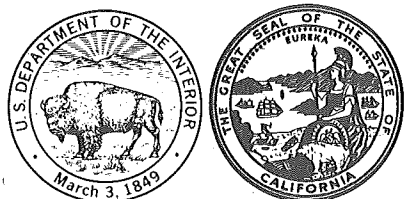


Joe N. Robles
Rec'd 02-18-81



Water Resources Data for California

Volume 4. Northern Central Valley Basins
and The Great Basin from Honey
Lake Basin to Oregon State Line

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-79-4

WATER YEAR 1979

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

CALENDAR FOR WATER YEAR 1979

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UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

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Menlo Park, California 94025

1980

PREFACE

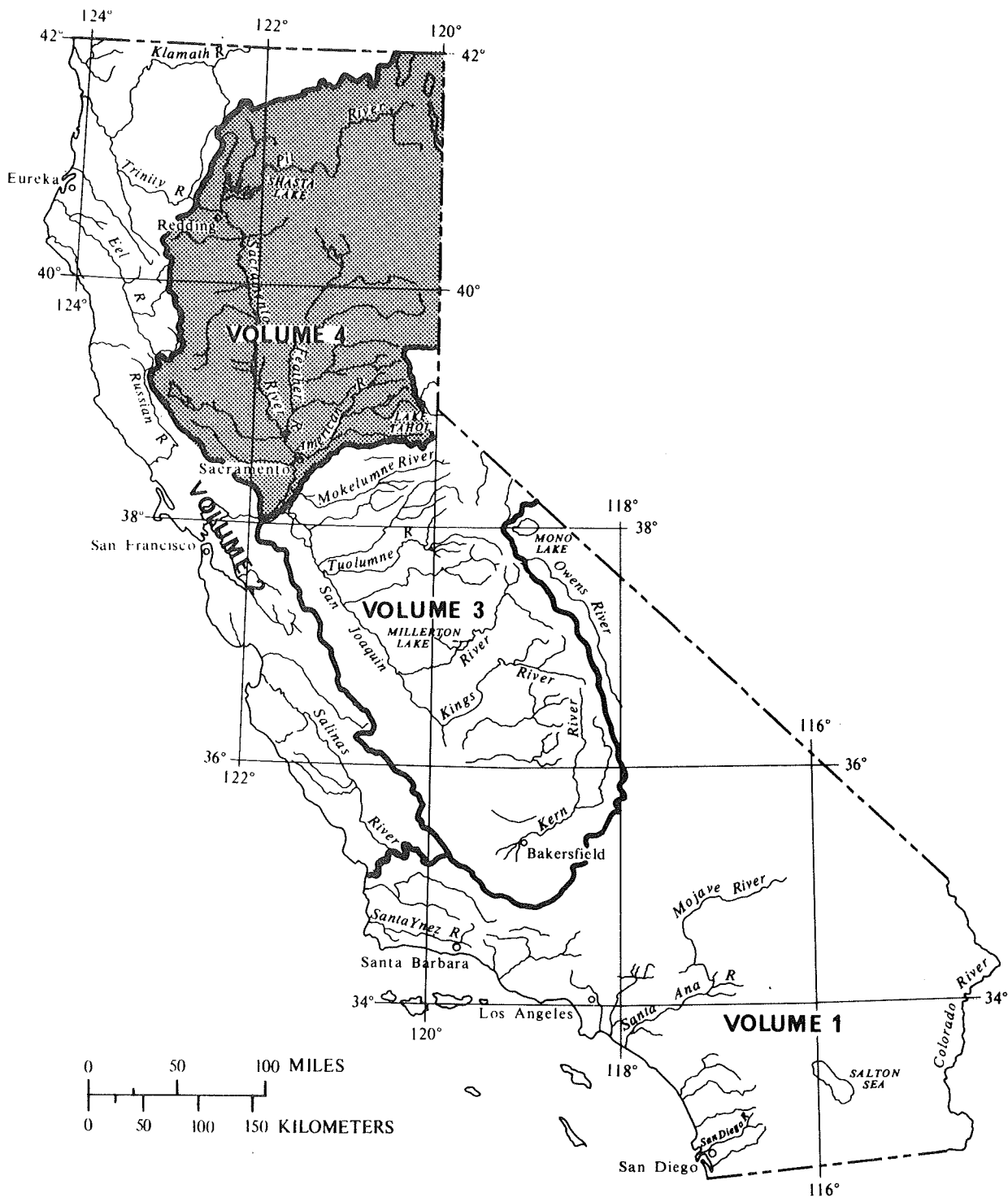
This report was prepared by personnel of the California District of the Water Resources Division, U.S. Geological Survey, under the supervision of Richard M. Bloyd, District Chief, and W. H. Robinson, Regional Hydrologist, Western Region. It was done in cooperation with the California Department of Water Resources and other agencies.

This report is one of a series issued by State. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, and Philip Cohen, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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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16. Abstracts Volume 4 of the water resources data for the 1979 water year for California consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality in lakes and reservoirs; and water levels in wells. This report contains discharge records for 204 gaging stations; stage and contents for 34 lakes and reservoirs; precipitation data for 2 stations; water quality for 81 stations; water levels for 33 observation wells, and water quality for 15 wells. Also included are 16 crest-stage partial-record stations, 9 low-flow partial-record stations, and 4 water-quality partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as special investigations. These data represent that part of the National Water Data system operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.			
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Area covered by volumes in the annual series on water-resources data for California. Area covered by this volume is shaded.

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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; (p) precipitation; (c) chemical;
(b) biological; (t), water temperature; and (s), sediment]

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 Dallas Childers, Hydrologist
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 William E. Faulkender, Hydrologic Technician
 Michael F. Friebe, Hydrologic Technician
 Verne L. Gamble, Supervisory Hydrologic Technician
 Debra A. Grillo, Clerk Typist
 Jerry G. Harmon, Hydrologist
 Ray J. Hoffman, Biologist
 Richard Ireland, Hydrologic Technician
 Randy M. Jensen, Hydrologic Technician
 Gail L. Keeter, Hydrologic Technician
 Byron R. Laurence, Hydrologic Technician
 Gordon E. Lokke, Hydrologist
 Gary W. Moeckli, Hydrologic Technician
 Richard N. Oltmann, Hydrologist
 Christine O'Neil, Clerk-Typist
 Lee A. Price, Hydrologic Technician
 Gerald L. Rockwell, Hydrologic Technician
 Johnnevan M. Shay, Hydrologic Technician
 M. Kathy Shay, Computer Technician
 Stephen K. Sorenson, Biologist
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(XVI)

B L A N K P A G E

WATER RESOURCES DATA FOR CALIFORNIA, 1979

Volume 4

INTRODUCTION

Water-resources data for the 1979 water year for California consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; records of water levels in selected observation wells; and selected chemical analyses of ground water. 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 Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released, either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published together as an official Survey report 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 report is identified as "U.S. Geological Survey Water-Data Report CA-79-4." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. 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.

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.
California Water Resources Control Board, Bill B. Dendy,
Executive Officer.
Georgetown Divide Public Utility District, C. F. Gierau, General Manager.
Lake County Flood Control and Water Conservation District,
H. C. Porter, Acting Manager.
Modoc County Department of Public Works, J. K. Grove, Director.
Oroville-Wyandotte Irrigation District, Milton R. Emerson,
General Manager-Chief Engineer.
Paradise Irrigation District, C. P. Kelly, Manager.
Placer County Water Agency, Elmer Pretzer, General Manager.
Siskiyou County Flood Control and Water Conservation District,
D. A. Gravenkamp, Director of Public Works.
Yolo County Flood Control and Water Conservation District,
W. L. McAnlis, Manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Water and Power Resources Service, U.S. Department of the Interior; and Forest Service and Soil Conservation Service, U.S. Department of Agriculture.

The following organizations aided in collecting records: Pacific Gas and Electric Co., Placer County Water Agency, Sacramento Municipal Utility District, Nevada and Oroville-Wyandotte Districts, and Yuba County Water Agency.

HYDROLOGIC CONDITIONS

Several large, cold storms during the first half of January brought heavy precipitation in the form of snow to the Sierra Nevada, alleviating the concern that had been growing about the possibility of another drought. These cold storms continued through February and March, increasing the snowpack.

In the area covered by this volume, runoff during the 1979 water year averaged about 75 percent of the 1941-70 median. The accumulative runoff for the index station, North Fork American River at North Fork Dam (fig. 1), remained well below normal at 72 percent for the first six months because the precipitation was mostly snow.

During the snowmelt period, runoff to streamflow increased to near normal and then began a seasonal decrease. Combined contents of ten reservoirs in northern California was 103 percent of average and 86 percent of the contents of the previous year.

The quality of the surface water did not change appreciably, and ground-water levels remained stable with only minor fluctuations.

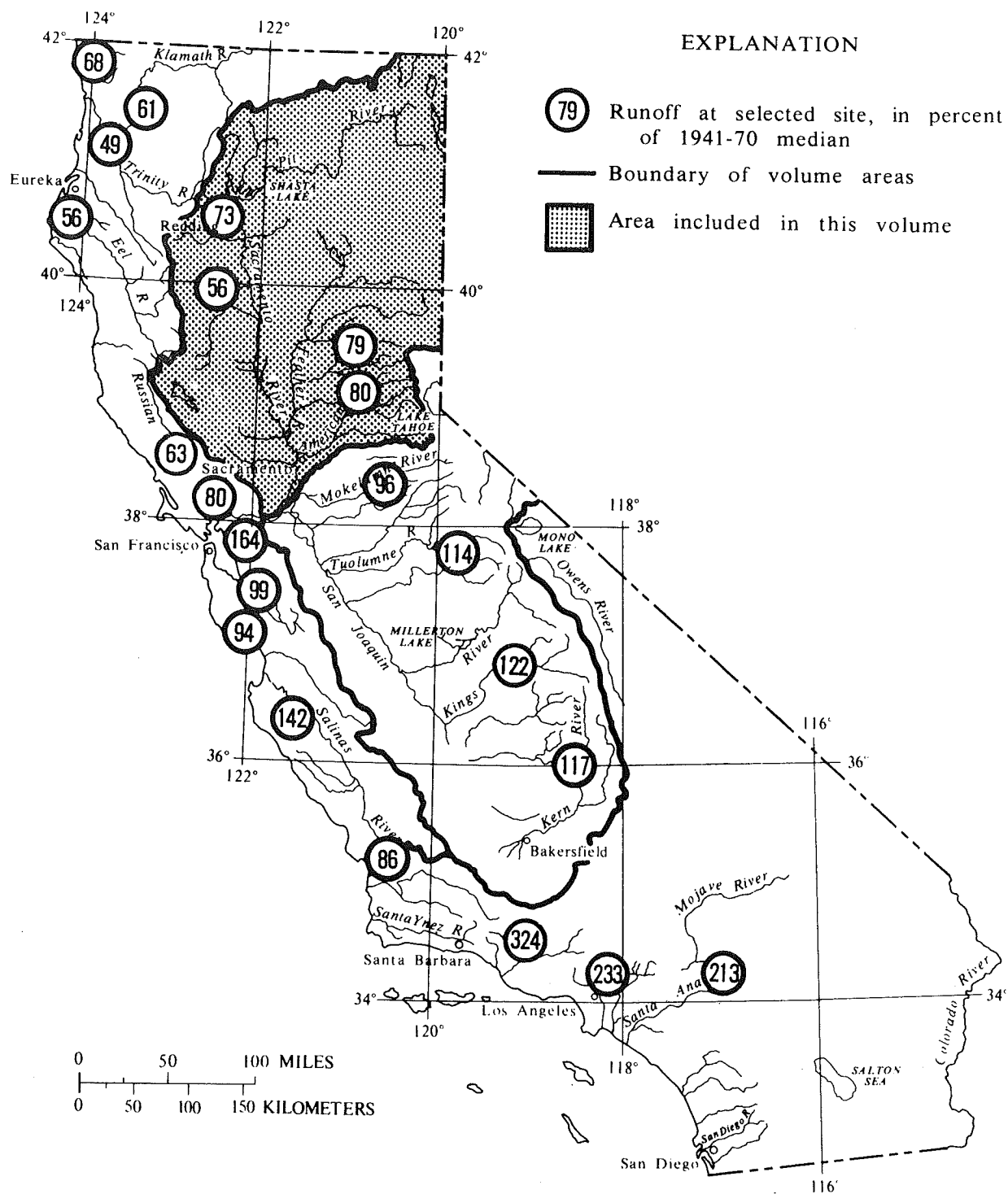


FIGURE 1.--Runoff for the current water year.

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 also 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 medium (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 organisms 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 (FT^3/S , ft^3/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 a later date.

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

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

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 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 where 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 11407000, which appears just to the left of the station name, includes the 2-digit number "11" plus the 6-digit downstream order number "407000". 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.

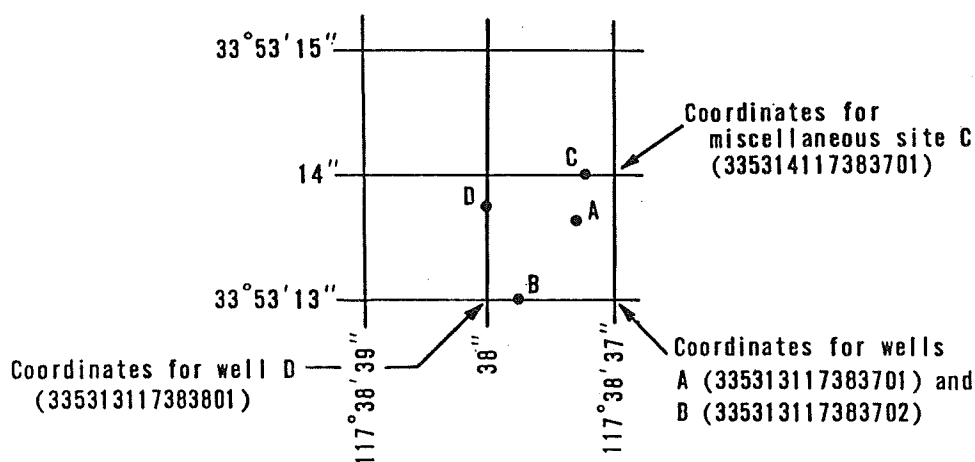


Figure 2.--System for numbering wells and miscellaneous sites (latitude and longitude).

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.

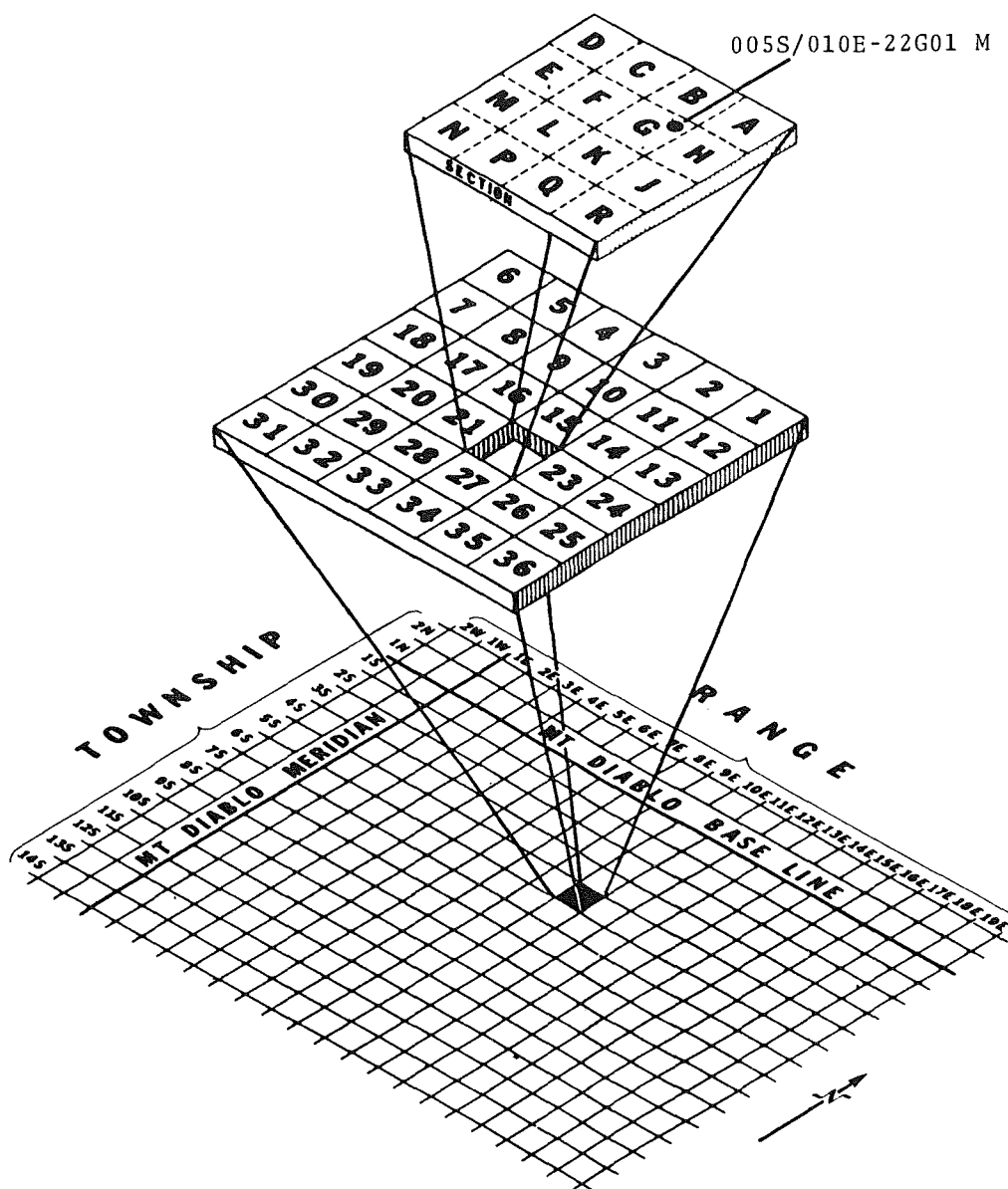


FIGURE 3.--California well-numbering system.

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
09429500 Colorado River above Imperial Dam, AZ-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 River at Oceanside, CA
11074000 Santa Ana River below Prado Dam, CA
11103010 Los Angeles River at Willow Street Bridge, 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.

Skeleton rating tables are published, immediately following EXTREMES, for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

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, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (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.
- 4-D1. Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
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- 5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greenson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 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.
- 5-C1. Laboratory theory and methods for sediment analyses, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 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.
- 8-B2. Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

10356500 SUSAN RIVER AT SUSANVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

CHEMICAL ANALYSES: Water years 1952 to current year.

BIOLOGICAL DATA: Water years 1978 to current year.

SEDIMENT RECORDS: Water years 1978 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT													
12...A	1005	4.2	166	8.3	11.5	1.0	9.9	--	--	--	--	--	
20...	0830	4.8	167	--	7.0	1.0	9.5	K11	K36	44	0	11	
NOV													
14...A	0845	6.4	202	8.4	.0	1.0	12.2	--	--	--	--	--	
22...	0930	12	147	--	2.5	4.0	10.9	--	--	63	--	13	
DEC													
15...A	1000	10	175	7.8	.5	2.0	11.9	--	--	--	--	--	
28...	0815	10	163	8.6	.0	4.5	12.5	K12	K3	--	--	--	
JAN													
04...A	1610	10	170	7.8	.5	1.0	13.6	--	--	--	--	--	
23...	0900	10	192	--	.0	1.0	10.0	K2	K4	64	0	12	
FEB													
05...A	0920	10	170	7.4	1.0	1.0	12.5	--	--	--	--	--	
14...	0930	91	116	8.5	.5	--	11.2	22	97	--	--	--	
MAR													
07...A	0945	80	112	7.5	3.0	7.0	11.8	--	--	--	--	--	
21...	0930	48	133	--	3.5	3.8	11.6	K3	K3	55	1	13	
APR													
11...A	0900	64	111	8.0	6.5	3.0	10.9	--	--	--	--	--	
13...	0815	76	108	8.7	7.5	1.0	10.2	K3	21	43	9	10	
MAY													
03...A	0630	76	104	7.3	7.5	3.0	10.1	--	--	--	--	--	
18...	0730	118	72	8.5	10.0	16	9.8	30	K110	33	4	7.9	
JUN													
13...A	0940	88	73	8.5	16.5	2.0	8.7	--	--	--	--	--	
19...	0800	12	119	8.8	11.5	1.9	9.4	20	50	52	0	12	
JUL													
18...A	0710	1.3	193	7.6	17.0	2.0	8.0	--	--	--	--	--	
19...	0800	.82	189	7.8	18.5	2.5	6.9	>40	>67	77	0	17	
AUG													
15...A	0705	--	208	8.2	15.0	2.0	7.9	--	--	--	--	--	
17...	1130	.56	204	--	16.5	1.9	8.3	--	--	86	0	18	
SEP													
12...A	1445	1.2	197	8.3	20.0	1.0	9.0	--	--	--	--	--	
21...	0845	3.0	192	7.6	12.0	2.8	8.8	47	>200	89	0	19	
DATE		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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT													
12...A	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	4.0	3.1	13	.2	1.2	50	3.4	.9	.0	15	--	--	69
NOV													
14...A	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	7.5	5.5	15	.3	1.9	--	1.5	1.1	.0	31	109	--	--
DEC													
15...A	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	6.1	--	--	2.0	72	2.5	--	.0	35	105	--	--
JAN													
04...A	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	8.2	6.5	18	.4	2.2	74	4.4	1.1	.0	34	120	113	--
FEB													
05...A	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
07...A	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	5.4	4.9	16	.3	1.2	54	4.5	1.4	.0	22	83	85	--
APR													
11...A	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	4.4	4.1	17	.3	1.1	34	17	.9	.0	25	82	83	--
MAY													
03...A	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	3.2	3.0	16	.2	1.1	29	3.2	1.1	.1	19	52	56	--
JUN													
13...A	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	5.3	4.8	16	.3	1.8	53	2.6	.8	.0	27	91	86	--
JUL													
18...A	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	8.4	6.1	14	.3	3.2	89	4.8	1.4	.0	33	134	127	--
AUG													
15...A	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	10	7.0	15	.3	2.9	100	2.2	1.3	.1	40	149	142	--
SEP													
12...A	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	10	13	36	.6	2.9	90	7.3	1.2	.1	39	189	177	--

See footnotes at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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, KJEL- DAHL, TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT											
12...A	--	--	--	--	--	--	--	--	--	--	--
20...	.15	--	.01	.67	.68	.50	.18	--	.07	.05	3.7
NOV											
14...A	--	--	--	--	--	--	--	--	--	--	--
22...	.15	.20	.02	.17	.19	.00	.20	.39	.05	.04	--
DEC											
15...A	--	--	--	--	--	--	--	--	--	--	--
28...	--	.41	.01	--	--	--	.11	--	.07	.05	.9
JAN											
04...A	--	--	--	--	--	--	--	--	--	--	--
23...	.16	.28	.01	.17	.18	.11	.07	.46	.05	.04	3.6
FEB											
05...A	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...A	--	--	--	--	--	--	--	--	--	--	--
21...	.11	.09	.02	.15	.17	.02	.15	.26	.11	.07	2.2
APR											
11...A	--	--	--	--	--	--	--	--	--	--	--
13...	.11	3.6	.07	.84	.91	.72	.19	4.5	.50	.10	1.7
MAY											
03...A	--	--	--	--	--	--	--	--	--	--	--
18...	.07	.23	.04	.29	.33	.14	.19	.56	.03	.01	--
JUN											
13...A	--	--	--	--	--	--	--	--	--	--	--
19...	.12	.04	.01	.31	.32	.11	.21	.36	.03	.01	4.7
JUL											
18...A	--	--	--	--	--	--	--	--	--	--	--
19...	.18	1.5	.17	1.3	1.5	.67	.83	3.0	.83	.05	--
AUG											
15...A	--	--	--	--	--	--	--	--	--	--	--
17...	.20	.23	.00	.36	.36	.00	.42	.59	.06	.04	--
SEP											
12...A	--	--	--	--	--	--	--	--	--	--	--
21...	.26	--	.02	.73	.75	.12	.63	--	.09	.09	4.3

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS RA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV										
22...	0930	1	0	0	0	20	3	0	4	0
FEB										
14...	0930	1	1	0	0	0	2	0	2	10
MAY										
18...	0730	1	0	0	0	0	1	0	1	10
AUG										
17...	1130	1	1	200	200	40	2	1	1	50

DATE	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
NOV										
22...	0	0	1	0	<3	6	4	2	310	190
FEB										
14...	10	0	0	0	0	8	7	1	1100	1000
MAY										
18...	10	0	0	0	2	14	14	0	130	90
AUG										
17...	50	0	0	0	<3	4	2	2	960	810

See footnotes at end of table.

10356500 SUSAN RIVER AT SUSANVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE 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 RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 22...	120	41	34	7	20	0	20	.1	.1	.0
FEB 14...	90	36	26	10	70	50	20	.3	.0	.3
MAY 18...	40	36	23	13	60	50	10	.1	.1	.0
AUG 17...	150	33	23	10	130	70	60	.1	.1	.0

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 22...	0	0	0	0	0	0	50	40	9
FEB 14...	0	0	0	0	0	0	20	20	0
MAY 18...	0	0	1	0	0	0	60	50	10
AUG 17...	0	0	0	0	0	0	70	70	4

K Results based on colony count outside the acceptable range (non-ideal colony count).

> Actual value is known to be greater than the value shown.

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

HONEY LAKE BASIN

10356500 SUSAN RIVER AT SUSANVILLE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF
BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	NOV 22,78 0930	MAR 21,79 0930	MAY 18,79 0730	AUG 17,79 1130	SEP 21,79 0845					
TOTAL CELLS/ML	2400	1500	540	160	550					
DIVERSITY: DIVISION	0.9	1.2	1.1	0.9	0.9					
..CLASS	1.0	1.2	1.1	0.9	0.9					
...ORDER	1.2	1.2	1.2	1.6	1.4					
...FAMILY	1.6	2.2	1.4	1.9	2.1					
....GENUS	1.7	2.5	1.4	2.2	2.2					
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	--	-	--	-	13	2	29#	18	160#	29
....OOCYSTIS	14	1	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	--	-	29#	18	--	-
...TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	--	-	--	-	26	5	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	14	1	--	-	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	28	1	--	-	--	-	14	9	86#	16
....MELOSIRA	140	6	--	-	--	-	29#	18	--	-
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	28	1	240#	16	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	28	2	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	110	5	14	1	--	-	--	-	14	3
....EPITHEMIA	14	1	--	-	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	--	-	--	-	--	-	14	3
...FRAGILARIACEAE										
....FRAGILARIA	--	-	14	1	26	5	--	-	200#	37
...SYNEDRA	--	-	55	4	--	-	--	-	14	3
...GOMPHONEMACEAE										
....GOMPHONEMA	14	1	--	-	--	-	--	-	--	-
...MERIDIONACEAE										
....MERIDION	--	-	14	1	--	-	--	-	--	-
...NAVICULACEAE										
....AMPHIPLEURA	14	1	--	-	--	-	--	-	--	-
....NAVICULA	97	4	110	7	13	2	--	-	--	-
...NITZSCHIA										
....NITZSCHIA	250	10	240#	16	77	14	57#	36	58	11
..CHRYSOPHYCEAE										
...CHRYSONOMADACEAE										
....OCHROMONADACEAE										
....OCHROMONAS	14	1	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	390#	71	--	-	--	-
...HORMOGONALES										
...OSCILLATORIACEAE										
....LYNGBYA	1700#	70	660#	45	--	-	--	-	--	-
....OSCILLATORIA	--	-	55	4	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	14	1	--	-	--	-	--	-
....TRACHELOMONAS	--	-	28	2	--	-	--	-	--	-

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

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

10356500 SUSAN RIVER AT SUSANVILLE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF
BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PERIPHYTON

DATE	LENGTH OF EXPOSURE (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
FEB 14...	84	11.5	10.7	1.36	.350	588	Polyethylene strip
MAR 21...	36	98.7	90.5	5.95	1.65	1378	do
JUN 19...	32	1.97	1.65	.190	.080	1684	do
SEP 21...	35	5.75	4.88	7.53	1.75	116	do

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED
SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. STEEVE DIAM. % FINER THAN .062 MM
OCT 20...	0830	4.8	7.0	12	.16	76
NOV 22...	0930	12	2.5	6	.19	66
JAN 23...	0900	10	.0	9	.24	53
FEB 14...	0930	91	.5	42	10	63
MAR 21...	0930	48	3.5	7	.91	75
APR 13...	0815	76	7.5	11	2.3	92
MAY 18...	0730	118	10.0	27	8.6	92
JUL 19...	0800	.82	18.5	5	.01	96
AUG 17...	1130	.56	16.5	9	.01	--
SEP 21...	0845	3.0	12.0	16	.13	--

HONEY LAKE BASIN

10358500 WILLOW CREEK NEAR SUSANVILLE, CA

LOCATION.--Lat 40°29'21", long 120°32'10", in SW¼NE¼ sec.5, T.30 N., R.13 E., Lassen County, Hydrologic Unit 18080003, on left bank 4 mi (6 km) upstream from Peters Valley Creek, and 8 mi (13 km) northeast of Susanville.

DRAINAGE AREA.--90.4 mi² (234.1 km²), excludes that of Eagle Lake Basin.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR CA-75-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,836.27 ft (1,474.095 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions for irrigation of 5,200 acres (21.0 km²) above station. Some flow at times enters Willow Creek from Eagle Lake through an abandoned tunnel.

AVERAGE DISCHARGE.--29 years, 33.9 ft³/s (0.960 m³/s), 24,560 acre-ft/yr (30.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 816 ft³/s (23.1 m³/s) Feb. 1, 1963, gage height, 5.59 ft (1.704 m); minimum, 8.1 ft³/s (0.23 m³/s) Nov. 16, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 69 ft³/s (1.95 m³/s) Feb. 14, gage height, 2.94 ft (0.896 m), no peak above base of 200 ft³/s (5.66 m³/s); minimum daily, 8.9 ft³/s (0.25 m³/s) Aug. 17-19, 23.

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	14	28	30	24	29	45	14	17	9.9	9.5	9.3	9.4
2	14	28	29	25	30	42	15	16	9.8	9.6	9.3	9.3
3	14	28	28	26	29	43	15	16	10	9.5	9.3	9.3
4	14	28	28	27	30	44	12	16	10	9.4	9.3	9.4
5	15	28	28	27	30	44	12	16	9.8	9.3	9.3	9.3
6	15	28	23	28	31	44	13	18	9.6	9.3	9.3	9.3
7	15	28	27	28	31	44	13	20	9.6	9.2	9.3	9.3
8	16	28	25	29	31	43	15	20	9.4	9.2	9.3	9.5
9	16	28	25	29	33	41	16	19	9.2	9.3	9.3	9.6
10	18	27	25	29	35	39	16	18	9.6	9.7	9.3	9.6
11	21	27	26	37	39	38	18	19	10	9.6	9.3	9.5
12	22	28	28	41	38	37	18	19	10	9.4	9.3	9.5
13	22	28	27	39	46	37	18	20	10	9.3	9.3	9.4
14	23	27	27	39	62	36	17	19	9.9	9.3	9.0	9.4
15	23	26	26	37	56	36	17	18	9.2	9.3	9.3	9.5
16	23	27	25	35	53	36	16	17	9.3	9.3	9.0	9.5
17	24	26	27	34	50	36	16	16	9.2	9.3	8.9	9.6
18	25	27	26	33	49	35	16	15	9.3	9.5	8.9	9.5
19	26	27	26	31	49	35	16	14	9.3	9.5	8.9	9.6
20	26	27	24	31	46	35	16	13	9.2	9.4	9.1	9.6
21	26	29	25	31	43	33	16	12	9.2	9.6	9.1	9.6
22	25	31	26	31	42	32	16	11	9.2	9.4	9.0	9.6
23	25	31	25	31	41	33	16	11	9.3	9.3	8.9	9.6
24	26	30	26	31	40	33	15	11	9.2	9.3	9.0	9.7
25	26	29	25	28	40	30	14	11	9.3	9.0	9.0	9.6
26	27	28	25	29	47	17	14	10	9.5	9.0	9.2	9.5
27	27	28	26	30	44	15	16	10	9.5	9.0	9.3	9.5
28	27	28	26	30	43	15	18	10	9.5	9.3	9.4	9.5
29	27	29	25	29	---	15	18	10	9.5	9.3	9.5	9.4
30	28	30	23	29	---	14	17	9.9	9.5	9.3	9.5	9.3
31	28	---	23	30	---	14	---	9.9	---	9.3	9.4	---
TOTAL	678	842	805	958	1137	1041	469	461.8	286.0	289.7	285.3	284.4
MEAN	21.9	28.1	26.0	30.9	40.6	33.6	15.6	14.9	9.53	9.35	9.20	9.48
MAX	28	31	30	41	62	45	18	20	10	9.7	9.5	9.7
MIN	14	26	23	24	29	14	12	9.9	9.2	9.0	8.9	9.3
AC-FT	1340	1670	1600	1900	2260	2060	930	916	567	575	566	564
CAL YR 1978	TOTAL	12472.0	MEAN 34.2	MAX 288	MIN 10	AC-FT 24740						
WTR YR 1979	TOTAL	7537.2	MEAN 20.6	MAX 62	MIN 8.9	AC-FT 14950						

10359300 PINE CREEK NEAR SUSANVILLE, CA

LOCATION.--Lat 40°39'54", long 120°47'25", in NE¼SE¼ sec.1, T.32 N., R.10 E., Lassen County, Hydrologic Unit 18080003, on right bank 0.3 mi (0.5 km) upstream from Eagle Lake, and 18 mi (29 km) northwest of Susanville.

DRAINAGE AREA.--226 mi² (585 km²).

PERIOD OF RECORD.--October 1960 to September 1966, October 1967 to September 1968, October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,120 ft (1,561 m), from topographic map. Prior to September 1968, at site 1.0 mi (1.6 km) upstream at different datum.

REMARKS.--No storage or diversion above station except for minor stock ponds.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--17 years (water years 1961-66, 1968, 1970-79), 22.4 ft³/s (0.634 m³/s), 16,230 acre-ft/yr (20.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) May 15, 1975, gage height, 5.45 ft (1.661 m); maximum gage height, 5.60 ft (1.707 m) Jan. 24, 1970; no flow for several months in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1967, reached a stage of 5.29 ft (1.612 m), discharge, 826 ft³/s (23.4 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40 ft³/s (1.13 m³/s) Apr. 13, gage height, 3.72 ft (1.134 m); no flow for several months.

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						0	1.9	0				
2						0	1.3	0				
3						0	1.0	0				
4						0	.30	.10				
5						0	1.6	.20				
6						0	5.3	11				
7						0	15	26				
8						0	18	37				
9						0	22	39				
10						0	20	39				
11						0	17	32				
12						.60	22	23				
13						3.1	39	17				
14						3.0	38	11				
15						7.4	34	6.5				
16						21	25	3.3				
17						22	20	.10				
18						38	20	0				
19						29	22	0				
20						19	19	0				
21						13	14	0				
22						12	11	0				
23						10	6.5	0				
24						9.1	3.0	0				
25						7.5	2.2	0				
26						6.6	4.3	0				
27						5.6	4.3	0				
28						4.6	2.9	0				
29						4.2	1.7	0				
30						3.2	0	0				
31		---			---	2.6	---	0	---			---
TOTAL	0	0	0	0	0	221.50	392.30	245.20	0	0	0	0
MEAN	0	0	0	0	0	7.15	13.1	7.91	0	0	0	0
MAX	0	0	0	0	0	38	39	39	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	439	778	486	0	0	0	0
CAL YR 1978	TOTAL	7609.00	MEAN	20.8	MAX	280	MIN	0	AC-FT	15090		
WTR YR 1979	TOTAL	859.00	MEAN	2.35	MAX	39	MIN	0	AC-FT	1700		

SURPRISE VALLEY BASIN

10360900 BIDWELL CREEK BELOW MILL CREEK, NEAR FORT BIDWELL, CA

LOCATION.--Lat 41°52'57", long 120°10'26", in NE¼SE¼ sec.6, T.46 N., R.16 E., Modoc County, Hydrologic Unit 18080001, on right bank 0.9 mi (1.4 km) downstream from Mill Creek, and 2.0 mi (3.2 km) northwest of Fort Bidwell.

DRAINAGE AREA.--25.6 mi² (66.3 km²).

PERIOD OF RECORD.--October 1960 to current year. Prior to October 1961, published as Bidwell Creek near Fort Bidwell.

REVISED RECORDS.--WDR CA-71-2: 1969-70.

GAGE.--Water-stage recorder. Altitude of gage is 5,000 ft (1,524 m), from topographic map.

REMARKS.--Less than 2 ft³/s (0.057 m³/s) diverted upstream for irrigation. No storage above station.

COOPERATION.--Records furnished by the California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--19 years, 21.7 ft³/s (0.615 m³/s), 15,720 acre-ft/yr (19.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 682 ft³/s (19.3 m³/s) Dec. 24, 1964, gage height, 5.64 ft (1.719 m), from rating curve extended above 105 ft³/s (2.97 m³/s) on basis of slope-area measurement of maximum flow; minimum, 1.4 ft³/s (0.040 m³/s) Nov. 5, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114 ft³/s (3.23 m³/s) May 22, gage height, 4.11 ft (1.253 m); minimum daily, 2.1 ft³/s (0.059 m³/s) several days in January and February.

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	4.8	4.5	7.6	3.1	2.1	5.2	10	61	53	16	6.2	5.2
2	4.8	4.3	5.6	2.9	2.1	7.9	9.8	59	50	16	6.1	4.9
3	4.8	4.2	5.9	2.9	2.1	4.9	9.3	66	50	15	5.9	4.8
4	4.8	4.3	7.7	2.9	2.1	4.8	10	80	54	15	5.7	4.7
5	4.8	4.3	6.1	2.9	2.3	7.5	15	76	56	14	5.7	4.6
6	4.8	4.3	4.6	2.7	2.3	12	23	60	55	13	5.6	4.2
7	4.8	4.2	4.6	2.7	2.6	18	21	46	49	13	5.6	4.0
8	4.7	4.1	4.6	2.7	2.6	17	20	41	43	12	5.4	3.8
9	4.7	4.2	4.3	2.7	2.8	14	20	39	38	12	5.1	3.8
10	4.7	3.0	4.3	2.7	3.1	13	18	38	34	12	5.0	3.7
11	4.5	4.3	4.3	2.7	4.0	17	17	42	32	11	5.0	3.7
12	4.4	5.9	4.3	2.7	3.9	21	15	52	31	11	4.9	3.5
13	4.4	7.1	4.0	2.7	4.9	23	22	68	31	10	6.8	3.5
14	4.4	6.6	4.3	2.5	4.9	24	25	87	30	10	6.1	3.5
15	4.4	8.0	4.0	2.5	4.3	26	33	96	27	9.9	5.6	3.4
16	4.5	6.4	4.0	2.5	4.5	19	40	102	26	9.3	5.2	3.3
17	4.5	4.9	4.3	2.5	4.3	14	35	100	30	8.8	4.9	3.1
18	4.5	4.6	4.0	2.5	4.6	12	28	103	30	8.9	4.8	3.1
19	4.4	4.7	4.0	2.5	4.5	10	23	107	29	8.6	4.7	3.7
20	4.5	5.3	4.9	2.5	4.6	9.3	21	109	27	8.5	5.2	3.6
21	4.5	5.3	5.2	2.5	4.7	9.4	21	108	26	8.6	5.5	3.3
22	4.4	5.2	4.0	2.3	4.9	9.4	23	112	24	8.7	5.0	3.3
23	4.4	5.1	3.7	2.3	5.2	9.4	21	111	22	8.4	4.7	3.3
24	4.4	4.9	3.7	2.3	5.2	11	20	105	21	7.9	4.6	3.2
25	4.4	4.8	3.7	2.3	5.3	14	22	100	20	7.5	4.4	3.1
26	4.4	4.9	3.7	2.3	5.5	18	27	96	20	7.3	4.4	3.2
27	4.4	6.1	3.7	2.3	5.1	18	37	96	19	7.0	4.4	3.2
28	4.2	6.9	3.5	2.3	5.4	15	42	87	17	6.9	9.6	3.1
29	4.3	15	3.5	2.3	---	13	48	75	17	6.7	6.3	2.9
30	4.2	8.7	3.3	2.1	---	12	56	66	17	6.6	6.8	2.9
31	4.2	---	3.1	2.1	---	11	---	58	---	6.3	5.9	---
TOTAL	140.0	166.1	138.5	78.9	109.9	419.8	732.1	2446	978	315.9	171.1	109.6
MEAN	4.52	5.54	4.47	2.55	3.93	13.5	24.4	78.9	32.6	10.2	5.52	3.65
MAX	4.8	15	7.7	3.1	5.5	26	56	112	56	16	9.6	5.2
MIN	4.2	3.0	3.1	2.1	2.1	4.8	9.3	38	17	6.3	4.4	2.9
AC-FT	278	329	275	156	218	833	1450	4850	1940	627	339	217

CAL YR 1978 TOTAL 10158.7 MEAN 27.8 MAX 169 MIN 3.0 AC-FT 20150
WTR YR 1979 TOTAL 5805.9 MEAN 15.9 MAX 112 MIN 2.1 AC-FT 11520

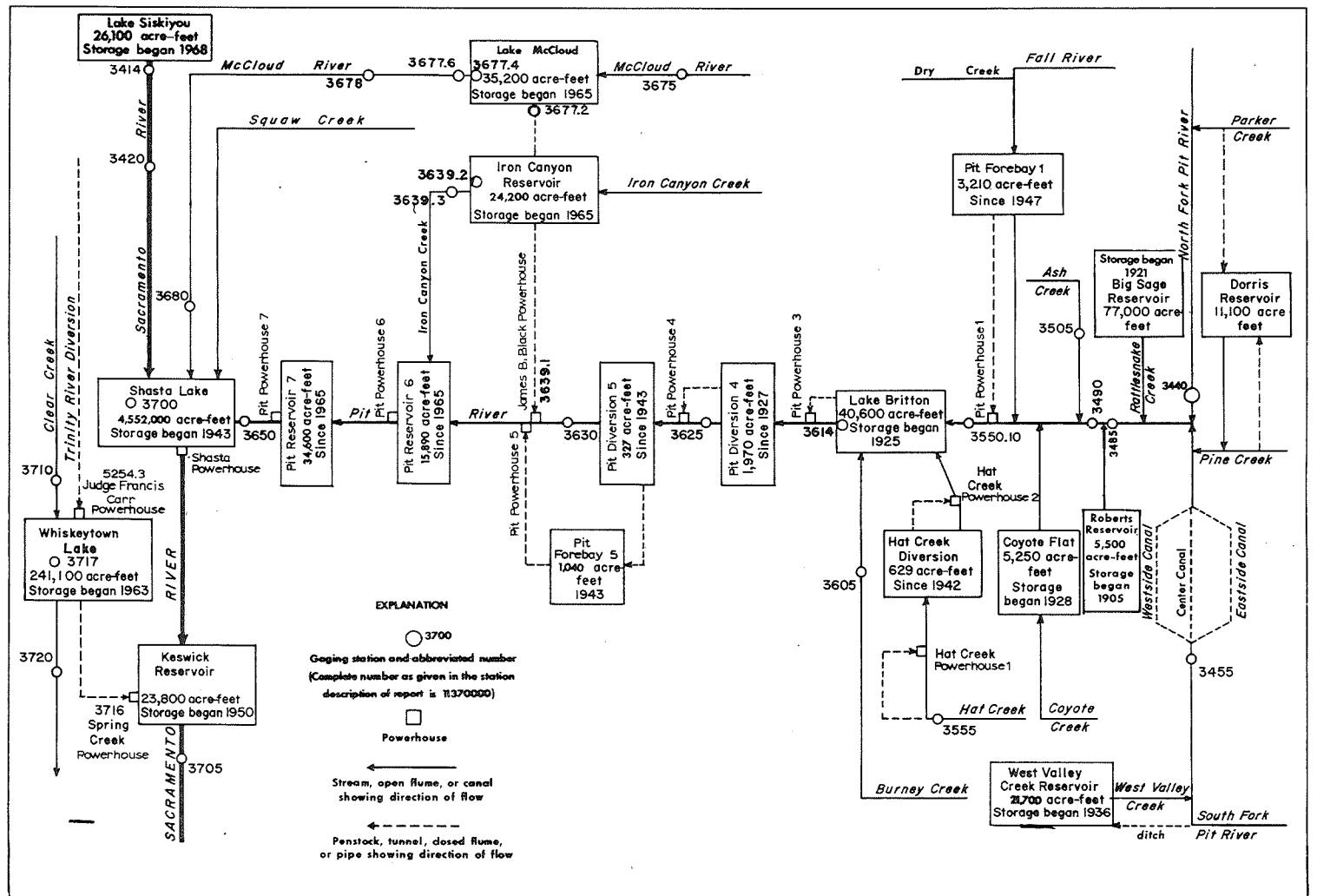


FIGURE 4.--Schematic diagram showing diversions and storage in Pit and McCloud river basins.

SACRAMENTO RIVER BASIN

11341400 SACRAMENTO RIVER NEAR MT SHASTA, CA

LOCATION.--Lat 41°15'56", long 122°18'32", in SE4SE4 sec.33, T.40 N., R.4 W., Siskiyou County, Hydrologic Unit 18020005, on left bank 200 ft (61 m) upstream from Stink Creek, 0.3 mi (0.5 km) upstream from Southern Pacific Railroad bridge, 1.7 mi (2.7 km) downstream from Box Canyon Dam, and 3.3 mi (5.3 km) south of town of Mt Shasta.

DRAINAGE AREA.--135 mi² (350 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (853 m), from topographic map. Prior to July 1, 1966, water-stage recorder at site 500 ft (152 m) upstream at datum 7.26 ft (2.213 m) higher, July 1, 1966, to Aug. 13, 1974, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Flow regulated by Box Canyon Dam 1.7 mi (2.7 km) upstream beginning December 1968, capacity, 26,100 acre-ft (32.2 hm³). See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE (adjusted for change in contents in Lake Siskiyou).--20 years, 248 ft³/s (7.023 m³/s), 179,700 acre-ft/yr (222 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Dec. 22, 1964, gage height, 15.6 ft (4.75 m) from floodmarks, present site and datum, from slope-area measurement of maximum flow; minimum, 37 ft³/s (1.05 m³/s) Sept. 6, 1962. Maximum discharge since construction of Box Canyon Dam in 1968, 11,500 ft³/s (326 m³/s) Jan. 16, 1974, gage height, 13.25 ft (4.039 m) from floodmarks, from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of flow-over-dam computation of maximum flow; minimum daily, 14 ft³/s (0.40 m³/s) Dec. 8-16, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) May 5, gage height, 5.28 ft (1.609 m); minimum daily, 29 ft³/s (0.82 m³/s) on several days during December.

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	104	167	32	38	95	143	345	675	97	73	47	67
2	80	167	31	38	94	141	326	668	52	70	39	74
3	61	167	31	69	94	141	312	682	51	72	39	72
4	60	167	31	122	94	141	297	800	69	73	39	68
5	60	165	31	122	73	141	332	1020	156	74	39	65
6	60	164	30	122	52	197	449	889	181	74	41	63
7	60	350	30	122	52	231	467	695	169	74	44	61
8	61	716	29	126	53	261	444	582	160	72	46	59
9	64	542	29	124	57	292	455	541	152	70	48	59
10	84	214	29	132	80	302	406	466	143	71	51	54
11	100	213	29	162	91	306	379	433	137	74	48	54
12	90	213	29	188	123	352	370	432	129	73	47	55
13	97	213	29	207	241	374	369	481	124	70	48	56
14	96	167	29	204	225	374	369	641	119	64	49	55
15	97	67	29	202	244	324	378	801	117	65	51	56
16	97	31	29	199	272	318	490	811	117	65	51	56
17	97	30	30	150	266	388	559	787	117	64	50	55
18	97	30	30	122	265	379	488	767	115	64	50	54
19	97	33	30	106	261	374	428	743	110	63	51	53
20	95	32	30	97	261	303	369	726	108	63	56	54
21	95	34	30	96	259	215	369	722	103	63	57	54
22	96	38	30	95	258	193	369	699	99	62	56	53
23	90	38	30	95	177	193	369	625	95	62	54	53
24	98	38	30	95	137	193	371	565	208	62	54	54
25	98	38	29	95	137	195	367	504	63	62	53	59
26	98	39	29	94	139	225	409	479	62	60	53	64
27	98	39	29	95	139	594	537	470	62	59	52	66
28	97	40	34	95	143	661	644	459	62	60	55	63
29	97	38	38	94	---	517	634	449	67	59	70	62
30	97	32	37	95	---	435	629	351	74	59	74	61
31	140	---	38	95	---	378	---	184	---	59	70	---
TOTAL	2761	4222	951	3696	4382	9281	12730	19147	3318	2055	1582	1779
MEAN	89.1	141	30.7	119	157	299	424	618	111	66.3	51.0	59.3
MAX	140	716	38	207	272	661	644	1020	208	74	74	74
MIN	60	30	29	38	52	141	297	184	51	59	39	53
AC-FT	5480	8370	1890	7330	8690	18410	25250	37980	6580	4080	3140	3530
MEAN ‡	70.4	86.4	70.6	113	163	334	427	614	110	64.9	53.8	58.7
AC-FT ‡	4330	5140	4340	6960	9060	20520	25380	37760	6540	3990	3310	3490
†	24910	21680	24130	23760	24130	26240	26370	26150	26110	26020	26190	26150

CAL YR 1978 TOTAL 131372 MEAN 360 MAX 2540 MIN 29 AC-FT 260600 MEAN ‡ 360 AC-FT ‡ 260600
WTR YR 1979 TOTAL 65904 MEAN 181 MAX 1020 MIN 29 AC-FT 130700 MEAN ‡ 181 AC-FT ‡ 130800

‡ Adjusted for change in contents in Lake Siskiyou.

† Contents in acre-feet, at end of month in Lake Siskiyou.

11341400 SACRAMENTO RIVER NEAR MT SHASTA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

CHEMICAL ANALYSES: Water years 1970-72.

WATER TEMPERATURES: Water years 1966 to current year.

SEDIMENT RECORDS: Water year 1972.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1965 to current year.

INSTRUMENTATION.--Temperature recorder since October 1965.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 20.0°C July 25-28, 1974, July 12, 1975; minimum recorded, 1.5°C on several days in 1968 and 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 19.5°C June 5, 23; minimum recorded, 3.0°C on Jan 29, Feb. 1-3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SACRAMENTO RIVER BASIN

11341400 SACRAMENTO RIVER NEAR MT SHASTA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

11342000 SACRAMENTO RIVER AT DELTA, CA

LOCATION.--Lat 40°56'23", long 122°24'58", in SW¼NW¼ sec.35, T.36 N., R.5 W, Shasta County, Hydrologic Unit 18020005, Water and Power Resources Service property, on left bank 0.2 mi (0.3 km) downstream from Dog Creek, 0.6 mi (1.0 km) southeast of Delta, and 2.8 mi (4.5 km) south of Lamoine.

DRAINAGE AREA.--425 mi² (1,101 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 1,075.00 ft (327.660 m) National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service).

REMARKS.--Records excellent. Some regulation since December 1968 by Lake Siskiyou, capacity, 26,100 acre-ft (32.2 hm³). Some minor diversions for irrigation above station. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--35 years, 1,162 ft³/s (32.91 m³/s), 841,900 acre-ft/yr (1,038 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft³/s (1,980 m³/s) Jan. 16, 1974, gage height, 27.20 ft (8.291 m), from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of slope-area measurements at gage heights, 19.50 ft (5.944 m) in gage well, 20.0 ft (6.10 m) from floodmarks, and 27.20 ft (8.291 m) in gage well, 28.7 ft (8.75 m) from floodmarks; minimum daily, 117 ft³/s (3.31 m³/s) Aug. 5, 6, 12-15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,600 ft³/s (300 m³/s) Mar. 27, gage height, 10.90 ft (3.322 m); minimum daily, 179 ft³/s (5.07 m³/s) Aug. 27, Sept. 17, 22.

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	313	358	268	216	332	1850	1830	2140	630	311	221	219
2	309	360	241	216	325	1390	1620	2020	570	312	199	280
3	263	360	231	216	319	1130	1470	2050	542	309	193	239
4	261	359	229	277	320	985	1410	2210	528	312	193	219
5	260	356	232	297	323	1030	1420	3100	571	310	193	213
6	260	354	227	296	299	1400	1680	2860	613	304	192	208
7	259	385	222	299	304	1850	1600	2600	588	300	191	202
8	259	779	220	495	308	1840	1510	2160	563	296	193	197
9	259	1010	220	553	348	1650	1470	1900	542	292	193	194
10	263	384	220	842	407	1510	1350	1700	518	300	193	192
11	293	379	223	2250	752	1500	1240	1550	499	297	189	186
12	293	385	224	1020	1170	1530	1190	1580	483	290	186	184
13	281	385	220	706	5280	1530	1210	1730	468	280	188	189
14	289	378	220	799	3350	1540	1230	1990	456	270	199	189
15	289	305	218	814	1860	2710	1260	2200	447	264	196	184
16	290	220	217	711	1470	2510	1610	2200	444	260	193	181
17	291	215	230	608	1260	2050	1700	2150	444	256	190	179
18	288	215	227	505	1500	1770	1400	2130	436	252	188	181
19	287	337	218	467	1300	1550	1260	2060	424	250	186	181
20	289	394	215	439	1390	1380	1110	1990	414	247	205	181
21	290	349	216	448	1490	1200	1100	1950	403	249	205	181
22	288	308	217	447	1570	1330	1170	1870	389	250	201	179
23	285	268	215	428	1450	1190	1400	1680	379	247	193	181
24	281	251	215	414	1160	1140	1480	1530	448	243	190	181
25	287	243	215	396	1050	1140	1330	1390	396	238	186	202
26	287	238	213	375	1230	1210	1550	1320	321	236	183	208
27	287	235	214	367	1160	6970	2500	1260	317	233	179	205
28	288	234	213	358	1830	5600	2290	1180	311	231	189	202
29	287	239	216	343	---	3440	2150	1100	309	229	244	197
30	285	249	214	346	---	2580	2040	1020	313	226	236	195
31	291	---	215	340	---	2120	---	804	---	224	230	---
TOTAL	8752	10532	6885	16288	33557	60625	45580	57424	13766	8318	6117	5929
MEAN	282	351	222	525	1198	1956	1519	1852	459	268	197	198
MAX	313	1010	268	2250	5280	6970	2500	3100	630	312	244	280
MIN	259	215	213	216	299	985	1100	804	309	224	179	179
AC-FT	17360	20890	13660	32310	66560	120200	90410	113900	27300	16500	12130	11760
CAL YR 1978 TOTAL	657281			1801	MAX 24700	MIN 213	AC-FT 1304000					
WTR YR 1979 TOTAL	273773			750	MAX 6970	MIN 179	AC-FT 543000					

SACRAMENTO RIVER BASIN

11342000 SACRAMENTO RIVER AT DELTA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

CHEMICAL ANALYSES: Water years 1951 to current year.

WATER TEMPERATURES: Water years 1951, 1954-57, 1963-79 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June to September 1951, October 1953 to September 1957, October 1962 to May 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder June to September 1951, October 1953 to September 1957, and from October 1962 to May 1979.

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, 29.5°C July 15, 1972; minimum recorded, 0.0°C on several days in 1964, 1967, 1968, and 1973.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 17.0°C Oct. 1; minimum recorded, 0.5°C Dec. 30-31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
05...A	1215	261	--	8.3	17.0	.00	10.7	--	--	53	0	8.1
NOV												
15...A	1300	310	165	8.1	7.0	1.0	12.7	--	--	--	--	--
27...A	1300	235	158	8.1	7.0	--	12.8	--	--	54	0	8.3
JAN												
03...A	0945	216	160	8.4	2.5	.00	14.0	--	--	--	--	--
30...	1525	342	133	8.1	4.5	--	13.1	--	--	--	--	--
MAR												
09...A	0945	1640	88	7.4	7.5	2.0	12.0	--	--	--	--	--
MAY												
29...A	1245	1100	--	7.8	12.0	.00	10.8	--	10	39	0	4.0
JUL												
16...A	0820	256	143	7.9	20.0	1.0	9.2	--	--	--	--	--
SEP												
11...A	0915	184	--	8.1	17.5	.00	10.1	1	.6	56	0	9.0

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	ALKA- LITY (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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT											
05...A	8.0	10	29	.6	57	3.4	6.1	126	--	.17	--
NOV											
15...A	--	--	--	--	--	--	--	--	--	--	--
27...A	8.1	10	28	.6	62	3.8	8.0	96	76	.13	--
JAN											
03...A	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	58	--	--	--	--	--	--
MAR											
09...A	--	--	--	--	--	--	--	--	--	--	--
MAY											
29...A	7.0	3.0	--	.2	43	--	1.0	--	--	--	4
JUL											
16...A	--	--	--	--	--	--	--	--	--	--	--
SEP											
11...A	8.0	10	--	.6	64	--	6.0	--	--	--	2

11342000 SACRAMENTO RIVER AT DELTA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, KJEL- DAHL, TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT 05... A	.00	--	.05	--	.40	--	.45	--	.02	.02	200
NOV 15... A	--	--	--	--	--	--	--	--	--	--	--
27... A	.05	--	.01	--	.20	--	.21	--	.02	.02	100
JAN 03... A	--	.12	--	.00	--	.20	--	.20	.03	.02	--
30... A	--	.05	.01	--	.10	--	.11	--	.04	.00	--
MAR 09... A	--	.01	--	.00	--	.30	--	.30	.02	.00	--
MAY 29... A	--	.00	--	.00	--	.10	--	.10	.01	.00	100
JUL 16... A	--	.02	--	.03	--	.37	--	.40	.02	.01	--
SEP 11... A	--	.01	--	.00	--	.20	--	.20	.02	.01	200

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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY 29... A	1245	0	0	0	0	0	20	0	10	.0	2.8
SEP 11... A	0915	10	200	10	0	0	20	0	0	.0	.9

SACRAMENTO RIVER BASIN

11342000 SACRAMENTO RIVER AT DELTA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO MAY 1979

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

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	8.5								
2	9.0	6.5	12.0	8.5								
3	9.5	7.0	12.5	9.0								
4	10.5	8.0	12.0	9.5								
5	10.5	8.5	10.0	9.0								
6	10.5	9.0	8.5	7.5								
7	10.5	7.5	9.5	7.0								
8	10.0	8.0	9.5	7.0								
9	10.0	7.5	11.0	7.0								
10	8.0	6.5	11.5	8.0								
11	9.5	7.0	12.5	9.0								
12	10.0	8.0	13.0	10.0								
13	10.5	8.5	13.5	10.0								
14	10.5	8.0	13.5	9.5								
15	11.0	8.5	13.5	10.0								
16	11.0	7.5	13.5	9.5								
17	8.0	6.5	14.0	10.5								
18	8.0	6.0	14.0	10.5								
19	9.0	6.0	14.5	10.5								
20	10.0	7.0	15.0	11.0								
21	10.5	8.5	15.5	11.5								
22	10.5	8.5	15.0	11.5								
23	8.5	7.5	14.5	11.5								
24	9.5	7.5	15.0	11.0								
25	11.0	7.5	15.0	11.5								
26	11.0	9.0	15.0	12.0								
27	9.5	8.0	14.5	12.0								
28	11.5	8.0	13.0	10.5								
29	11.0	8.0	13.0	10.0								
30	11.5	9.0	14.0	10.5								
31	---	---	14.5	12.0								
MONTH	11.5	6.0	15.5	7.0								

11344000 NORTH FORK PIT RIVER AT ALTURAS, CA

LOCATION.--Lat 41°28'56", long 120°32'16", in SE¼NW¼ sec.13, T.42 N., R.12 E., Modoc County, Hydrologic Unit 18020002, on right bank 10 ft (3 m) downstream from Estes Street bridge in Alturas, and 1.2 mi (1.9 km) upstream from confluence of North and South Forks.

DRAINAGE AREA.--212 mi² (549 km²), excluding Goose Lake basin.

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR CA-78-4: 1975(M), 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 4,345.00 ft (1,324.356 m) National Geodetic Vertical Datum of 1929. Since Apr. 10, 1973, a supplementary water-stage recorder for winter periods is located above a concrete weir 0.25 mi (0.40 km) upstream.

REMARKS.--Records good except those for December and January, which are fair. Flow is regulated by many small irrigation ponds and Dorris Reservoir, capacity 11,100 acre-ft (13.7 hm³). Diversions above station for irrigation of about 7,100 acres (28.7 km²). See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--8 years, 58.8 ft³/s (1.665 m³/s), 42,600 acre-ft/yr (52.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) Feb. 29, 1972, gage height, 11.90 ft (3.627 m), from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of estimate of peak discharge by flow-over-dam computation; minimum daily, 0.01 ft³/s (<0.001 m³/s) July 20, Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 815 ft³/s (23.1 m³/s) Mar. 15, gage height, 8.39 ft (2.557 m); minimum daily, 0.08 ft³/s (0.002 m³/s) Aug. 7, 8.

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	.97	.84	19	4.8	9.8	22	97	243	.80	.75	.23	.52
2	.98	.71	16	5.4	10	21	86	228	.88	.85	.45	.55
3	.75	.67	13	5.8	12	22	75	220	1.2	1.0	.60	.63
4	.62	.71	13	5.8	11	25	78	224	1.1	.87	.41	.71
5	.60	.75	15	5.6	11	47	111	236	1.8	.78	.30	.93
6	.70	1.3	10	6.0	12	139	186	234	1.6	.72	.20	1.3
7	.98	7.2	9.7	6.2	15	282	195	226	1.1	.67	.08	1.1
8	1.1	3.5	9.0	6.0	45	345	183	240	2.3	.67	.08	.84
9	1.1	2.9	9.4	6.2	104	312	222	198	1.0	.61	.15	.77
10	1.2	3.4	10	7.0	106	321	179	167	1.4	.45	.15	.70
11	1.3	3.1	11	141	150	397	263	163	2.2	.51	.15	.67
12	1.2	3.0	13	302	86	499	283	175	2.6	.58	.30	.61
13	1.2	51	11	48	97	415	266	179	1.7	.67	.43	.54
14	1.2	42	10	21	63	338	271	198	1.1	.79	.34	.42
15	1.1	13	17	12	37	541	285	216	1.0	.96	.30	.30
16	1.1	12	19	9.2	30	645	330	214	.90	.67	.30	.22
17	1.1	12	6.3	7.3	25	463	303	192	.83	.67	.33	.22
18	1.1	11	5.3	7.0	23	324	295	184	33	.71	.40	.16
19	1.1	12	4.3	6.2	21	252	248	178	7.3	.88	.45	.15
20	1.2	32	4.1	5.0	20	195	214	169	9.5	.76	.45	.15
21	.91	20	4.8	4.6	20	161	208	143	5.1	.75	.45	.15
22	4.6	14	4.0	4.0	19	140	215	129	1.6	.65	.45	.21
23	4.1	13	3.4	4.5	18	126	210	118	1.6	.60	.45	1.0
24	2.6	12	3.1	4.0	18	133	186	102	2.0	.53	.36	1.2
25	1.9	11	2.8	3.7	18	151	178	73	1.3	.52	.37	.65
26	1.7	10	2.5	4.0	20	177	206	94	1.3	.44	.37	.92
27	1.7	9.4	3.2	2.6	21	173	262	68	1.6	.47	.37	.97
28	1.8	11	2.9	2.3	24	145	256	15	1.2	.52	.32	.82
29	1.9	19	3.1	8.8	---	131	248	12	.99	.52	.49	.71
30	1.7	24	3.5	12	---	127	233	5.3	.69	.54	.57	.56
31	1.2	---	4.0	10	---	111	---	4.6	---	.36	.54	---
TOTAL	44.71	356.48	262.4	678.0	1045.8	7180	6372	4847.9	90.69	20.47	10.84	18.68
MEAN	1.44	11.9	8.46	21.9	37.4	232	212	156	3.02	.66	.35	.62
MAX	4.6	51	19	302	150	645	330	243	33	1.0	.60	1.3
MIN	.60	.67	2.5	2.3	9.8	21	75	4.6	.69	.36	.08	.15
AC-FT	89	707	520	1340	2070	14240	12640	9620	180	41	22	37
CAL YR 1978	TOTAL	21289.53	MEAN 58.3	MAX 909	MIN .03	AC-FT 42230						
WTR YR 1979	TOTAL	20927.97	MEAN 57.3	MAX 645	MIN .08	AC-FT 41510						

SACRAMENTO RIVER BASIN

11345500 SOUTH FORK PIT RIVER NEAR LIKELY, CA

LOCATION.--Lat 41°13'51", long 120°26'10", in NE¼SE¼ sec.11, T.39 N., R.13 E., Modoc County, Hydrologic Unit 18020002, on left bank 250 ft (76 m) downstream from highway bridge, 1.4 mi (2.3 km) downstream from West Valley Creek, and 3.5 mi (5.6 km) east of Likely..

DRAINAGE AREA.--247 mi² (640 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,508 ft (1,374 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, at site 1,000 ft (305 m) downstream at different datum.

REMARKS.--Records excellent except those for the winter period, which are good. Flow partly regulated by West Valley Creek Reservoir beginning in May 1937, usable capacity, 21,700 acre-ft (26.8 hm³). Diversions for irrigation of about 3,800 acres (1,538 hm²) above station. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--51 years, 78.5 ft³/s (2.22 m³/s), 56,870 acre-ft/yr (70.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) June 2, 1971, gage height, 6.05 ft (1.844 m); minimum, 0.2 ft³/s (0.006 m³/s) Feb. 3, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 295 ft³/s (8.35 m³/s) May 20, gage height, 3.65 ft (1.113 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Dec. 30, 31.

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	25	26	41	2.0	23	5.4	6.8	164	157	137	128	74
2	24	26	32	2.0	22	5.0	5.1	162	150	140	124	69
3	24	25	27	2.1	21	4.7	4.8	182	147	141	142	67
4	25	25	32	2.5	22	4.6	4.3	199	168	138	157	66
5	25	24	29	2.9	25	13	7.0	188	204	131	155	66
6	26	21	19	3.2	21	46	17	166	241	126	154	65
7	27	22	15	3.4	17	73	15	140	223	128	153	63
8	24	23	12	3.6	12	76	14	101	215	127	151	62
9	24	24	8.7	4.0	7.6	58	18	74	211	125	150	62
10	23	22	4.6	10	11	51	15	57	208	122	151	66
11	23	20	4.8	42	17	52	26	86	201	123	150	62
12	24	18	5.3	35	18	51	25	125	199	120	148	61
13	23	17	5.8	17	33	39	18	150	194	124	148	58
14	23	20	6.5	13	11	31	17	169	191	121	146	57
15	23	19	6.7	5.6	4.8	33	21	193	183	116	147	57
16	22	28	6.8	4.3	3.2	35	29	215	181	117	133	55
17	22	28	6.5	4.2	3.9	33	28	233	205	117	106	55
18	21	26	6.0	4.2	3.5	28	26	257	203	114	105	55
19	21	26	5.5	4.4	6.2	21	18	280	146	114	103	55
20	22	27	4.9	4.6	5.9	16	18	290	135	123	93	54
21	23	27	3.7	4.7	5.2	13	17	275	125	136	74	54
22	23	27	3.8	4.7	5.6	12	20	257	117	146	72	53
23	24	24	3.4	4.8	5.4	10	21	241	110	138	68	52
24	24	20	3.1	5.2	4.5	10	17	221	105	136	67	52
25	22	19	2.8	5.0	4.6	11	15	196	100	137	69	52
26	22	16	2.6	5.1	5.9	14	34	180	107	134	70	52
27	25	18	2.4	5.0	5.5	13	100	175	139	132	69	52
28	25	22	2.2	6.6	5.0	12	143	158	137	132	72	51
29	25	76	2.0	9.2	---	12	152	134	136	133	80	49
30	24	61	1.9	13	---	11	147	111	137	130	77	48
31	23	---	1.9	24	---	8.7	---	128	---	129	76	---
TOTAL	731	777	308.9	257.3	329.8	802.4	999.0	5507	4975	3987	3538	1744
MEAN	23.6	25.9	9.96	8.30	11.8	25.9	33.3	178	166	129	114	58.1
MAX	27	76	41	42	33	76	152	290	241	146	157	74
MIN	21	16	1.9	2.0	3.2	4.6	4.3	57	100	114	67	48
AC-FT	1450	1540	613	510	654	1590	1980	10920	9870	7910	7020	3460
CAL YR 1978	TOTAL	24547.2	MEAN 67.3	MAX 273	MIN 1.3	AC-FT 48690						
WTR YR 1979	TOTAL	23956.4	MEAN 65.6	MAX 290	MIN 1.9	AC-FT 47520						

11345500 SOUTH FORK PIT RIVER NEAR LIKELY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1957 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT 12...	0730	24	7.8	7.0	1.0	10.0	4	--	--
MAY 02...	1400	154	7.3	14.0	7.0	9.4	6	1.0	32
SEP 12...	1135	61	8.7	20.0	18	8.3	6	1.2	53

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 AD- SORP- TION RATIO	ALKA- LINEITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT 12...	--	--	--	5.3	--	46	.0	8	.00
MAY 02...	0	8.0	3.0	6.0	.5	44	.0	16	--
SEP 12...	0	13	5.0	11	.7	71	.0	8	--

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
OCT 12...	--	.03	--	.50	--	.53	.04	.02
MAY 02...	.01	--	.00	--	.50	.50	.07	.00
SEP 12...	.01	--	.01	--	.79	.80	.11	.06

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)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 12...	0730	0	0	0	0	0	0	80	0	10	.1	2.6
MAY 02...	1400	0	0	0	0	0	0	30	0	10	.0	6.2
SEP 12...	1135	0	200	0	0	0	10	20	0	10	.0	4.6

LOCATION. --Lat 41°24'22", long 120°55'36", in NW¼SW¼ sec.10, T.41 N., R.9 E., Modoc County, Hydrologic Unit 18020002, on right bank at lower end of Warm Spring Valley, 3.9 mi (6.3 km) southwest of Canby.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1445: 1904, 1935(M), 1936, 1937(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,266 ft (1,300 m) National Geodetic Vertical Datum of 1929. January 1904 to December 1905, nonrecording gage and May 6, 1929, to Sept. 30, 1931, water-stage recorder, at site 100 ft (30 m) upstream at different datum.

REMARKS.--Records excellent except those for December and January, which are good. Flow regulated by many small reservoirs, total capacity now, about 144,000 acre-ft (178 hm³). Diversions for irrigation of about 39,000 acres (158 km²) above station. See schematic diagram of Pit and McClood River basins.

AVERAGE DISCHARGE.--49 years (water years 1905, 1932-79), 243 ft³/s (6.882 m³/s), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,000 ft³/s (368 m³/s) Mar. 8, 1904, gage height, 15.0 ft (4.57 m) site and datum then in use; minimum, 0.1 ft³/s (0.003 m³/s) Apr. 29, Aug. 5, Sept. 18, 1934, Aug. 18-21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft³/s (39.1 m³/s) Mar. 9, gage height, 5.16 ft (1.573 m); minimum daily, 4.7 ft³/s (0.13 m³/s) Aug. 1.

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	42	90	150	24	62	221	204	353	33	47	4.7	55
2	45	65	148	25	65	220	183	392	21	51	6.9	59
3	43	48	136	26	66	196	166	375	21	43	6.3	66
4	38	49	112	34	67	225	153	331	19	44	5.1	67
5	34	61	99	41	66	317	150	348	25	50	20	62
6	31	70	87	42	73	512	175	432	18	54	41	51
7	26	63	84	45	96	804	238	520	13	52	28	34
8	24	80	80	48	126	1130	266	555	10	48	21	32
9	22	72	77	49	172	1360	273	530	12	44	29	32
10	21	77	67	60	262	1270	305	483	25	41	27	33
11	20	58	63	137	351	1100	290	417	13	38	24	34
12	21	53	72	188	378	1050	344	360	15	41	23	34
13	19	57	91	356	382	1050	401	303	54	42	28	29
14	17	68	95	271	364	978	373	377	61	41	47	27
15	17	82	94	173	316	798	365	411	62	39	94	22
16	16	94	86	125	250	803	370	304	95	35	79	17
17	15	66	80	114	215	958	421	342	143	33	81	17
18	15	75	74	105	182	891	425	338	192	32	84	23
19	16	80	68	95	161	647	431	244	193	32	75	30
20	21	84	61	90	163	496	386	343	228	25	68	35
21	26	90	52	85	142	380	329	424	189	19	59	38
22	26	101	48	80	130	311	311	408	143	22	53	33
23	25	96	42	70	123	259	304	252	130	50	49	34
24	35	90	38	63	123	230	313	217	127	54	41	24
25	58	87	34	61	118	223	299	253	110	100	31	35
26	51	79	31	60	129	234	279	280	89	81	21	35
27	17	71	28	60	154	251	309	241	74	58	19	36
28	20	78	27	59	193	256	376	219	53	37	21	43
29	27	78	25	61	---	232	402	112	40	22	31	44
30	28	134	25	62	---	224	362	66	39	13	40	36
31	35	---	24	61	---	215	---	67	---	8.3	54	---
TOTAL	851	2296	2198	2770	4929	17841	9205	10297	2247	1296.3	1211.0	1127
MEAN	27.5	76.5	70.9	89.4	176	576	307	332	74.9	41.8	39.1	37.6
MAX	58	134	150	356	382	1360	431	555	228	100	94	67
MIN	15	48	24	24	62	196	150	66	10	8.3	4.7	17
AC-FT	1690	4550	4360	5490	9780	35390	18260	20420	4460	2570	2400	2240
CAL YR 1978	TOTAL	60455.8	MEAN 166	MAX 1420	MIN 1.8	AC-FT	119900					
WTR YR 1979	TOTAL	56268.3	MEAN 154	MAX 1360	MIN 4.7	AC-FT	111600					

11348500 PIT RIVER NEAR CANBY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

CHEMICAL ANALYSES: Water years 1951 to current year.

WATER TEMPERATURES: Water years 1965-79 (discontinued).

SEDIMENT RECORDS: Water years 1957-61, 1967-70.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1965 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from March 1965 to January 1979.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 31.0°C June 28, 1973; minimum recorded, 0.0°C on many days during most years.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 18.0°C Oct. 1; minimum recorded, 0.0°C on several days during November to January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY (MG/L AS CAC03)
OCT									
11...	1445	20	283	8.3	16.5	14	10.3	--	--
NOV									
14...	1545	75	305	8.2	2.5	18	12.1	--	--
DEC									
14...	1515	108	281	7.6	1.5	16	12.0	--	--
JAN									
04...	1245	37	316	7.8	2.0	11	12.5	--	--
FEB									
05...	1340	66	283	7.7	.5	10	12.5	--	--
MAR									
07...	1555	890	232	7.5	9.0	110	9.4	--	--
APR									
11...	1410	283	202	8.0	7.5	21	10.6	--	--
MAY									
02...	1245	392	165	7.8	14.0	25	9.4	--	--
16...	1000	283	190	7.5	18.0	--	--	--	--
JUN									
12...	1405	9.1	260	8.4	21.5	11	8.7	--	--
26...	0935	93	263	8.3	22.5	--	--	--	--
JUL									
17...	1405	33	265	9.0	25.0	6.0	9.9	--	--
AUG									
14...	1405	51	278	8.7	20.5	4.0	10.2	--	--
16...	1200	73	264	8.6	19.5	--	8.8	21	120
SEP									
12...	1005	35	278	8.6	17.0	10	7.8	--	--

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT								
11...	--	--	--	--	--	--	--	--
NOV								
14...	--	--	--	--	--	--	--	--
DEC								
14...	--	--	--	--	--	--	--	--
JAN								
04...	--	--	--	--	--	--	--	--
FEB								
05...	--	--	--	--	--	--	--	--
MAR								
07...	--	--	--	--	--	--	--	--
APR								
11...	--	--	--	--	--	--	--	--
MAY								
02...	--	--	--	--	--	--	--	--
16...	--	.10	.02	.88	.90	.16	.08	--
JUN								
12...	--	--	--	--	--	--	--	--
26...	--	.02	.10	1.2	1.3	.18	.11	--
JUL								
17...	--	--	--	--	--	--	--	--
AUG								
14...	--	--	--	--	--	--	--	--
16...	4.0	.00	.03	.87	.90	.18	.10	100
SEP								
12...	--	--	--	--	--	--	--	--

SACRAMENTO RIVER BASIN

11348500 PIT RIVER NEAR CANBY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	14.0	8.0	6.0	3.5	2.0	0.5	0.0				
2	17.5	13.0	9.0	6.5	2.5	1.0	0.5	0.0				
3	17.5	12.5	9.0	6.0	2.0	0.0	0.5	0.0				
4	17.0	12.5	8.5	7.0	4.0	0.5	0.5	0.0				
5	17.5	13.0	8.0	5.5	2.5	0.5	0.5	0.0				
6	17.5	13.0	8.0	5.0	0.5	0.0	0.5	0.0				
7	17.0	13.0	8.0	5.5	0.5	0.0	0.5	0.0				
8	17.5	12.5	8.0	5.0	0.5	0.0	0.0	0.0				
9	17.0	12.0	8.0	5.5	0.5	0.0	0.5	0.0				
10	17.0	12.0	5.0	2.5	0.5	0.0	0.5	0.0				
11	17.0	12.0	2.0	0.5	0.5	0.0	0.5	0.0				
12	17.0	12.5	1.5	0.5	0.5	0.0	0.5	0.0				
13	17.0	12.0	2.0	0.5	0.5	0.0	0.0	0.0				
14	17.5	11.5	1.5	0.5	0.5	0.0	0.5	0.0				
15	16.5	12.0	1.0	0.5	0.5	0.0	0.5	0.0				
16	16.5	12.0	1.5	0.5	0.5	0.0	0.5	0.0				
17	16.5	11.5	2.0	0.5	0.0	0.0	0.5	0.0				
18	16.0	11.0	2.0	0.5	0.5	0.0	0.5	0.0				
19	12.5	10.5	3.5	1.0	0.5	0.0	0.5	0.0				
20	14.0	9.0	3.0	0.5	0.5	0.0	0.5	0.0				
21	13.5	9.5	3.0	2.0	0.5	0.0	0.5	0.0				
22	12.5	8.5	4.0	2.0	0.5	0.0	0.5	0.0				
23	12.0	8.0	3.5	2.0	0.5	0.0	0.5	0.0				
24	12.0	8.5	3.0	2.0	0.5	0.0	0.5	0.0				
25	11.5	8.5	2.5	1.0	0.5	0.0	0.5	0.0				
26	11.5	8.5	1.5	0.0	0.5	0.0	0.5	0.0				
27	12.0	7.5	0.5	0.0	0.5	0.0	0.5	0.0				
28	11.5	7.5	2.0	0.0	0.5	0.0	0.5	0.0				
29	10.5	7.5	4.0	2.0	0.5	0.0	0.5	0.0				
30	8.5	6.0	3.5	1.5	0.5	0.0	0.5	0.0				
31	7.5	4.0	---	---	0.5	0.0	0.0	0.0				
MONTH	18.0	4.0	9.0	0.0	4.0	0.0	0.5	0.0				

11349000 PIT RIVER NEAR LOOKOUT, CA

LOCATION.--Lat 41°19'27", long 121°07'36", in SE¼NE¼ sec.11, T.40 N., R.7 E., Modoc County, Hydrologic Unit 18020002, on right bank 0.2 mi (0.3 km) downstream from unnamed tributary, and 8.2 mi (13.2 km) north of Lookout.

DRAINAGE AREA.--1,585 mi² (4,105 km²), excluding Goose Lake basin.

PERIOD OF RECORD.--January 1929 to September 1931, August 1958 to September 1971, August 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,147.9 ft (1,264.28 m) National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service). January 1929 to September 1931 at site approximately 2.5 mi (4.0 km) downstream at different datum.

REMARKS.--Records good. Flow regulated by many small reservoirs. Diversions for irrigation of 41,000 acres (16,593 hm²) above station. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--16 years (water years 1930-31, 1959-71, 1979), 292 ft³/s (8.269 m³/s), 211,600 acre-ft/yr (261 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) Jan. 24, 1970, gage height, 20.96 ft (6.389 m); no flow Aug. 29, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s (47.9 m³/s) Mar. 9, gage height, 11.68 ft (3.560 m); minimum daily, 13 ft³/s (0.37 m³/s) Aug. 3, 5.

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	42	54	145	34	61	229	250	345	63	41	17	59
2	42	93	158	35	63	235	228	392	42	48	14	60
3	43	59	147	37	65	215	206	385	34	48	13	65
4	40	50	129	39	72	242	191	340	30	44	14	71
5	36	52	112	46	72	431	181	417	30	43	13	69
6	33	69	95	49	76	690	197	521	34	50	15	65
7	29	67	80	52	88	1050	242	612	30	51	38	52
8	25	69	75	57	125	1420	289	618	27	50	31	41
9	25	84	86	59	190	1600	306	578	25	47	24	39
10	24	79	74	63	275	1620	319	534	23	45	29	40
11	22	79	65	119	403	1530	349	467	33	43	28	42
12	22	57	65	256	454	1510	334	396	26	40	26	41
13	24	66	66	262	727	1460	449	320	26	42	25	40
14	22	61	71	387	535	1400	412	328	56	42	30	36
15	21	80	69	222	399	1260	396	418	61	36	47	34
16	22	99	56	152	301	1100	387	338	61	34	95	32
17	21	92	51	115	250	1140	456	324	114	32	69	28
18	20	72	48	100	208	1100	471	333	131	32	79	27
19	20	87	43	93	178	852	478	255	177	33	77	33
20	22	95	42	86	163	662	439	290	182	29	70	42
21	27	94	43	84	164	529	375	379	190	25	62	46
22	34	102	42	77	141	428	330	393	141	22	55	48
23	34	104	41	72	135	354	321	312	118	48	53	44
24	34	98	39	68	128	305	328	194	109	48	48	45
25	46	94	37	52	126	285	317	201	106	66	43	47
26	64	87	36	46	136	307	291	266	91	85	37	48
27	54	78	39	48	148	319	305	237	74	65	30	48
28	29	88	37	51	196	321	360	204	62	44	29	48
29	29	88	36	54	---	298	408	160	48	33	31	52
30	37	103	34	60	---	282	395	79	40	24	42	51
31	39	---	34	67	---	269	---	64	---	20	50	---
TOTAL	982	2400	2095	2942	5879	23443	10010	10700	2184	1310	1234	1393
MEAN	31.7	80.0	67.6	94.9	210	756	334	345	72.8	42.3	39.8	46.4
MAX	64	104	158	387	727	1620	478	618	190	85	95	71
MIN	20	50	34	34	61	215	181	64	23	20	13	27
AC-FT	1950	4760	4160	5840	11660	46500	19850	21220	4330	2600	2450	2760

CAL YR 1978	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--
WTR YR 1979	TOTAL	64572	MEAN	177	MAX	1620	MIN	13	AC-FT	128100

11350500 ASH CREEK AT ADIN, CA

LOCATION.--Lat 41°11'54", long 120°56'32", in SE¼SW¼ sec.21, T.39 N., R.9 E., Modoc County, Hydrologic Unit 18020002, on left bank 300 ft (91 m) upstream from highway bridge at Adin, and 0.4 mi (0.6 km) upstream from Butte Creek.

DRAINAGE AREA.--258 mi² (668 km²).

PERIOD OF RECORD.--March 1904 to December 1905, October 1928 to November 1932, October 1957 to current year. Records of daily discharge for Oct. 19-31, 1928, are in error and should not be used.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,190 ft (1,277 m), on basis of bench mark 300 ft (91 m) downstream. Prior to Sept. 12, 1957, water-stage recorder or nonrecording gage at sites within 1 mi (2 km) of present site, at different datums.

REMARKS.--Small diversions above station for irrigation. Flow regulated by many small reservoirs, total capacity, 4,732 acre-ft (5.83 hm³). See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--27 years (water years 1905, 1929-32, 1958-79), 74.3 ft³/s (2.104 m³/s), 53,830 acre-ft/yr (66.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,950 ft³/s (83.5 m³/s) Jan. 24, 1970, gage height, 14.69 ft (4.478 m) in gage well, 15.24 ft (4.645 m) from floodmarks; no flow for part of Aug. 26, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 926 ft³/s (26.2 m³/s) Mar. 7, gage height, 9.64 ft (2.938 m); minimum daily, 11 ft³/s (0.31 m³/s) July 17, Sept. 22.

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	24	40	37	29	29	60	61	88	22	15	17	16
2	25	41	35	34	27	55	57	89	20	14	17	16
3	26	39	32	39	28	53	53	86	21	15	17	16
4	27	38	31	44	31	80	52	81	20	15	17	16
5	26	39	36	39	31	186	53	179	19	15	28	16
6	26	39	25	38	35	370	68	185	18	15	20	15
7	21	40	20	37	38	537	69	197	17	14	18	16
8	22	40	22	39	41	449	64	165	17	15	19	13
9	25	41	36	39	44	368	73	124	17	15	18	13
10	27	40	38	41	46	305	66	106	18	15	18	14
11	28	31	35	79	53	265	87	101	17	14	19	14
12	31	25	35	100	51	220	76	85	16	15	19	14
13	31	28	33	48	111	170	72	79	17	15	20	14
14	31	27	33	40	80	156	71	76	16	14	21	15
15	36	25	33	36	54	202	75	75	16	14	21	14
16	32	27	31	37	49	311	83	72	16	13	20	13
17	33	32	33	37	46	193	93	68	21	11	19	15
18	34	31	35	35	46	170	97	63	24	12	19	15
19	34	30	25	32	45	150	80	59	21	12	18	15
20	36	35	22	31	45	110	72	56	20	15	20	16
21	37	33	38	32	45	95	66	46	17	31	20	15
22	37	33	37	32	44	86	66	41	16	30	19	11
23	37	31	35	31	43	80	73	43	17	22	16	13
24	33	30	34	32	43	75	74	40	16	19	15	17
25	32	30	33	32	45	76	62	37	14	19	16	20
26	34	30	33	25	55	81	67	33	13	17	15	24
27	36	29	34	32	56	78	87	32	12	17	12	17
28	36	32	31	30	63	72	84	31	13	18	15	16
29	36	35	21	23	---	73	84	27	13	19	18	16
30	36	36	20	27	---	72	80	26	14	20	20	17
31	38	---	28	31	---	71	---	24	---	17	18	---
TOTAL	967	1007	971	1181	1324	5269	2165	2414	518	512	569	462
MEAN	31.2	33.6	31.3	38.1	47.3	170	72.2	77.9	17.3	16.5	18.4	15.4
MAX	38	41	38	100	111	537	97	197	24	31	28	24
MIN	21	25	20	23	27	53	52	24	12	11	12	11
AC-FT	1920	2000	1930	2340	2630	10450	4290	4790	1030	1020	1130	916

CAL YR 1978 TOTAL 23353.6 MEAN 64.0 MAX 476 MIN 5.2 AC-FT 46320
WTR YR 1979 TOTAL 17359.0 MEAN 47.6 MAX 537 MIN 11 AC-FT 34430

11355010 PIT RIVER BELOW PIT NO. 1 POWERHOUSE, NEAR FALL RIVER MILLS, CA

LOCATION.--Lat 40°59'00", long 121°30'39", in NE¼NW¼ sec.15, T.36 N., R.4 E., Shasta County, Hydrologic Unit 18020003, on left bank 0.9 mi (1.4 km) downstream from Pit No. 1 powerhouse and 4 mi (6 km) southwest of Fall River Mills.

DRAINAGE AREA.--3,761 mi² (9,741 km²), excluding Goose Lake basin.

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,840 ft (865.6 m), from topographic map.

REMARKS.--Records good. Flow regulated by many small reservoirs, total usable reservoir capacity, 210,000 acre-ft (259 hm³), and Pit No. 1 powerplant. Many diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,380 ft³/s (124 m³/s) Mar. 9, 1979, gage height, 8.42 ft (2.566 m); minimum daily, 819 ft³/s (23.2 m³/s) Feb. 1, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1974 reached a stage of 14.8 ft (4.51 m), from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,380 ft³/s (124 m³/s) Mar. 9, gage height, 8.42 ft (2.566 m); minimum daily, 819 ft³/s (23.2 m³/s) Feb. 1.

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	1290	1310	1490	1330	819	2330	1900	1930	1360	1230	1080	1250
2	1270	1270	1510	1300	1190	2080	1790	2000	1290	1220	1150	1240
3	1340	1340	1540	1350	1280	2010	1780	2030	1260	1180	1150	1240
4	1300	1350	1540	1340	1340	1990	1790	1970	1250	1130	1160	1250
5	1300	1390	1540	1420	1340	2120	1700	2000	1250	1470	1160	1250
6	1280	1400	1500	1290	1360	2460	1720	2210	1180	996	1160	1250
7	1240	1360	1440	1340	1410	3060	1700	2390	1290	1140	1240	1250
8	1380	1400	1400	1360	1360	3630	1680	2470	1240	1170	1130	1260
9	1300	1520	1460	1360	1430	4010	1820	2480	1170	1030	1140	1260
10	1330	1420	1410	1420	1480	3890	1800	2440	1180	1350	1190	1270
11	1320	1530	1390	1500	1600	3820	1830	2240	1170	1210	1070	1250
12	1090	1240	1510	1640	1720	3710	1830	2240	1230	1200	1160	1150
13	1490	1170	1460	1800	2140	3410	1790	2030	1070	1370	1170	1170
14	1300	1470	1430	1760	2600	3200	1930	1950	1250	999	1160	1200
15	1260	1450	1400	1650	2550	3150	2180	2020	1190	1150	1200	1190
16	1300	1440	1410	1770	2360	3130	2060	1940	1170	1200	1170	1200
17	1320	1480	1520	1620	2070	3020	1990	1760	1210	1110	1190	1190
18	1300	1480	1390	1590	2130	3900	2110	1730	1180	1140	1180	1180
19	1330	1520	1410	1490	1930	3080	2050	1710	1190	1160	1190	1180
20	1290	1670	1370	1460	1880	2810	2090	1700	1230	1170	1210	1180
21	1320	1630	1400	1470	1770	2490	2000	1590	1300	1140	1220	1180
22	1310	1580	1340	1420	1910	2190	1950	1580	1220	1220	1220	1200
23	1330	1520	1390	1670	1810	2280	1910	1540	1150	1270	1220	1190
24	1290	1510	1370	1350	1800	2010	1870	1410	1230	1190	1230	1210
25	1310	1500	1380	1400	1770	1910	1920	1530	1170	1170	1210	1270
26	1270	1490	1330	1350	1850	1890	1850	1330	1250	1230	1220	1210
27	1300	1480	1360	1400	1870	1830	1920	1400	1170	1100	1220	1210
28	1350	1470	1360	1390	1970	1950	1750	1380	1180	1180	1280	1260
29	1310	1470	1360	1350	---	1930	1770	1570	1160	1200	1190	1150
30	1350	1480	1340	1350	---	1930	1880	1310	1180	1280	1280	1270
31	1450	---	1340	1350	---	1900	---	1300	---	1170	1260	---
TOTAL	40620	43340	44090	45290	48739	82120	56360	57180	36370	36775	36810	36560
MEAN	1310	1445	1422	1461	1741	2649	1879	1845	1212	1186	1187	1219
MAX	1490	1670	1540	1800	2600	4010	2180	2480	1360	1470	1280	1270
MIN	1090	1170	1330	1290	819	1830	1680	1300	1070	996	1070	1150
AC-FT	80570	85960	87450	89830	96670	163900	111800	113400	72140	72940	73010	72520
CAL YR 1978	TOTAL	665380	MEAN	1823	MAX	4050	MIN	1090	AC-FT	1320000		
WTR YR 1979	TOTAL	564254	MEAN	1546	MAX	4010	MIN	819	AC-FT	1119000		

SACRAMENTO RIVER BASIN

11355500 HAT CREEK NEAR HAT CREEK, CA

LOCATION.--Lat 40°41'12", long 121°25'25", in NW¼SE¼ sec.28, T.33 N., R.5 E., Shasta County, Hydrologic Unit 18020003, on right bank 0.8 mi (1.3 km) northeast of Old Station Post Office, and 8 mi (13 km) southeast of Hat Creek Post Office.

DRAINAGE AREA.--162 mi² (420 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--July 1926 to September 1929, April 1930 to current year.

REVISED RECORDS.--WSP 1395: 1938. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,300 ft (1,311 m), from topographic map. July 1926 to April 1928 at site 0.5 mi (0.8 km) upstream at different datum. May 1928 to July 1965 at site 80 ft (24 m) upstream at datum 2.76 ft (0.841 m) higher.

REMARKS.--Records excellent. Diversions for irrigation of 260 acres (1.05 km²) above station. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--52 years, 139 ft³/s (3.936 m³/s), 100,700 acre-ft/yr (124 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) Dec. 11, 1937, gage height, 7.75 ft (2.362 m) in gage well, affected by drawdown, site and datum then in use, from rating curve extended above 610 ft³/s (17.3 m³/s) on basis of slope-area measurement of maximum flow; minimum, 67 ft³/s (1.90 m³/s) Sept. 7, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 214 ft³/s (6.06 m³/s) May 21, gage height, 3.23 ft (0.984 m), no peak above base of 220 ft³/s (6.23 m³/s); minimum daily, 100 ft³/s (2.83 m³/s) Sept. 23, 24.

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	126	124	134	120	123	119	118	140	170	116	113	105
2	126	124	129	121	123	118	118	136	174	114	112	104
3	126	125	124	122	122	120	118	144	185	114	113	103
4	126	125	132	124	124	120	118	150	192	113	112	103
5	126	125	130	125	124	121	120	153	192	113	112	103
6	126	125	122	125	125	123	122	144	191	114	112	103
7	124	125	120	125	124	124	120	141	178	113	112	103
8	118	125	120	126	124	124	121	137	168	113	112	109
9	118	125	125	124	123	123	123	133	165	113	108	110
10	118	119	131	127	123	123	120	132	158	116	105	110
11	118	120	131	172	124	124	120	131	153	116	105	109
12	118	120	134	153	132	125	119	131	156	116	105	110
13	118	124	133	131	132	124	121	142	149	116	104	110
14	115	122	130	133	119	125	123	155	139	115	104	109
15	112	122	126	129	120	127	125	163	138	114	104	109
16	114	129	124	126	119	124	130	169	135	114	104	109
17	117	128	129	125	119	122	128	171	133	114	104	109
18	121	127	125	127	120	122	124	181	127	116	104	105
19	121	129	125	126	118	121	122	190	126	115	105	102
20	122	130	122	127	120	120	121	194	134	114	112	101
21	122	130	125	127	119	120	122	198	138	112	117	101
22	122	129	126	126	120	120	123	199	134	111	114	101
23	122	125	126	125	119	119	123	194	133	108	112	100
24	122	127	127	127	119	120	121	189	133	108	111	100
25	123	124	129	129	119	121	120	189	131	108	110	101
26	123	123	127	122	119	121	123	192	130	108	110	101
27	123	124	129	124	118	123	133	188	126	108	110	101
28	123	130	127	126	121	121	132	178	126	106	112	105
29	123	133	124	122	---	120	133	163	125	105	111	107
30	123	133	120	121	---	120	135	159	120	110	111	107
31	123	---	121	124	---	118	---	167	---	112	106	---
TOTAL	3759	3771	3927	3961	3412	3772	3696	5053	4459	3485	3386	3150
MEAN	121	126	127	128	122	122	123	163	149	112	109	105
MAX	126	133	134	172	132	127	135	199	192	116	117	110
MIN	112	119	120	120	118	118	118	131	120	105	104	100
AC-FT	7460	7480	7790	7860	6770	7480	7330	10020	8840	6910	6720	6250

CAL YR 1978 TOTAL 52843 MEAN 145 MAX 279 MIN 112 AC-FT 104800
WTR YR 1979 TOTAL 45831 MEAN 126 MAX 199 MIN 100 AC-FT 90910

11360500 BURNEY CREEK AT PARK AVENUE, NEAR BURNEY, CA

LOCATION.--Lat 40°52'35", long 121°40'13", in NE¼SE¼ sec.19, T.35 N., R.3 E., Shasta County, Hydrologic Unit 18020003, on right bank upstream edge of Park Avenue bridge, 0.4 mi (0.6 km) southwest of Burney Post Office, and 3.5 mi (5.6 km) upstream from Goose Creek.

DRAINAGE AREA.--94.6 mi² (245.0 km²).

PERIOD OF RECORD.--August 1911 to August 1913 (published as "at Burney"), March 1921 to September 1922, April 1958 to September 1964, October 1965 to September 1974 (published as "near Burney"), October 1974 to September 1975, October 1976 to September 1977. Monthly discharge only for some periods, published in WSP 1315-A.

REVISIONS.--WSP 1931: Drainage area. WDR CA-71-2: 1970.

GAGE.--Water-stage recorder. Altitude of gage is 3,180 ft (969 m), from topographic map. August 1911 to August 1913 and March 1921 to September 1922, nonrecording gage or water-stage recorder at different site and datum. April 1958 to September 1964, October 1965 to Nov. 6, 1974, at site 1.0 mi (1.6 km) upstream at different datum.

REMARKS.--Small diversions upstream for irrigation. Slight regulation probably caused by logging operations.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--22 years (water years 1912-13, 1922, 1959-64, 1966-75, 1977-79), 68.4 ft³/s (1.937 m³/s), 49,560 acre-ft/yr (61.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,910 ft³/s (139 m³/s) Jan. 23, 1970, gage height, 15.89 ft (4.843 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of contracted-opening measurement of maximum flow; minimum, 3.4 ft³/s (0.096 m³/s) Aug. 4, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 480 ft³/s (13.6 m³/s) Feb. 12, gage height, 5.55 ft (1.692 m); minimum daily, 8.4 ft³/s (0.238 m³/s) on several days during September.

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	12	13	18	16	15	69	71	142	39	13	9.2	10
2	12	13	16	16	15	65	68	138	36	13	9.1	10
3	12	13	15	16	15	63	68	115	35	14	9.2	9.7
4	12	13	16	16	15	61	68	111	33	14	9.2	9.7
5	12	13	16	16	14	57	74	205	31	13	9.0	9.5
6	12	14	14	16	14	55	81	259	29	13	9.0	9.4
7	12	14	12	16	18	57	83	205	27	12	8.9	9.1
8	12	13	14	16	18	61	85	173	26	12	8.9	9.1
9	12	13	15	16	19	58	91	146	25	12	9.0	9.2
10	12	13	15	28	21	55	88	127	24	12	8.9	9.1
11	12	13	16	76	48	58	88	119	23	12	8.8	8.9
12	12	13	17	43	194	63	89	112	22	11	8.7	8.9
13	12	14	16	25	72	66	92	108	22	11	8.9	8.8
14	12	13	15	21	48	70	99	107	21	11	8.9	8.7
15	12	13	15	20	41	81	104	104	20	11	8.9	8.6
16	12	14	16	19	36	91	114	101	20	11	8.8	8.5
17	12	14	17	21	34	76	136	96	19	11	8.8	8.4
18	12	14	16	18	33	71	111	94	19	11	8.8	8.4
19	12	15	16	18	32	67	96	92	19	11	8.8	8.6
20	13	27	21	19	32	64	90	87	18	11	9.1	8.6
21	13	19	15	17	33	62	85	83	18	11	9.6	8.4
22	13	17	15	18	33	62	87	81	17	11	9.6	8.4
23	13	16	15	19	34	61	92	76	17	11	9.5	8.4
24	13	15	14	17	34	61	96	70	17	10	9.4	8.6
25	13	15	17	16	36	66	91	63	16	9.9	9.1	10
26	13	15	17	16	42	69	92	60	15	9.6	9.0	9.6
27	13	15	16	16	42	86	102	58	14	9.6	8.8	9.1
28	13	15	16	16	75	86	97	53	14	9.5	9.6	9.0
29	13	15	16	15	---	81	93	48	13	9.5	11	8.9
30	13	16	16	15	---	81	90	44	12	9.4	15	8.7
31	13	---	16	15	---	75	---	42	---	9.1	11	---
TOTAL	384	440	489	632	1063	2098	2721	3319	661	348.6	290.5	270.3
MEAN	12.4	14.7	15.8	20.4	38.0	67.7	90.7	107	22.0	11.2	9.37	9.01
MAX	13	27	21	76	194	91	136	259	39	14	15	10
MIN	12	13	12	15	14	55	68	42	12	9.1	8.7	8.4
AC-FT	762	873	970	1250	2110	4160	5400	6580	1310	691	576	536

CAL YR 1978 TOTAL 29243.2 MEAN 80.1 MAX 624 MIN 6.6 AC-FT 58000
WTR YR 1979 TOTAL 12716.4 MEAN 34.8 MAX 259 MIN 8.4 AC-FT 25220

RESERVOIRS IN PIT AND McCLOUD RIVER BASINS, CA

11361400 LAKE BRITTON NEAR BURNEY.--Lat 41°01'20", long 121°40'32", in SW¼SW¼ sec.30, T.37 N., R.3 E., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, at control house on right bank 200 ft (61 m) upstream from dam on Pit River, 1.1 mi (1.8 km) downstream from Clark Creek, 1.3 mi (2.1 km) northwest of Burney Falls, and 9 mi (14 km) north of Burney. DRAINAGE AREA, 4,607 mi² (11,932 km²). PERIOD OF RECORD, October 1965 to current year. GAGE, remote telemark read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

Reservoir is formed by gravity-type concrete dam. Storage began July 15, 1925. Maximum storage, 40,626 acre-ft (50.1 hm³). Dead storage, 30 acre-ft (370 m³). Normal operating pool is from elevation 2,744.0 ft (836.37 m), capacity, 26,183 acre-ft (32.3 hm³) to 2,757.0 ft (840.33 m), capacity, 40,626 acre-ft (50.1 hm³). Record of contents collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project. See schematic diagram of Pit and McCloud River basins. Records prior to water year 1977 reported usable contents only.

EXTREMES FOR PERIOD OF RECORD: Maximum total contents, 46,576 acre-ft (57.4 hm³) Jan. 25, 1970, elevation, 2,761.55 ft (841.720 m); minimum total contents, 26,755 acre-ft (33.0 hm³) Oct. 9, 1976, elevation, 2,744.60 ft (836.554 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 40,309 acre-ft (49.7 hm³) Oct. 11, elevation, 2,756.75 ft (840.257 m); minimum, 27,879 acre-ft (34.4 hm³) Feb. 24, elevation, 2,745.75 ft (836.905 m).

11363920 IRON CANYON RESERVOIR NEAR BIG BEND.--Lat 41°02'41", long 121°58'52", in SW¼SE¼ sec.21, T.37 N., R.1 W., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, in control house on left bank 500 ft (150 m) upstream from Iron Canyon Dam on Iron Canyon Creek, 3.7 mi (6.0 km) northwest of Big Bend. DRAINAGE AREA, 11.1 mi² (28.7 km²). PERIOD OF RECORD, December 1965 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 a rockfill dam completed in 1965. Capacity is 24,200 acre-ft (29.8 hm³) between elevations 2,525.00 ft (769.620 m), invert of sluice pipe and 2,665.00 ft (812.292 m), crest of spillway. No dead storage. Water is diverted from Lake McCloud through a tunnel to Iron Canyon Reservoir and thence into the Pit River via a powerplant. Record of contents collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 23,539 acre-ft (29.0 hm³) May 16, 22, 1977, elevation, 2,663.60 ft (811.865 m); normal minimum since initial operation of reservoir, 2,860 acre-ft (3.53 hm³) May 23, 24, 29, June 2, 7, 9, 14, 23, 24, 1966, elevation, 2,590.00 ft (789.432 m). Reservoir drained for inspection Feb. 10, 1971. Contents reduced to 195 acre-ft (240,000 m³), elevation, 2,540.00 ft (774.192 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 23,292 acre-ft (28.7 hm³) June 30, elevation, 2,663.10 ft (811.713 m); minimum, 4,072 acre-ft (5.02 hm³) Jan. 12, elevation, 2,599.70 ft (792.389 m).

11367740 LAKE McCLOUD NEAR McCLOUD.--Lat 41°08'06", long 122°04'26", in SE¼SW¼ sec.22, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on McCloud Dam near spillway on McCloud River, 200 ft (61 m) downstream from Panther Creek, and 8.8 mi (14.1 km) southeast of McCloud. DRAINAGE AREA, 403 mi² (1,044 km²). PERIOD OF RECORD, October 1965 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 a rockfill dam completed in 1965. Capacity, 35,234 acre-ft (43.4 hm³) between elevations 2,471.30 ft (753.252 m), invert of sluice pipe and 2,680.00 ft (816.864 m), maximum operational water surface. No dead storage. Water is diverted from Lake McCloud through a diversion tunnel to Iron Canyon Reservoir and thence into the Pit River. Record of contents collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 35,967 acre-ft (44.3 hm³) Jan. 15, 1974, elevation, 2,681.40 ft (817.291 m); minimum since storage pool first filled, 15,700 acre-ft (19.4 hm³) Jan. 22, 1967, elevation, 2,632.60 ft (802.416 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 33,899 acre-ft (41.8 hm³) July 5-9, elevation, 2,677.40 ft (816.072 m); minimum, 15,758 acre-ft (19.4 hm³) Jan. 17, elevation, 2,632.90 ft (802.508 m).

MONTHEND ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)
	11361400	LAKE BRITTON		11363920	IRON CANYON RESERVOIR		11367740	LAKE McCLOUD	
Sept. 30.....	2754.40	37406	--	2623.00	8691	--	2646.30	20329	--
Oct. 31.....	2749.60	31889	-5517	2624.00	8949	+258	2638.50	17577	-2752
Nov. 30.....	2749.80	32107	+218	2624.80	9158	+209	2638.80	17678	+101
Dec. 31.....	2750.60	32992	+885	2624.30	9027	-131	2638.70	17645	-33
CAL YR 1978..	--	--	+3955	--	--	+3090	--	--	-4818
Jan. 31.....	2749.20	31455	-1537	2620.90	8165	-862	2636.60	16945	-700
Feb. 28.....	2748.30	30493	-962	2617.60	7379	-786	2642.70	19027	+2082
Mar. 31.....	2746.15	28278	-2215	2628.30	10107	+2728	2660.20	25875	+6848
Apr. 30.....	2754.40	37406	+9128	2641.80	14328	+4221	2673.90	32154	+6279
May 31.....	2752.60	35271	-2135	2650.80	17744	+3416	2672.60	31522	-632
June 30.....	2754.60	37648	+2377	2663.10	23292	+5548	2677.10	33747	+2225
July 31.....	2755.40	38625	+977	2641.00	14050	-9242	2663.00	27093	-6654
Aug. 31.....	2753.60	36447	-2178	2632.70	11378	-2672	2649.90	21686	-5407
Sept. 30.....	2754.10	37044	+597	2628.60	10190	-1188	2639.70	17984	-3702
WTR YR 1979..	--	--	-362	--	--	+1499	--	--	-2345

11362500 PIT RIVER BELOW PIT NO. 4 DAM, CA

LOCATION.--Lat 40°58'25", long 121°46'42", unsurveyed, T.36 N., R.2 E., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, on right bank 0.6 mi (1.0 km) downstream from Ruling Creek, 1.3 mi (2.1 km) downstream from Pit No. 4 Dam, and 2.7 mi (4.3 km) downstream from Pit No. 3 powerhouse.

DRAINAGE AREA.--4,648 mi² (12,038 km²), excluding Goose Lake basin.

PERIOD OF RECORD.--May 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "near Pecks Bridge" April to October 1922, and as "at Lindsay Flat" November 1922 to June 1927.

REVISED RECORDS.--WSP 843: 1935(M). WSP 1315-A: 1928(M). WDR CA-75-4: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,358 ft (718.7 m), from river-profile map. Prior to November 1922, water-stage recorder at site at Pecks Bridge 7.4 mi (11.9 km) upstream at different datum. November 1922 to June 20, 1927, at site at Lindsay Flat 1.8 mi (2.9 km) upstream at different datum.

REMARKS.--Flow regulated by small reservoirs and powerplants, total usable reservoir capacity, 253,000 acre-ft (312 hm³). Many diversions above station; diversion to Pit No. 4 powerplant began June 9, 1955. See schematic diagram of Pit and McCloud River basins.

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.--57 years (water years 1923-79), 2,709 ft³/s (76.72 m³/s), 1,962,700 acre-ft/yr (2.42 km³/yr), adjusted for diversion to Pit No. 4 powerplant.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft³/s (878 m³/s) Jan. 25, 1970, gage height, 18.04 ft (5.499 m), from rating curve extended above 17,000 ft³/s (481 m³/s); minimum daily, 234 ft³/s (6.63 m³/s) Sept. 13, 1953. Minimum daily discharge since diversion to Pit No. 4 powerplant in 1955, 22 ft³/s (0.62 m³/s) Dec. 2-4, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,060 ft³/s (86.7 m³/s) Mar. 16, gage height, 8.25 ft (2.515 m); minimum daily, 41 ft³/s (1.16 m³/s) Dec. 3-5.

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	105	73	45	51	53	56	97	154	152	154	175	171
2	100	76	43	51	54	54	101	149	151	153	176	169
3	103	76	41	53	58	54	105	152	156	151	180	172
4	110	76	41	52	56	57	104	148	154	148	175	174
5	108	77	41	50	53	56	105	158	149	153	175	171
6	102	78	45	52	54	56	108	152	157	148	176	169
7	102	78	50	54	56	58	110	151	148	151	178	173
8	100	77	51	52	54	60	111	151	154	152	174	172
9	103	76	53	51	56	62	110	151	154	148	177	172
10	102	75	51	52	56	640	109	154	153	151	172	173
11	102	76	51	52	56	975	109	149	150	162	179	170
12	101	77	51	53	55	823	108	152	152	179	177	175
13	102	75	52	52	55	652	111	148	155	176	170	180
14	99	75	53	52	53	442	110	153	153	176	170	185
15	99	76	52	55	54	286	110	155	152	179	172	187
16	104	76	51	53	55	343	110	149	153	177	169	177
17	102	75	51	54	54	122	111	149	151	175	172	184
18	102	80	50	54	55	87	110	156	153	171	169	182
19	105	76	51	53	56	56	109	154	150	172	170	189
20	102	76	51	53	57	58	109	152	149	176	172	184
21	102	78	52	54	56	57	109	149	150	174	169	189
22	102	74	53	54	56	57	106	150	147	171	172	187
23	104	75	52	53	56	58	109	151	148	169	171	176
24	103	76	50	53	56	58	108	151	169	170	174	196
25	101	79	52	55	56	58	113	153	149	167	172	185
26	99	78	53	53	54	59	109	150	152	176	171	269
27	100	75	52	55	54	56	131	152	147	167	173	190
28	102	77	51	55	57	57	154	151	147	171	169	177
29	100	79	50	54	---	84	151	156	148	162	171	194
30	103	75	52	53	---	57	151	156	156	182	170	188
31	102	---	53	54	---	58	---	145	---	162	170	---
TOTAL	3171	2290	1544	1642	1545	5654	3398	4701	4559	5123	5360	5480
MEAN	102	76.3	49.8	53.0	55.2	182	113	152	152	165	173	183
MAX	110	80	53	55	58	975	154	158	169	182	180	269
MIN	99	73	41	50	53	54	97	145	147	148	169	169
AC-FT	6290	4540	3060	3260	3060	11210	6740	9320	9040	10160	10630	10870
MEAN ‡	2191	2244	2211	2338	2747	3781	2703	2816	1844	1816	1866	1868
AC-FT ‡	134700	133500	136000	143800	152600	232500	160800	173100	109700	111700	114700	111200
CAL YR 1978 TOTAL	67094		MEAN 184	MAX 2290	MIN 41	AC-FT 133100		MEAN ‡ 2811		AC-FT ‡ 2035000		
WTR YR 1979 TOTAL	44467		MEAN 122	MAX 975	MIN 41	AC-FT 88200		MEAN ‡ 2368		AC-FT ‡ 1714000		

‡ Adjusted for diversion to Pit No. 4 powerplant.

SACRAMENTO RIVER BASIN

11363000 PIT RIVER AT BIG BEND, CA

LOCATION.--Lat 41°01'10", long 121°54'36", in NW¼SW¼ sec.31, T.37 N., R.1 E., Shasta County, Hydrologic Unit 18020003, on left bank at Big Bend, 0.4 mi (0.6 km) downstream from Nelson Creek, and 1.5 mi (2.4 km) upstream from Kosk Creek.

DRAINAGE AREA.--4,711 mi² (12,201 km²), excluding Goose Lake basin.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Henderson" 1910-23.

REVISED RECORDS.--WSP 1345: 1911, 1914(M), 1916(M), 1917, 1928, 1935-36(M). WDR CA-75-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,674.47 ft (510.378 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 28, 1912, nonrecording gage and Dec. 28, 1912, to June 21, 1924, water-stage recorder at same site at datum 7.69 ft (2.344 m) higher.

REMARKS.--Flow regulated by many reservoirs and powerplants, total usable reservoir capacity, about 253,000 acre-ft (312 hm³). Many diversions above station; diversion to Pit No. 5 powerhouse began May 1, 1944. See schematic diagram of Pit and McCloud River basins.

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 diversion to Pit No. 5 powerplant).--33 years (water years 1911-43), 2,931 ft³/s (83.0 m³/s), 2,122,000 acre-ft/yr (2.62 km³/yr); 36 years (water years 1944-79), 555 ft³/s (15.72 m³/s), 402,100 acre-ft/yr (496 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,000 ft³/s (1,390 m³/s) Jan. 25, 1970, gage height, 18.17 ft (5.538 m) in gage well, 19.0 ft (5.79 m) from floodmarks, from rating curve extended above 17,000 ft³/s (481 m³/s), partly affected by gate operation at Pit No. 4 Dam; minimum daily, 34 ft³/s (0.96 m³/s) Mar. 29, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,900 ft³/s (167 m³/s) Mar. 16, gage height, 10.57 ft (3.222 m); minimum daily, 39 ft³/s (1.10 m³/s) Dec. 9, 10.

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	111	88	52	43	55	151	131	151	146	107	111	103
2	116	51	43	46	54	129	127	179	141	110	106	102
3	123	50	41	47	50	120	125	176	138	114	112	107
4	123	48	42	50	50	112	121	176	135	112	108	106
5	117	48	43	50	55	119	121	232	140	112	106	111
6	119	51	42	50	58	144	127	236	133	112	107	109
7	112	55	42	48	56	154	118	240	138	108	112	106
8	113	55	41	65	56	159	120	224	135	106	106	101
9	109	56	39	75	57	155	120	212	130	109	115	103
10	108	57	39	99	61	1030	118	203	127	115	114	104
11	112	54	40	167	84	1590	114	199	133	113	105	103
12	111	53	41	92	103	1440	111	196	127	112	100	104
13	112	52	40	73	307	1400	109	194	126	110	111	108
14	119	53	42	74	411	1060	110	190	122	106	110	104
15	119	54	48	75	142	898	112	186	121	106	110	103
16	109	54	47	69	123	985	124	180	121	108	111	98
17	108	52	50	65	106	710	136	179	123	109	108	102
18	112	51	50	61	107	638	124	176	125	114	102	104
19	114	61	49	61	99	597	117	170	125	112	107	108
20	113	93	48	59	103	594	113	171	122	111	109	108
21	114	65	48	59	114	374	111	167	124	108	117	103
22	111	61	48	57	120	218	111	164	125	108	110	101
23	114	55	47	56	123	143	127	162	113	114	107	110
24	113	52	47	57	125	137	143	159	115	111	105	103
25	118	52	46	56	112	136	125	156	117	110	103	101
26	114	53	47	55	130	144	125	155	121	115	101	102
27	116	53	48	53	116	179	135	153	115	113	105	103
28	108	52	48	54	157	163	129	153	112	108	109	102
29	112	50	48	53	---	153	128	148	115	107	112	103
30	115	50	46	55	---	144	123	149	111	111	118	106
31	115	---	44	55	---	135	---	148	---	111	112	---
TOTAL	3530	1679	1396	1979	3134	14111	3655	5584	3776	3422	3369	3128
MEAN	114	56.0	45.0	63.8	112	455	122	180	126	110	109	104
MAX	123	93	52	167	411	1590	143	240	146	115	118	111
MIN	108	48	39	43	50	112	109	148	111	106	100	98
AC-FT	7000	3330	2770	3930	6220	27990	7250	11080	7490	6790	6680	6200
CAL YR 1978 TOTAL	129463		MEAN 355	MAX 3350	MIN 39	AC-FT 256800						
WTR YR 1979 TOTAL	48763		MEAN 134	MAX 1590	MIN 39	AC-FT 96720						

LOCATION.--Lat 40°59'12", long 121°58'35", in SW¼SE¼ sec.9, T.36 N., R.1 W., Shasta County, Hydrologic Unit 18020003, at powerplant on right bank of Pit River, 5.8 mi (9.3 km) downstream from Big Bend.

GAGE.--Recorded output from powerplant turbines.

REMARKS.--Water is diverted from Lake McCloud (station 11367740) at SE¼SW¼ sec.22, T.38 N., R.2 W., to Iron Canyon Reservoir (station 11363920), and then into the penstock for James B. Black powerplant. Records are combined flow of diversion from McCloud River at McCloud Dam plus Iron Canyon Creek.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--13 years, 976 ft³/s (27.64 m³/s), 707,100 acre-ft/yr (872 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,420 ft³/s (68.5 m³/s) July 15, 1966; no flow for several days most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	834	842	751	635	625	877	803	1960	548	896	1020	299
2	834	438	663	658	580	995	1110	2000	939	802	823	405
3	660	636	600	726	469	697	370	663	23	619	917	249
4	763	648	704	525	689	874	796	774	1040	389	579	960
5	664	628	635	757	587	510	801	1270	1090	681	730	890
6	890	703	883	216	660	962	1050	1380	982	999	734	741
7	416	889	1130	673	582	960	784	1980	4.3	214	641	773
8	770	302	443	1110	646	967	1040	1940	0	569	887	133
9	707	672	173	984	615	968	589	779	107	1000	925	281
10	986	567	369	671	562	966	1010	1440	509	1160	1030	783
11	644	671	676	1340	695	983	795	1280	1310	1020	241	1170
12	599	545	517	1760	691	963	491	725	1200	1270	468	781
13	1060	613	561	887	581	813	581	1000	780	715	830	756
14	109	480	867	981	1200	1060	1030	1180	255	1010	593	697
15	649	753	730	748	1280	985	401	869	365	403	930	682
16	836	890	146	0	1000	800	1310	625	129	1050	395	601
17	629	824	595	167	432	597	1010	965	201	929	797	350
18	1050	471	745	0	510	1210	912	1170	898	1240	376	973
19	661	723	624	425	849	632	812	548	1030	1070	462	608
20	692	706	616	528	781	467	957	804	567	683	783	545
21	649	691	571	510	774	830	834	1050	704	906	921	604
22	549	809	670	774	801	828	849	1060	865	928	774	491
23	623	32	398	620	902	885	889	917	120	1030	756	820
24	671	794	600	634	1080	935	1060	1150	340	852	755	969
25	460	531	703	658	648	734	481	1080	937	1050	85	476
26	641	629	578	618	919	969	522	812	506	1280	305	703
27	1010	522	562	604	966	566	614	297	689	1230	715	674
28	540	493	762	671	832	658	401	669	517	345	643	317
29	537	770	641	677	---	741	546	127	755	362	876	441
30	587	508	535	597	---	930	1950	33	175	951	600	411
31	562	---	556	678	---	1140	---	346	---	1098	1050	---
TOTAL	21282	18780	19004	20832	20956	26494	24798	30893	17585.3	26743	21641	18583
MEAN	687	626	613	672	748	855	827	997	586	863	698	619
MAX	1060	890	1130	1760	1280	1210	1950	2000	1310	1280	1050	1170
MIN	109	32	146	0	432	467	370	33	0	214	85	133
AC-FT	42210	37250	37690	41320	41570	52550	49190	61280	34880	53040	42920	36860
CAL YR 1978	TOTAL	320450.00	MEAN 878	MAX 2020	MIN 0	AC-FT	635600	</				

SACRAMENTO RIVER BASIN

11363930 IRON CANYON CREEK BELOW IRON CANYON DAM, NEAR BIG BEND, CA

LOCATION.--Lat 41°02'27", long 121°59'02", in NW¼NW¼ sec.28, T.37 N., R.1 W., Shasta County, Hydrologic Unit 18020003, on left bank 0.2 mi (0.3 km) downstream from Iron Canyon Dam, and 4.2 mi (6.8 km) west of Big Bend.

DRAINAGE AREA, -11.6 mi² (30.0 km²).

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder, 60° sharp-crested V-notch weir, and concrete control. Datum of gage is 2,461.52 ft (750.271 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow is regulated by Iron Canyon Dam. There is interbasin diversion from Lake McCloud (station 11367790) to Iron Canyon Reservoir (station 11363920) and then into a tunnel to James. B. Black powerplant on the Pit River (station 11363910). See schematic diagram of Pit and McCloud River basins.

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.--13 years, 7.28 ft³/s (0.206 m³/s), 5,270 acre-ft/yr (6.50 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 582 ft³/s (16.5 m³/s) Feb. 25, 1978, gage height, 3.24 ft (0.988 m), flow was the result of failure of the James B. Black penstock; no flow July 15-18, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.1 ft³/s (0.116 m³/s) May 5, gage height, 1.46 ft (0.445 m); minimum daily, 2.7 ft³/s (0.076 m³/s) May 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.2	3.2	3.1	2.8	3.2	3.1	3.1	3.1	3.2	3.1	3.1
2	3.1	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.2	3.1
3	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.1	3.2	3.1	3.1	3.1
4	3.1	3.2	3.2	3.1	3.1	3.2	3.1	3.1	3.2	3.1	3.1	3.1
5	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.1	3.2	3.1	3.1
6	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.1	3.1	3.1
7	3.2	3.1	3.2	3.1	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2
8	3.2	3.1	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.1
9	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.1	3.1	3.1
10	3.2	3.1	3.1	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1
11	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
12	3.1	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1
13	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.2
14	3.2	3.2	2.8	3.1	3.1	3.2	3.1	3.2	3.2	3.1	3.1	3.1
15	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.2	3.2	3.1	3.1	3.1
16	3.1	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.2	3.1	3.1	3.1
17	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.1	3.2	2.9	3.1	3.1
18	3.2	3.2	3.2	3.1	3.2	3.1	3.2	3.1	3.1	3.1	3.1	3.1
19	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1	3.2
20	3.2	3.1	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1	3.2
21	3.1	3.2	3.2	3.1	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2
22	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1
23	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.1	3.1	3.2	3.2
24	2.9	3.2	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.1	3.2
25	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.2	3.1	3.1	3.1	2.8
26	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.1	3.2
27	3.2	3.2	3.1	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.1	3.2
28	3.2	2.8	3.1	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	3.2
29	3.2	3.2	3.1	3.2	---	3.2	3.2	2.7	3.2	3.1	3.2	3.1
30	3.2	3.2	3.2	3.1	---	2.8	3.1	3.2	3.1	3.1	3.1	3.1
31	3.2	---	3.1	3.1	---	3.2	---	3.1	---	3.1	3.1	---
TOTAL	98.3	95.2	97.9	97.6	88.1	97.2	94.1	96.7	94.3	96.7	96.6	93.7
MEAN	3.17	3.17	3.16	3.15	3.15	3.14	3.14	3.12	3.14	3.12	3.12	3.12
MAX	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
MIN	2.9	2.8	2.8	3.1	2.8	2.8	3.1	2.7	3.1	2.9	3.1	2.8
AC-FT	195	189	194	194	175	193	187	192	187	192	192	186
CAL YR 1978	TOTAL	16210.7	MEAN	44.4	MAX	538	MIN	2.7	AC-FT	32150		
WTR YR 1979	TOTAL	1146.4	MEAN	3.14	MAX	3.2	MIN	2.7	AC-FT	2270		

LOCATION.--Lat 40°50'36", long 122°00'58", in NW¼SE¼ sec.31, T.35 N., R.1 W., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, on right bank 0.5 mi (0.8 km) upstream from Potem Creek, 1.9 mi (3.1 km) downstream from Pit No. 7 Dam and powerhouse, and 5.0 mi (8.0 km) west of town of Montgomery Creek.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1931: Drainage area.

REMARKS.--Flow regulated by many reservoirs and powerplants, total usable reservoir capacity, 337,000 acre-ft (416 hm³). Many diversions above station for irrigation. Diversion from McCloud River to Pit River began December 1965 (station 11367720). See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE (prior to diversion from McCloud River).--21 years (water years 1945-65), 3,759 ft³/s (106.5 m³/s), 2,721,000 acre-ft/yr (3.35 km³/yr); 14 years (water years 1966-79), 5,092 ft³/s (144.2 m³/s), 3,689,000 acre-ft/yr (4.55 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s (2,070 m³/s) Jan. 24, 1970, gage height, 32.36 ft (9.863 m); minimum daily, 30 ft³/s (0.85 m³/s) July 12, 27, 1975, result of construction work below Pit No. 7 powerplant.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,890 ft³/s (280 m³/s) Feb. 13, gage height, 25.56 ft (7.791 m); maximum gage height, 25.95 ft (7.910 m) May 26, backwater from Shasta Lake; minimum daily discharge, 151 ft³/s (4.28 m³/s) June 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	3280	4060	1680	466	6700	3860	6090	3430	1580	3190	2330
2	3390	2670	2380	3690	444	5390	4150	6350	2470	2960	2730	1770
3	3660	2800	1860	3410	526	5230	4690	4440	640	3560	3220	888
4	3550	2120	3140	3200	2240	4290	4730	4570	3060	2270	1300	3240
5	3910	2170	3880	3490	3210	4560	5460	6100	4700	3000	1960	3660
6	2880	3580	4640	1410	3890	6280	5540	7160	2890	3370	2290	3750
7	1220	3380	4430	1650	3530	6220	3860	8020	2600	1140	2910	2440
8	1830	2490	2850	4950	3650	6650	4110	7180	2580	1370	3150	944
9	2530	3920	853	5110	2350	7050	4240	5890	1160	3160	3760	1600
10	2820	4200	1930	5090	1550	7550	4420	6190	2010	3950	3560	2970
11	2510	2410	3140	7570	2490	7430	4240	5650	4190	3980	626	4500
12	2530	1490	3470	5730	4610	7410	4190	5310	3860	4790	829	3630
13	4310	2770	3700	5090	8430	7220	4290	5520	3030	2300	2780	2440
14	2880	3040	3710	3840	8230	7070	4430	5690	2700	1370	3020	2980
15	4460	3780	3180	3070	8140	7190	4290	5310	2280	1050	3430	2330
16	2610	4410	1030	3330	5550	6920	5790	3730	1050	3350	3220	1190
17	2470	3610	2530	2060	5100	4900	5030	5050	1230	3090	3210	1530
18	3390	2190	4170	2650	5150	6980	4550	4510	3140	4240	455	2890
19	2340	3360	3230	2910	5350	5100	4380	3550	3560	3520	8100	3090
20	2640	3810	3200	2720	4810	6270	5090	4450	3730	1940	2890	2510
21	2690	3370	3160	3500	5650	5780	5560	4880	4060	1640	4110	4360
22	2630	4210	3370	3290	5420	5570	5420	4230	4650	2260	3120	1530
23	3490	1570	1700	3430	6710	5480	4970	3490	151	3390	3150	2200
24	3850	3300	2480	2840	5710	5510	5310	5260	690	2390	2700	2520
25	4050	2380	2500	3380	2340	5210	4320	4180	3370	3320	869	1900
26	2920	3070	3210	3240	5100	5910	3600	3610	3690	4220	1350	1970
27	4280	2950	3340	2630	4490	6450	4290	1500	3510	3910	2780	2660
28	1760	3290	3780	3100	7010	5710	3480	2690	2390	1300	2660	2330
29	2090	3550	3710	4620	---	3970	4430	3100	2990	1240	3330	2040
30	3420	3600	2450	4930	---	5850	5120	2650	661	2960	3440	2270
31	2920	---	2090	2390	---	5260	---	3220	---	3510	3970	---
TOTAL	91710	92770	93173	110000	121516	186960	137990	149570	80472	86130	80872	74462
MEAN	2958	3092	3006	3558	4340	6031	4600	4825	2682	2778	2609	2482
MAX	4460	4410	4640	7570	8430	7550	5790	8020	4700	4790	4110	4500

SACRAMENTO RIVER BASIN

11365000 PIT RIVER NEAR MONTGOMERY CREEK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1953 to current year.

CHEMICAL ANALYSES: Water years 1951, 1953, 1955 to current year.

WATER TEMPERATURES: Water years, 1951, 1954-57, 1959.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June to September 1951, October 1953 to September 1957, October 1958 to August 1959.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT 05...A	0900	--	2690	--	7.8	14.0	1.0	10.2	--	48	0
NOV 15...A	0745	--	2530	165	7.6	4.5	2.0	11.9	--	--	--
27...A	1000	--	4690	152	7.6	7.0	--	11.9	--	51	0
JAN 04...A	0940	3200	--	154	7.7	5.0	.00	13.7	--	53	--
30...A	1000	--	4090	136	7.8	5.5	--	12.3	--	--	--
MAR 06...A	1000	--	7140	138	7.4	8.5	4.0	11.0	1.4	50	0
MAY 02...A	0915	6350	--	--	7.7	13.5	1.0	11.0	1.1	48	0
JUL 17...A	1035	3090	--	140	8.1	19.0	2.0	9.3	--	--	--
SEP 19...A	1020	--	2500	--	8.1	18.3	.00	9.2	.8	50	0

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	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, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT 05... A	9.4	6.0	10	30	.6	61	2.6	2.3	115	.16	--
NOV 15... A	--	--	--	--	--	--	--	--	--	--	--
27... A	9.8	6.4	9.9	29	.6	68	3.0	3.2	84	.11	--
JAN 04... A	--	--	12	--	.7	69	--	4.1	--	--	--
30... A	--	--	--	--	--	66	--	--	--	--	--
MAR 06... A	12	5.0	8.0	--	.5	61	--	2.0	--	--	--
MAY 02... A	11	5.0	9.0	--	.6	60	--	1.0	--	--	4
JUL 17... A	--	--	--	--	--	--	--	--	--	--	--
SEP 19... A	10	6.0	10	--	.6	64	--	2.0	--	--	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- 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, KJEL- DAHL, TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT 05...A	.00	--	.04	--	.60	--	--	.64	.04	.03	0
NOV 15...A	--	--	--	--	--	--	--	--	--	--	--
27...A	.10	--	.02	--	--	--	--	.22	.04	.04	0
JAN 04...A	--	.14	--	.01	--	.09	--	.10	.05	.03	0
30...A	--	.12	.03	--	.03	--	.06	--	.06	.01	--
MAR 06...A	--	.17	--	.02	--	.48	--	.50	.03	.03	0
MAY 02...A	--	.00	--	.00	--	.20	--	.20	.04	.01	0
JUL 17...A	--	.04	--	.02	--	.48	--	.50	.04	.02	--
SEP 19...A	--	.06	--	.03	--	.27	--	.30	.05	.03	0

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 PR)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY 02...A	0915	0	0	0	0	0	20	0	0	.0	3.0
SEP 19...A	1020	0	0	0	0	0	20	0	0	.0	--

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DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	756	733	720	698	689	725	853	921	796	686	674	663
2	753	732	720	698	688	716	836	928	789	700	674	669
3	750	732	720	697	687	710	822	920	786	672	674	663
4	750	732	720	698	688	706	817	941	780	656	674	663
5	750	732	720	697	687	711	821	1020	777	686	669	663
6	750	732	718	698	687	726	841	1090	768	696	669	663
7	750	732	712	697	686	745	852	1030	760	650	669	663
8	750	732	711	708	686	757	848	983	754	655	669	663
9	750	730	713	705	690	757	848	940	750	683	669	657
10	745	727	713	718	695	754	839	914	744	697	669	657
11	744	727	712	764	709	754	828	896	741	695	669	657
12	744	730	711	742	734	763	823	893	734	671	669	657
13	744	727	709	718	871	768	827	899	739	670	669	657
14	744	726	709	721	833	775	840	913	726	723	674	657
15	744	726	709	715	786	822	845	928	724	651	669	657
16	741	726	709	710	755	879	877	936	721	670	663	657
17	738	726	713	708	735	840	925	931	720	653	663	657
18	738	726	710	703	729	815	891	930	720	685	663	657
19	743	736	706	702	718	797	858	930	721	656	663	657
20	744	738	705	697	721	786	840	928	704	635	669	652
21	744	734	705	697	719	781	830	926	709	655	669	652
22	741	729	703	697	716	787	842	928	699	663	669	652
23	738	726	703	697	710	784	867	915	660	674	669	652
24	738	726	703	697	709	781	885	894	685	674	663	652
25	738	726	703	695	706	785	876	877	742	674	663	657
26	738	720	703	689	709	818	875	868	664	674	663	657
27	738	720	703	690	709	978	922	861	695	674	663	659
28	738	720	703	692	726	1050	945	844	684	674	669	663
29	738	720	700	686	---	961	929	828	696	674	669	663
30	737	721	698	693	---	915	914	814	662	674	669	663
31	736	---	698	691	---	878	---	803	---	674	663	---
TOTAL	23052	21844	21982	21818	20178	24824	25816	28429	21850	20874	20710	19759
MEAN	744	728	709	704	721	801	861	917	728	673	668	659
MAX	756	738	720	764	871	1050	945	1090	796	723	674	669
MIN	736	720	698	686	686	706	817	803	660	635	663	652
AC-FT	45720	43330	43600	43280	40020	49240	51210	56390	43340	41400	41080	39190
CAL YR 1978	TOTAL	360402	MEAN	987	MAX	2770	MIN	698	AC-FT	714900		
WTR YR 1979	TOTAL	271136	MEAN	743	MAX	1090	MIN	635	AC-FT	537800		

SACRAMENTO RIVER BASIN

11367720 McCLOUD-IRON CANYON DIVERSION TUNNEL NEAR McCLOUD, CA

LOCATION.--Lat 41°08'06", long 122°04'26", in SE¼SW¼ sec.22, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on left bank of Lake McCloud, 8.8 mi (14.2 km) southeast of McCloud.

PERIOD OF RECORD.--December 1965 to current year.

REVISED RECORDS.--WDR CA-75-4: 1973.

GAGE.--None. Water-stage recorders on Lake McCloud and Iron Canyon Reservoir used to compute record.

REMARKS.--Water is diverted from Lake McCloud (station 11367740) to Iron Canyon Reservoir (station 11363920) and thence into James B. Black powerplant (station 11363910) on the Pit River. Diversion began Dec. 1, 1965. See schematic diagram of Pit and McCloud River basins.

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.--13 years, 973 ft³/s (27.56 m³/s), 704,900 acre-ft/yr (869 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,890 ft³/s (53.5 m³/s) May 20-22, June 1-3, 10, 1967; no flow for several days in 1965-68, 1971, 1978.

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	713	591	575	551	579	756	838	943	682	572	713	553
2	711	554	583	585	579	775	859	1030	707	588	713	515
3	691	558	577	601	548	753	804	992	647	582	718	472
4	679	564	589	581	563	756	796	960	690	563	677	531
5	668	562	593	611	554	701	789	991	719	567	655	570
6	689	577	641	532	563	726	814	1040	742	604	648	582
7	633	621	722	543	554	749	811	1110	674	570	631	597
8	630	556	636	645	559	767	827	1180	615	559	642	511
9	628	571	546	681	559	784	801	1130	571	590	658	469
10	663	571	514	670	561	798	820	1150	567	630	683	513
11	641	577	545	816	579	830	817	1150	632	654	611	592
12	618	564	539	963	613	837	774	1100	676	686	579	614
13	677	568	541	937	631	802	757	1080	676	674	597	610
14	570	545	591	911	741	854	774	1090	634	734	585	610
15	570	571	603	867	823	877	741	1060	613	653	603	602
16	597	615	521	691	837	845	791	1010	565	673	566	582
17	587	643	536	562	744	817	813	999	533	678	579	535
18	645	593	571	454	699	857	822	1010	567	712	538	580
19	620	609	577	461	708	817	811	967	604	702	516	570
20	617	623	579	481	701	771	826	953	598	704	538	549
21	609	623	579	495	701	772	807	960	606	701	577	535
22	591	643	593	552	705	774	810	952	617	708	591	520
23	581	532	547	556	725	783	822	955	571	721	591	549
24	585	573	556	561	755	798	840	970	550	713	595	612
25	556	552	581	565	723	782	817	973	586	723	513	584
26	568	562	571	563	736	803	786	952	574	755	477	599
27	623	558	562	561	749	792	768	887	582	779	501	579
28	595	532	597	571	747	794	737	864	569	715	520	518
29	589	562	591	577	---	800	753	797	584	663	553	501
30	560	543	568	575	---	818	853	726	544	677	560	475
31	554	---	551	579	---	850	---	694	---	698	609	---
TOTAL	19258	17313	17875	19298	18536	24638	24078	30675	18495	20547	18537	16629
MEAN	621	577	577	623	662	795	803	990	617	663	598	554
MAX	713	643	722	963	837	877	859	1180	742	779	718	614
MIN	554	532	514	454	548	701	737	694	533	559	477	469
AC-FT	38200	34340	35460	38280	36770	48870	47760	60840	36680	40750	36770	32980

CAL YR 1978 TOTAL 308987.00 MEAN 847 MAX 1410 MIN .00 AC-FT 612900
WTR YR 1979 TOTAL 245879.00 MEAN 674 MAX 1180 MIN 454 AC-FT 487700

SACRAMENTO RIVER BASIN

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11367760 McCLLOUD RIVER BELOW McCLLOUD DAM, NEAR McCLLOUD, CA

LOCATION.--Lat 41°07'44", long 122°04'08", in SW¼NE¼ sec.27, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on left bank 0.1 mi (0.2 km) downstream from Lizard Creek, 0.6 mi (1.0 km) downstream from McCloud Dam, and 9 mi (14 km) southeast of McCloud.

DRAINAGE AREA.--404 mi² (1,046 km²).

PERIOD OF RECORD.--April 1966 to current year (low flow only).

GAGE.--Water-stage recorder. Datum of gage is 2,401.76 ft (732.056 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow regulated by Lake McCloud (station 11367740) since November 1965. Most of McCloud River runoff is diverted from reservoir through tunnel to Iron Canyon Reservoir (station 11363920) in Pit River basin. This station records fishwater release. Prior to water year 1974, flow was computed up to 400 ft³/s (11.3 m³/s). Because of channel changes, flow is computed only up to 200 ft³/s (5.66 m³/s). See schematic diagram of Pit and McCloud River basins.

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.

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	196	198	197	157	148	69	42	62	138	161	196	
2	196	198	197	155	148	77	49	67	140	161	196	
3	195	198	197	155	149	90	59	72	141	161	195	
4	197	198	197	155	150	98	64	74	141	161	195	
5	197	198	198	155	148	97	67	59	141	161	197	
6	197	198	197	155	148	82	65	56	144	164	196	
7	196	198	198	155	148	51	68	53	146	164	196	
8	196	198	197	138	148	42	72	53	146	164	195	
9	196	198	197	137	147	41	74	55	146	164	195	
10	196	199	198	125	142	44	78	54	147	163	195	
11	197	199	196	68	109	41	81	61	150	163	196	
12	196	199	196	105	94	41	85	67	150	167	196	
13	196	199	196	128	58	41	85	69	149	190	196	
14	196	199	197	128	55	41	88	72	151	191	196	
15	198	199	199	132	53	41	88	101	151	191	196	
16	198	199	172	136	73	42	80	101	152	192	196	
17	198	199	155	140	92	41	74	101	152	192	196	
18	198	199	158	141	98	41	79	105	152	192	197	
19	197	193	159	142	108	41	84	107	153	192	197	
20	197	178	158	143	104	45	89	110	155	194	195	
21	197	187	158	143	105	50	90	112	155	194	194	
22	197	192	163	143	102	50	91	116	155	193	197	
23	198	195	163	144	107	56	77	119	156	193	197	
24	198	196	163	145	105	60	57	122	156	194	197	
25	198	196	163	145	106	63	57	124	158	193	196	
26	198	197	163	147	101	58	56	126	159	195	196	
27	198	197	163	147	102	48	45	129	160	194	196	
28	198	197	164	147	79	49	44	132	160	194	196	
29	198	197	164	149	---	45	48	134	160	195	192	
30	198	197	165	146	---	43	55	135	160	197	192	
31	198	---	165	146	---	42	---	137	---	196	194	
TOTAL	6109	5895	5553	4352	3127	1670	2091	2885	4524	5626	6064	
MEAN	197	197	179	140	112	53.9	69.7	93.1	151	181	196	
MAX	198	199	199	157	150	98	91	137	160	197	197	
MIN	195	178	155	68	53	41	42	53	138	161	192	
AC-FT	12120	11690	11010	8630	6200	3310	4150	5720	8970	11160	12030	

SACRAMENTO RIVER BASIN

11367800 McCLOUD RIVER AT AH-DI-NA, NEAR McCLOUD, CA

LOCATION.--Lat 41°06'39", long 122°05'42", in NE¼SW¼ sec.33, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on right bank at Ah-Di-Na, 1.8 mi (2.9 km) downstream from Squirrel Creek, 3.9 mi (6.3 km) downstream from McCloud Dam, and 9.6 mi (15.4 km) south of McCloud.

DRAINAGE AREA.--427 mi² (1,106 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,160 ft (658 m), from topographic map.

REMARKS.--Flow regulated by Lake McCloud 3.9 mi (6.3 km) upstream (station 11367740) since November 1965. Diversion to Iron Canyon Reservoir (station 11363920) through McCloud River diversion tunnel (station 11367720) started Dec. 1, 1965. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for diversion to Iron Canyon Reservoir and change in contents in Lake McCloud).--15 years, 1,256 ft³/s (35.57 m³/s), 910,000 acre-ft/yr (1.12 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to construction of McCloud Dam, 9,660 ft³/s (274 m³/s) Dec. 22, 1964, gage height, 9.43 ft (2.874 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s); minimum daily, 86 ft³/s (2.44 m³/s) Oct. 1-26, 1964. Maximum discharge since construction of McCloud Dam in 1965, 26,400 ft³/s (748 m³/s) Jan. 16, 1974, gage height, 13.68 ft (4.170 m) in gage well, 15.38 ft (4.688 m) from floodmarks, from rating curve extended above 8,000 ft³/s (227 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 41 ft³/s (1.16 m³/s) Dec. 18-20, 1971 (caused by valve malfunction at dam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 12.5 ft (3.81 m), discharge, 17,800 ft³/s (504 m³/s), from rating curve extended above 2,500 ft³/s (70.8 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 531 ft³/s (15.0 m³/s) Mar. 27, gage height, 2.33 ft (0.710 m); minimum daily, 156 ft³/s (4.42 m³/s) Jan. 12.

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	211	208	209	167	171	175	180	173	197	184	201	211
2	209	208	208	164	171	162	171	171	196	181	201	212
3	209	208	208	164	174	165	171	172	197	181	200	210
4	211	208	208	164	175	166	170	171	195	181	199	211
5	211	208	207	164	174	166	171	176	195	180	201	210
6	211	208	208	164	174	171	173	186	195	180	201	211
7	211	208	208	165	176	172	171	214	197	179	200	211
8	210	206	208	163	176	183	172	198	197	179	200	211
9	207	207	208	163	177	173	170	188	196	178	200	211
10	209	208	210	170	181	167	170	173	193	175	199	211
11	211	208	207	163	182	171	169	173	195	176	200	211
12	210	209	207	156	185	183	171	173	195	178	200	212
13	209	208	206	161	427	186	169	169	193	200	201	211
14	209	208	208	163	272	188	171	169	191	200	201	211
15	211	209	209	162	176	285	169	203	191	200	201	211
16	211	208	185	161	166	326	178	200	191	201	200	211
17	211	208	168	163	171	254	173	196	191	200	200	210
18	211	208	168	162	171	214	168	195	188	200	201	211
19	209	214	168	163	174	186	170	195	187	200	201	211
20	209	203	169	164	174	171	170	195	189	201	201	211
21	209	206	175	164	176	166	170	194	188	201	199	211
22	209	207	173	163	174	166	176	194	188	201	202	211
23	210	207	174	165	175	167	173	195	185	200	201	212
24	211	207	174	166	176	168	175	195	186	200	201	212
25	211	206	174	166	175	170	174	194	186	200	201	212
26	208	208	174	166	176	177	175	195	186	201	201	210
27	208	208	174	169	176	385	175	195	185	200	200	210
28	207	208	174	168	185	416	174	197	184	200	204	209
29	207	208	173	168	---	300	171	196	184	200	200	211
30	207	209	174	171	---	242	170	197	184	202	199	211
31	207	---	175	169	---	205	---	196	---	202	200	---
TOTAL	6494	6234	5891	5101	5260	6426	5160	5838	5725	5962	6216	6328
MEAN	209	208	190	165	188	207	172	188	191	192	201	211
MAX	211	214	210	171	427	416	180	214	197	202	204	212
MIN	207	203	168	156	166	162	168	169	184	176	199	209
AC-FT	12880	12370	11680	10120	10430	12750	10230	11580	11360	11830	12330	12550
MEAN ‡	786	787	766	776	887	1114	1080	1168	845	747	711	703
AC-FT ‡	48330	46810	47110	47700	49280	68470	64270	71790	50260	45930	43690	41830

CAL YR 1978 TOTAL 153874 MEAN 422 MAX 5490 MIN 156 AC-FT 305200 MEAN ‡ 1261 AC-FT ‡ 913200
WTR YR 1979 TOTAL 70635 MEAN 194 MAX 427 MIN 156 AC-FT 140100 MEAN ‡ 864 AC-FT ‡ 625500

‡ Adjusted for diversion to Iron Canyon Reservoir and change in contents in Lake McCloud.

11368000 McCLOUD RIVER ABOVE SHASTA LAKE, CA

LOCATION.--Lat 40°57'30", long 122°13'07", unsurveyed, T.36 N., R.3 W., Shasta County, Hydrologic Unit 18020004, on right bank just upstream from Shasta Lake, 0.2 mi (0.3 km) downstream from Big Bollibokka Creek, and 11.3 mi (18.2 km) east of Lamoine.

DRAINAGE AREA.--604 mi² (1,564 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to 1950, published as "above Shasta Reservoir."

REVISED RECORDS.--WSP 1445: 1953(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft (335.280 m) National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service).

REMARKS.--Flow partially regulated by Lake McCloud (station 11367740) since Nov. 3, 1965. Diversions to Iron Canyon Reservoir (station 11363920) began Dec. 1, 1965. See schematic diagram of Pit and McCloud River basins.

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 regulation by Lake McCloud and diversion to Pit River basin).--20 years (water years 1946-65), 1,699 ft³/s (48.12 m³/s), 1,230,000 acre-ft/yr (1.52 km³/yr); 14 years (water years 1966-79), 793 ft³/s (22.46 m³/s), 574,500 acre-ft/yr (708 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,500 ft³/s (1,290 m³/s) Jan. 16, 1974, gage height, 28.26 ft (8.614 m), from rating curve extended above 15,000 ft³/s (425 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 109 ft³/s (3.09 m³/s) Dec. 16-20, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,550 ft³/s (101 m³/s) Feb. 13, gage height, 13.78 ft (4.200 m); minimum daily, 248 ft³/s (7.02 m³/s) Jan. 5, 6.

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	301	286	312	253	278	1410	875	563	386	291	272	280
2	300	289	302	248	275	1080	785	534	380	293	272	313
3	300	289	300	248	273	868	721	517	377	293	272	305
4	300	288	299	252	274	744	673	501	375	290	272	292
5	300	287	300	248	274	704	641	646	371	293	272	292
6	296	285	298	248	278	779	626	707	370	293	272	288
7	296	286	295	252	282	929	594	1000	366	291	272	284
8	296	285	294	366	284	959	571	900	362	289	268	284
9	292	284	295	401	304	877	551	793	358	285	268	284
10	292	286	296	526	335	787	534	706	354	290	268	280
11	292	286	300	1170	532	741	523	643	351	287	268	280
12	292	291	300	618	625	729	504	608	347	284	268	280
13	290	294	296	434	2960	703	491	574	346	298	272	280
14	288	294	295	460	2160	680	479	550	341	300	276	280
15	288	293	296	476	1200	924	467	548	336	298	276	280
16	288	296	285	446	913	1130	525	537	336	296	272	280
17	288	296	272	405	786	1000	576	513	334	294	272	280
18	288	296	263	372	775	914	502	496	330	292	272	276
19	288	365	259	347	725	827	480	483	326	291	272	276
20	288	395	255	334	758	751	468	476	323	292	280	276
21	288	372	257	331	842	699	460	465	321	293	276	272
22	288	340	258	329	934	740	460	458	317	292	272	272
23	285	317	260	322	960	681	555	458	313	290	272	276
24	284	310	260	319	907	652	636	446	311	287	272	272
25	284	305	260	310	855	632	612	438	308	285	268	288
26	286	304	260	299	886	646	608	428	305	285	268	280
27	286	300	260	296	852	1830	647	425	302	284	268	280
28	284	300	260	291	1260	2340	617	420	301	280	272	280
29	284	300	255	284	---	1590	595	418	297	276	305	280
30	284	302	255	285	---	1160	575	407	296	276	296	280
31	285	---	256	281	---	1010	---	393	---	272	284	---
TOTAL	9001	9121	8653	11451	21787	29516	17351	17051	10140	8960	8489	8470
MEAN	290	304	279	369	778	952	578	550	338	289	274	282
MAX	301	395	312	1170	2960	2340	875	1000	386	300	305	313
MIN	284	284	255	248	273	632	460	393	296	272	268	272
AC-FT	17850	18090	17160	22710	43210	58540	34420	33820	20110	17770	16840	16800
CAL YR 1978 TOTAL	423274		MEAN	1160	MAX	18600	MIN	255	AC-FT	839600		
WTR YR 1979 TOTAL	159990		MEAN	438	MAX	2960	MIN	248	AC-FT	317300		

11370000 SHASTA LAKE NEAR REDDING, CA

LOCATION.--Lat 40°43'08", long 122°25'12", in SE¼NW¼ sec.15, T.33 N., R.5 W., Shasta County, Hydrologic Unit 18020005, in Shasta Dam on Sacramento River near right bank, 2 mi (3 km) downstream from Squaw Creek, and 9.5 mi (15.3 km) north of Redding.

DRAINAGE AREA.--6,421 mi² (16,630 km²), excluding Goose Lake basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1942 to current year. Prior to 1950, published as Shasta Reservoir near Redding.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service). Prior to July 10, 1944, nonrecording gage at various sites near dam at same datum.

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in 1949; regulation began Dec. 30, 1943. Usable capacity, 4,436,300 acre-ft (5.47 km³) between elevations 737.75 ft (224.866 m), bottom of lowest set of river outlets and 1,067.0 ft (325.22 m), top of flashboard gates on drum-type spillway gates. Dead storage, 115,700 acre-ft (143 hm³). Installation of flashboard gates on top of drum gates completed Nov. 12, 1964. Gates increased elevation to 1,067.0 ft (325.22 m), total capacity, 4,552,100 acre-ft (5.61 km³). All water passes down the Sacramento River, most of which is through powerplant at dam. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records furnished by Water and Power Resources Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,550,300 acre-ft (5.61 km³) May 19, 1967, elevation, 1,066.94 ft (325.203 m); minimum since reservoir first filled, 562,600 acre-ft (694 hm³) Sept. 13, 1977, elevation, 836.68 ft (255.020 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,368,100 acre-ft (5.39 km³) May 22, elevation, 1,060.74 ft (323.314 m); minimum, 3,141,300 acre-ft (3.87 km³) Sept. 30, elevation, 1,013.87 ft (309.028 m).

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

830	515,500	910	1,291,900	990	2,616,600
840	587,100	920	1,424,800	1,000	2,828,500
850	665,500	930	1,566,200	1,010	3,051,800
860	751,000	940	1,717,300	1,020	3,286,900
870	843,600	950	1,877,000	1,030	3,533,500
880	943,900	960	2,046,800	1,050	4,063,100
890	1,052,000	970	2,226,100	1,067	4,552,100
900	1,167,900	980	2,416,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3422200	3329700	3315100	3329700	3331600	3702800	4139500	4271700	4329900	3946000	3437800	3196400
2	3419000	3327700	3315100	3326800	3326000	3718200	4139500	4277500	4322400	3929200	3421800	3192100
3	3417600	3326800	3314200	3323600	3321000	3731400	4145100	4280300	4311400	3913500	3407200	3186700
4	3416100	3322700	3314900	3319700	3319500	3741300	4152200	4282900	4302800	3896000	3390000	3185500
5	3416100	3319000	3316800	3317600	3319000	3751100	4160000	4291800	4297600	3879400	3374000	3183900
6	3414300	3319000	3320200	3313000	3320700	3764300	4168800	4302500	4286100	3864100	3358100	3182200
7	3408400	3318500	3323100	3310100	3321900	3780100	4174400	4315700	4275200	3845100	3345200	3179100
8	3405000	3317100	3324100	3315600	3323600	3795200	4179500	4330500	4263400	3828400	3334000	3173000
9	3401000	3318800	3322400	3321400	3323900	3810900	4183400	4341200	4247700	3812400	3324400	3168800
10	3397800	3318300	3321000	3334500	3323100	3826500	4191100	4351100	4233700	3798700	3314700	3165500
11	3395600	3314900	3321400	3360100	3324100	3841700	4197600	4356300	4224000	3783800	3301900	3165700
12	3392900	3310100	3321900	3364500	3334500	3856900	4204700	4357100	4213200	3770600	3290500	3164500
13	3393200	3307400	3323400	3363300	3387500	3871100	4210400	4358600	4201000	3752900	3283300	3163100
14	3392200	3305200	3324800	3369900	3423200	3885800	4213800	4362100	4189100	3733700	3276300	3162200
15	3393200	3304500	3326800	3373500	3447500	3906000	4216300	4365500	4175000	3713500	3271300	3160100
16	3390000	3305000	3325800	3371800	3465900	3926500	4224000	4365500	4157800	3697900	3266200	3157300
17	3387800	3304300	3326800	3367900	3480700	3942000	4229400	4367000	4143200	3682200	3262400	3153300
18	3386500	3300400	3330900	3365000	3499000	3960700	4232800	4367800	4130500	3669200	3253300	3153300
19	3379900	3301100	3332800	3363300	3513600	3973800	4236000	4367000	4119100	3654500	3245100	3153700
20	3374800	3302100	3334300	3359600	3535500	3988000	4238800	4367000	4107600	3636400	3240600	3153300
21	3369100	3303600	3335300	3356400	3559800	4001900	4240500	4367600	4097300	3617300	3238900	3154200
22	3363300	3304000	3337000	3352000	3583800	4014300	4242500	4368100	4088400	3599900	3234200	3152300
23	3359800	3303600	3336000	3349900	3606000	4025800	4244200	4366400	4073900	3584300	3230800	3150700
24	3356700	3304800	3336000	3347900	3623500	4036900	4246000	4367600	4057600	3566500	3226100	3148400
25	3353500	3304300	3335700	3346700	3633800	4046500	4246000	4367000	4047100	3550200	3219400	3147900
26	3349600	3304800	3336700	3345000	3648500	4061400	4247400	4365200	4033800	3536000	3213200	3146700
27	3347900	3305000	3337900	3342300	3658900	4099000	4250800	4359200	4019000	3521400	3208500	3146700
28	3342600	3306200	3340600	3339900	3682200	4118500	4254200	4353100	4000600	3501500	3204900	3145100
29	3336500	3307400	3341100	3339400	---	4126600	4259100	4348500	3983600	3481700	3203700	3143200
30	3334000	3310800	3338900	3340600	---	4133600	4264000	4342700	3965100	3464700	3202100	3141300
31	3332100	---	3335700	3338700	---	4137800	---	4336600	---	3450500	3200600	---
MAX	3422200	3329700	3341100	3373500	3682200	4137800	4264000	4368100	4329900	3946000	3437800	3196400
MIN	3332100	3300400	3314200	3310100	3319000	3702800	4139500	4271700	3965100	3450500	3200600	3141300
†	1021.87	1020.99	1022.02	1022.14	1035.80	1052.68	1057.13	1059.65	1046.43	1026.69	1016.39	1013.87
‡	-95800	-21300	+24900	+3000	+343500	+455600	+126200	+72600	-371500	-514600	-249900	-59300
††	9210	4520	2690	2480	1700	4620	7020	13930	17110	17140	13690	11700

CAL YR 1978 ‡ +2163400

WTR YR 1979 ‡ -286600

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SACRAMENTO RIVER BASIN

11370000 SHASTA LAKE NEAR REDDING, CA--Continued

McCLOUD RIVER ARM OF SHASTA LAKE NEAR LAKEHEAD, CA

LOCATION.--Lat 40°48'30", long 122°17'30", Shasta County, Hydrologic Unit 18020004, 8.4 mi (13.5 km) southeast of Lakehead.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) <u>1/</u>	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
AUG							
15...	0945	.50	115	8.1	25.4	7.9	101
15...	0946	1.0	115	8.1	25.4	7.9	101
15...	0947	2.0	114	8.1	25.4	7.9	101
15...	0948	3.0	114	8.1	25.3	7.9	100
15...	0949	4.0	114	8.1	25.3	7.9	100
15...	0950	5.0	115	8.1	25.2	7.9	100
15...	0951	6.0	115	8.1	25.2	8.0	101
15...	0952	7.0	115	8.1	25.2	7.9	100
15...	0953	8.0	115	8.0	25.2	7.9	100
15...	0954	9.0	116	7.4	24.4	6.5	81
15...	0955	10.0	119	7.2	22.4	5.9	71
15...	0956	11.0	117	7.2	22.1	5.7	68
15...	0957	12.0	121	7.3	20.3	5.6	65
15...	0958	13.0	125	7.3	19.9	6.0	69
15...	0959	14.0	128	7.3	19.7	6.3	72
15...	1000	15.0	128	7.3	19.2	6.3	71
15...	1001	16.0	125	7.3	18.8	6.3	71
15...	1002	17.0	127	7.3	18.5	6.4	71
15...	1003	18.0	127	7.3	18.3	6.3	70
15...	1004	19.0	124	7.2	18.0	6.1	67
15...	1005	20.0	123	7.2	17.8	6.3	69
15...	1006	21.0	124	7.2	17.6	6.2	68
15...	1007	22.0	125	7.2	17.2	6.2	67
15...	1008	23.0	120	7.1	16.7	6.3	68
15...	1009	24.0	122	7.1	16.2	6.1	65
15...	1010	25.0	120	7.0	15.8	6.2	65

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	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, NH4 + ORG. SUSP. 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, ORTHO, DIS- SOLVED (MG/L AS P)
AUG										
15...	1015	16	16	.02	.19	.55	.01	.74	.76	.28

SHASTA LAKE AT SHASTA DAM, NEAR PROJECT CITY, CA

LOCATION.--Lat 40°43'33", long 122°24'36", Shasta County, Hydrologic Unit, 18020005, 4.4 mi (7.1 km) northwest of Project City.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) <u>1/</u>	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
AUG							
14...	1030	.50	111	7.8	25.2	7.8	99
14...	1031	1.0	111	7.8	25.2	7.8	99
14...	1032	2.0	111	7.8	25.2	7.8	99
14...	1033	3.0	111	7.8	25.2	7.8	99
14...	1034	4.0	111	7.8	25.2	7.8	99
14...	1035	5.0	111	7.8	25.2	7.8	99
14...	1036	6.0	111	7.8	25.2	7.8	99
14...	1037	7.0	111	7.8	25.2	7.8	99
14...	1038	8.0	111	7.8	25.2	7.8	99
14...	1039	9.0	111	7.8	25.2	7.8	99
14...	1040	10.0	112	7.4	23.6	7.7	95

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

11370000 SHASTA LAKE NEAR REDDING, CA--Continued

SQUAW CREEK ARM OF SHASTA LAKE NEAR PROJECT CITY, CA

LOCATION.--Lat 40°46'35", long 122°11'58", Shasta County, Hydrologic Unit 18020003, 9.7 mi (15.6 km) northeast of Project City.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
AUG							
14...	1345	.50	117	8.3	26.3	8.3	107
14...	1346	1.0	118	8.3	26.2	8.3	107
14...	1347	2.0	118	8.3	26.1	8.3	107
14...	1348	3.0	118	8.3	26.1	8.2	106
14...	1349	4.0	118	8.3	26.0	8.0	103
14...	1350	5.0	117	8.2	26.0	8.0	103
14...	1351	6.0	117	8.2	25.8	7.8	100
14...	1352	7.0	118	8.1	25.8	7.7	99
14...	1353	8.0	119	7.4	24.7	6.1	77
14...	1354	9.0	124	7.4	23.2	5.0	61
14...	1355	10.0	126	7.3	21.9	4.7	56
14...	1356	11.0	128	7.4	20.7	5.7	66
14...	1357	12.0	125	7.4	20.4	6.1	71
14...	1358	13.0	126	7.4	20.0	6.3	72
14...	1359	14.0	128	7.4	19.7	6.3	72
14...	1400	15.0	127	7.4	19.3	6.2	70
14...	1401	16.0	127	7.4	19.2	6.1	69
14...	1402	17.0	127	7.4	18.9	5.9	66
14...	1403	18.0	128	7.3	18.6	5.8	65
14...	1404	19.0	129	7.2	18.2	5.7	63
14...	1405	20.0	128	7.2	17.8	5.6	62
14...	1406	21.0	128	7.2	17.4	5.5	60
14...	1407	22.0	129	7.2	17.0	5.7	62
14...	1408	23.0	127	7.2	16.8	6.0	65
14...	1409	24.0	125	7.1	16.5	5.9	63
14...	1410	25.0	127	7.1	16.2	5.8	62
14...	1411	26.0	128	7.1	15.6	5.6	59
14...	1412	27.0	127	7.1	15.5	5.5	58
14...	1413	28.0	129	7.0	14.8	5.6	58
14...	1414	29.0	131	7.0	14.4	5.7	58
14...	1415	30.0	131	7.0	14.0	5.7	58
14...	1416	31.0	133	7.0	13.6	5.7	57
14...	1417	32.0	133	7.0	13.3	5.9	59
14...	1418	33.0	134	7.0	12.9	6.0	59
14...	1419	34.0	136	7.0	12.7	6.0	59
14...	1420	35.0	136	7.0	12.5	6.1	60
14...	1421	36.0	136	7.0	12.4	6.1	60
14...	1422	37.0	137	7.0	12.1	6.1	59
14...	1423	38.0	138	7.0	12.0	6.0	58
14...	1424	39.0	138	7.0	11.9	6.0	58
14...	1425	40.0	140	7.0	11.7	6.0	58
14...	1426	45.0	142	7.0	11.2	5.7	54
14...	1427	50.0	143	7.0	10.7	5.7	54
14...	1428	55.0	141	7.0	10.3	5.7	53
14...	1429	59.0	140	7.0	10.0	5.5	51

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	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,NH4 + ORG. SUSP. 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, ORTHO, DIS- SOLVED (MG/L AS P)
AUG										
14...	1435	13	13	.01	.00	.48	.00	.48	.49	.05

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

SACRAMENTO RIVER BASIN

11370000 SHASTA LAKE NEAR REDDING, CA--Continued

PIT RIVER ARM OF SHASTA LAKE AT ALLIE COVE, NEAR LAKEHEAD, CA

LOCATION(REVISED).--Lat 40°45'51", long 122°16'52", Shasta County, Hydrologic Unit 18020003, 11.2 mi (18.0 km) southeast of Lakehead.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
AUG							
15...	1300	.50	114	8.6	26.4	8.6	111
15...	1301	1.0	113	8.6	26.3	8.7	113
15...	1302	2.0	115	8.6	25.9	8.8	113
15...	1303	3.0	114	8.7	25.8	8.9	114
15...	1304	4.0	115	8.6	25.6	8.7	111
15...	1305	5.0	115	8.5	25.5	8.5	108
15...	1306	6.0	114	8.5	25.5	8.5	108
15...	1307	7.0	114	8.5	25.5	8.5	108
15...	1308	8.0	114	8.3	25.3	8.2	104
15...	1309	9.0	116	7.4	23.1	6.5	79
15...	1310	10.0	119	7.4	22.1	5.5	66
15...	1311	11.0	121	7.3	21.0	5.8	68
15...	1312	12.0	125	7.5	20.3	6.5	75
15...	1313	13.0	128	7.6	20.0	7.0	80
15...	1314	14.0	128	7.6	19.5	7.1	81
15...	1315	15.0	127	7.6	19.3	7.1	80
15...	1316	16.0	128	7.6	19.1	7.0	79
15...	1317	17.0	128	7.6	18.6	6.9	77
15...	1318	18.0	127	7.6	18.3	6.7	74
15...	1319	19.0	128	7.6	17.9	6.7	74
15...	1320	20.0	125	7.4	17.6	6.4	70
15...	1321	21.0	123	7.4	17.3	6.5	71
15...	1322	22.0	124	7.4	16.9	6.6	71
15...	1323	23.0	124	7.3	16.8	6.6	71
15...	1324	24.0	123	7.3	16.4	6.7	71
15...	1325	25.0	122	7.3	15.8	6.8	72
15...	1326	28.0	118	7.3	14.2	7.3	74
15...	1327	30.0	122	7.3	13.5	7.3	73
15...	1328	32.0	117	7.3	12.8	7.7	76
15...	1329	35.0	120	7.3	12.3	7.9	77
15...	1330	40.0	123	7.3	11.6	8.2	79
15...	1331	45.0	123	7.3	11.0	8.3	78
15...	1332	50.0	122	7.2	10.6	8.3	78
15...	1333	55.0	124	7.2	10.1	8.1	75
15...	1334	60.0	124	7.2	9.6	8.0	73
15...	1335	65.0	124	7.1	9.2	7.6	69
15...	1336	70.0	124	7.1	8.7	7.7	69

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	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, NH4 + ORG. SUSP. 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, ORTHO, DIS- SOLVED (MG/L AS P)
AUG										
15...	1340	16	16	.02	.40	1.2	.00	1.6	1.6	.52

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

11370000 SHASTA LAKE NEAR REDDING, CA--Continued

PIT RIVER ARM OF SHASTA LAKE BELOW BRUSHY CANYON, NEAR PROJECT CITY, CA

LOCATION(REVISED)--Lat 40°45'00", long 122°12'50", Shasta County, Hydrologic Unit 18020003, 8.7 mi (14.0 km) northeast of Project City.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMPLING DEPTH (M) 1/	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATURATION)
AUG							
15...	1115	.50	115	8.6	25.8	8.2	105
15...	1116	1.0	115	8.6	25.8	8.1	104
15...	1117	2.0	116	8.5	25.6	8.0	102
15...	1118	3.0	116	8.5	25.4	7.9	101
15...	1119	4.0	116	8.5	25.4	7.8	99
15...	1120	5.0	115	8.6	25.3	7.9	100
15...	1121	6.0	115	8.4	25.3	7.7	98
15...	1122	7.0	115	8.3	25.3	7.4	94
15...	1123	8.0	117	7.7	24.7	5.9	74
15...	1124	9.0	119	7.4	23.5	3.9	48
15...	1125	10.0	124	7.6	21.9	5.7	68
15...	1126	11.0	127	7.7	21.0	6.8	80
15...	1127	12.0	128	7.7	20.5	7.1	82
15...	1128	13.0	128	7.8	20.0	7.6	87
15...	1129	14.0	129	7.8	19.5	7.7	88
15...	1130	15.0	127	7.8	19.3	7.7	87
15...	1131	16.0	129	7.7	19.2	7.7	87
15...	1132	17.0	128	7.7	19.1	7.5	85
15...	1133	18.0	129	7.7	18.6	7.0	78
15...	1134	19.0	129	7.6	18.1	6.7	74
15...	1135	20.0	128	7.5	17.7	6.4	70
15...	1136	21.0	126	7.5	17.5	6.4	70
15...	1137	22.0	126	7.4	17.3	6.2	67
15...	1138	23.0	127	7.4	16.9	6.2	67
15...	1139	24.0	127	7.4	16.7	6.2	67
15...	1140	25.0	123	7.3	16.0	6.2	66
15...	1141	26.0	124	7.3	15.7	6.1	64
15...	1142	27.0	125	7.3	15.1	6.1	63
15...	1143	28.0	123	7.3	14.7	6.2	64
15...	1144	29.0	122	7.2	14.3	6.2	63
15...	1145	30.0	122	7.2	13.8	6.2	63
15...	1146	31.0	120	7.2	13.5	6.4	64
15...	1147	35.0	121	7.2	12.4	6.9	67

DATE	TIME	DEPTH TO BOTTOM OF SAMPLE INTER-VAL (FT)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	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, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	RHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
AUG										
15...	1150	13	13	.02	.11	.51	.00	.62	.64	.22

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

SACRAMENTO RIVER BASIN
11370000 SHASTA LAKE NEAR REDDING, CA--Continued

WATER-QUALITY RECORDS

SACRAMENTO RIVER ARM OF SHASTA LAKE NEAR LAKEHEAD, CA

LOCATION (REVISED).--Lat 40°48'08", long 122°22'44", Shasta County, Hydrologic Unit 18020005, 7.2 mi (11.6 km) south of Lakehead.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
AUG							
15...	1530	.50	112	8.0	25.6	7.7	98
15...	1531	1.0	112	8.0	25.6	7.7	98
15...	1532	2.0	112	8.0	25.6	7.7	98
15...	1533	3.0	112	8.0	25.6	7.7	98
15...	1534	4.0	112	8.0	25.6	7.7	98
15...	1535	5.0	112	8.0	25.6	7.7	98
15...	1536	6.0	112	8.0	25.6	7.7	98
15...	1537	7.0	111	8.0	25.4	7.7	98
15...	1538	8.0	111	8.0	25.4	7.7	98
15...	1539	9.0	113	7.6	23.8	7.2	89
15...	1540	10.0	113	7.4	22.4	7.1	85
15...	1541	11.0	113	7.4	21.6	6.9	82
15...	1542	12.0	114	7.4	20.8	6.7	78
15...	1543	13.0	120	7.4	20.2	6.7	77
15...	1544	14.0	124	7.4	19.4	6.6	75
15...	1545	15.0	125	7.4	19.1	6.6	74
15...	1546	16.0	126	7.4	18.6	6.5	73
15...	1547	17.0	124	7.4	18.3	6.5	72
15...	1548	18.0	124	7.4	18.0	6.4	71
15...	1549	19.0	123	7.3	17.7	6.5	71
15...	1550	20.0	119	7.3	17.3	6.5	71
15...	1551	21.0	116	7.2	17.1	6.6	71
15...	1552	22.0	113	7.2	17.0	6.6	71
15...	1553	23.0	109	7.2	16.6	6.7	72
15...	1554	24.0	109	7.2	16.3	6.7	71
15...	1555	25.0	109	7.2	15.8	6.9	73
15...	1556	26.0	100	7.2	15.3	7.1	74
15...	1557	27.0	103	7.1	14.9	7.2	74
15...	1558	28.0	100	7.1	14.4	7.4	76
15...	1559	29.0	99	7.1	13.8	7.7	78
15...	1600	30.0	99	7.2	13.4	7.8	78
15...	1601	35.0	100	7.2	12.1	8.4	81
15...	1602	40.0	101	7.2	11.3	8.6	82
15...	1603	45.0	99	7.2	10.8	8.7	82
15...	1604	50.0	96	7.2	10.2	8.7	81
15...	1605	55.0	92	7.2	9.7	8.8	81
15...	1606	60.0	90	7.1	9.2	8.6	78
15...	1607	65.0	90	7.1	8.9	8.2	74

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	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, NH4 + ORG. SUSP. 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, ORTHO, DIS- SOLVED (MG/L AS P)
AUG										
15...	1610	16	16	.03	.08	.13	.26	.21	.24	.17

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

11370000 SHASTA LAKE NEAR REDDING, CA--Continued

SHASTA LAKE AT SHASTA DAM, NEAR PROJECT CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMPLING DEPTH (M) <u>1</u> /	SPECIFIC CONDUCTANCE (MICRO- MHOS)	RH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATURATION)
AUG							
14...	1041	11.0	114	7.4	21.5	7.6	90
14...	1042	12.0	116	7.3	20.7	7.3	85
14...	1043	13.0	118	7.3	20.1	7.3	84
14...	1044	14.0	118	7.3	19.8	7.2	82
14...	1045	15.0	119	7.3	19.3	7.2	82
14...	1046	16.0	120	7.2	18.8	7.2	81
14...	1047	17.0	121	7.2	18.4	6.9	77
14...	1048	18.0	121	7.2	18.3	7.2	80
14...	1049	19.0	121	7.2	18.0	7.2	79
14...	1050	20.0	118	7.2	17.8	7.1	78
14...	1051	21.0	118	7.1	17.4	7.1	77
14...	1052	22.0	118	7.1	17.1	7.3	79
14...	1053	23.0	116	7.1	16.8	7.4	80
14...	1054	24.0	115	7.1	16.4	7.5	80
14...	1055	25.0	115	7.1	16.0	7.7	81
14...	1056	26.0	111	7.1	15.7	7.8	82
14...	1057	27.0	112	7.1	15.2	8.0	83
14...	1058	28.0	109	7.1	14.8	8.2	84
14...	1059	29.0	109	7.1	14.1	8.4	85
14...	1100	30.0	108	7.1	13.7	8.6	86
14...	1101	31.0	108	7.1	13.4	8.6	86
14...	1102	32.0	108	7.1	13.1	8.6	85
14...	1103	33.0	108	7.1	12.8	8.8	87
14...	1104	34.0	110	7.1	12.5	8.8	86
14...	1105	35.0	110	7.1	12.4	8.8	86
14...	1106	36.0	110	7.1	12.1	8.9	86
14...	1107	37.0	110	7.1	12.0	8.9	86
14...	1108	38.0	110	7.1	11.8	8.9	86
14...	1109	39.0	112	7.1	11.7	8.9	86
14...	1110	40.0	112	7.1	11.5	8.9	85
14...	1111	41.0	112	7.1	11.5	8.9	85
14...	1112	42.0	112	7.1	11.7	9.0	86
14...	1113	43.0	111	7.1	11.3	9.0	86
14...	1114	44.0	112	7.1	11.2	9.0	85
14...	1115	45.0	112	7.1	11.1	9.0	85
14...	1116	46.0	112	7.1	10.9	9.0	85
14...	1117	47.0	111	7.1	10.8	9.0	85
14...	1118	48.0	113	7.1	10.7	9.0	84
14...	1119	49.0	111	7.1	10.6	9.1	85
14...	1120	50.0	111	7.1	10.5	9.0	84
14...	1121	51.0	111	7.1	10.4	9.0	84
14...	1122	52.0	110	7.1	10.3	9.0	84
14...	1123	53.0	111	7.1	10.2	9.0	84
14...	1124	54.0	111	7.0	10.2	8.9	83
14...	1125	55.0	111	7.0	10.0	8.8	81
14...	1126	60.0	109	7.0	9.5	8.8	80
14...	1127	65.0	107	7.0	8.8	8.6	77
14...	1128	70.0	107	7.0	8.5	8.5	76
14...	1129	75.0	109	6.9	8.2	8.5	75
14...	1131	85.0	116	6.9	7.5	8.4	73
14...	1132	88.0	116	6.7	7.3	8.2	71

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	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, NH4 + ORG. SUSP. 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, ORTHO, DIS- SOLVED (MG/L AS P)
AUG										
14...	1135	16	16	.01	.00	.01	.00	.01	.02	.02
14...	1140	131	114	.04	.01	.39	.00	.40	.44	.06

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

SACRAMENTO RIVER BASIN

11370500 SACRAMENTO RIVER AT KESWICK, CA

LOCATION.--Lat 40°36'04", long 122°26'36", in SW¼NW¼ sec.28, T.32 N., R.5 W., Shasta County, Hydrologic Unit 18020101, on right bank 0.4 mi (0.6 km) upstream from Middle Creek, 0.8 mi (1.3 km) downstream from Keswick Dam, 1.6 mi (2.6 km) downstream from Keswick, and 10 mi (16 km) downstream from Shasta Dam.

DRAINAGE AREA.--6,468 mi² (16,752 km²), excluding Goose Lake basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 479.81 ft (146.246 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1939, at site 1.5 mi (2.4 km) upstream at datum 20.2 ft (6.16 m) higher and Oct. 1, 1939, to Apr. 30, 1942, at site 1.5 mi (2.4 km) upstream at datum 15.2 ft (4.63 m) higher. Aug. 20, 1960, to July 3, 1973, auxiliary water-stage recorder at city of Redding pumping plant 2.1 mi (3.4 km) downstream.

REMARKS.--Records excellent. Flow regulated by Shasta Dam beginning Dec. 30, 1943 (station 11370000). Diurnal fluctuations from Shasta powerplant re-regulated by Keswick Reservoir, capacity, 4,170 acre-ft (5.14 hm³) between normal operations elevations 579.0 ft (176.48 m) and 586.0 ft (178.61 m) and powerplant. No diversion for irrigation between Shasta Dam and station at Keswick. Since December 1963, water is released from Whiskeytown Lake (station 11371700) at lat 40°37'03", long 122°31'31", through a tunnel to Spring Creek powerplant (station 11371600) and then into Keswick Reservoir. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE (adjusted for change in contents in and evaporation from Shasta Lake and transbasin diversion into Keswick Reservoir).--41 years, 8,522 ft³/s (241.3 m³/s), 6,174,000 acre-ft/yr (7,613 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 186,000 ft³/s (5,270 m³/s) Feb. 23, 1940, gage height, 47.2 ft (14.39 m) site and datum then in use, from rating curve extended above 75,000 ft³/s (2,120 m³/s) on basis of peak discharge at Kennet plus 4,000 ft³/s (113 m³/s) estimated inflow; minimum observed, 2,730 ft³/s (77.3 m³/s) Aug. 22, 1939. Maximum discharge since construction of Shasta Dam in 1944, 81,400 ft³/s (2,310 m³/s) Apr. 1, 1974, gage height, 31.92 ft (9.729 m); maximum gage height, 32.22 ft (9.821 m) Jan. 24, 1970; minimum discharge, 154 ft³/s (4.36 m³/s) May 15, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,000 ft³/s (425 m³/s) July 7, gage height, 16.42 ft (5.005 m); minimum daily, 3,620 ft³/s (102 m³/s) Apr. 11, 12.

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	6050	5320	6300	6290	4590	3810	8710	6930	8760	14400	13000	7890
2	6060	5270	6250	6420	4170	3820	8630	6910	8790	14400	13000	7840
3	5970	5820	6260	6260	4100	3810	6140	6930	8820	14300	13000	7490
4	5970	6210	6280	6240	4120	3780	5310	6960	9970	14300	13000	7440
5	6030	6220	6310	5360	4090	3800	5370	7750	10100	14200	13100	6970
6	5970	6300	6430	5270	3730	3810	5230	7800	10300	14100	13000	6930
7	6030	6240	6290	5290	3730	3780	5140	7780	10400	14400	12500	6410
8	6090	6230	6310	5310	3720	3780	5150	6140	10700	14400	11600	6330
9	6090	6200	6290	5330	3680	3810	5130	5570	10800	14400	11600	6310
10	6160	6210	6310	5430	3660	3770	3830	5670	10800	13900	11600	6310
11	6100	6190	6280	6750	3690	3750	3620	7700	10800	13900	10800	5790
12	6110	6230	6300	8770	3710	3740	3620	8250	10900	13800	10000	6000
13	6110	6220	6320	8700	4130	3770	3660	8260	10800	13800	9970	5750
14	6210	6290	6300	8930	3830	3730	4920	8230	10800	13800	9960	5720
15	6120	6250	6270	8910	3790	3720	5630	8230	10800	13800	8840	5770
16	6120	6220	6270	8740	3850	3740	5630	8230	10800	13800	8680	5100
17	6190	6340	6340	6860	3790	3770	5630	8230	10800	13900	8730	5140
18	6130	6280	6270	6240	3900	3780	5640	8220	10800	13900	8800	5140
19	6130	6290	6270	6280	3870	3780	5610	8220	10800	13900	8760	5160
20	6150	6320	6300	6280	4040	3780	5670	8280	10800	13900	8810	5180
21	6120	6260	6310	6300	4210	3770	6910	8270	10900	13800	8770	5210
22	6170	6260	6300	6310	4030	3780	7900	8250	10800	13800	8790	5180
23	6150	6280	6290	5360	3910	3780	8730	8250	10800	13900	8610	5190
24	6150	6280	6260	5370	3890	3760	8780	8230	10800	13800	8530	5180
25	6090	6270	6340	5300	3840	3730	8720	8350	10800	13500	8080	5190
26	6160	6270	6310	5390	3840	3730	7110	8260	10900	13400	8140	5120
27	6140	6300	6330	5260	3830	4620	6930	8270	12300	13500	7880	5180
28	6070	6300	6260	5310	3820	8720	6920	8240	12700	13500	8010	5180
29	6060	6300	6250	5310	---	8770	6930	8320	12600	13500	7990	5160
30	5410	6320	6310	5250	---	8720	6940	8340	12700	13400	7960	5160
31	5300	---	6260	4750	---	8690	---	8950	---	13000	7880	---
TOTAL	187610	185490	195170	193570	109560	137600	184140	242020	322840	430400	309390	176420
MEAN	6052	6183	6296	6244	3913	4439	6138	7807	10760	13880	9980	5881
MAX	6210	6340	6430	8930	4590	8770	8780	8950	12700	14400	13100	7890
MIN	5300	5270	6250	4750	3660	3720	3620	5570	8760	13000	7880	5100
AC-FT	372100	367900	387100	383900	217300	272900	365200	480000	640400	853700	613700	349900
MEAN ‡	3633	3995	3745	6056	9687	11540	8117	8709	4104	3549	3513	3400
AC-FT ‡	223400	237700	230300	372400	538000	709800	483000	535500	244200	218200	216000	202300
CAL YR 1978 TOTAL	3208020			MEAN 8789	MAX 39300	MIN 2500	AC-FT 6363000	MEAN‡ 10580	AC-FT‡ 7661000			
WTR YR 1979 TOTAL	2674210			MEAN 7327	MAX 14400	MIN 3620	AC-FT 5304000	MEAN‡ 5816	AC-FT‡ 4211000			

‡ Adjusted for change in contents and evaporation from Shasta Lake and transbasin diversion into Keswick Reservoir.

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

CHEMICAL ANALYSES: Water years 1951 to current year. Published as "near Keswick" in 1951 and 1953; as "at Keswick Dam, near Keswick" in 1968-69.

BIOLOGICAL DATA: Water year 1979.

SEDIMENT RECORDS: Water years 1978 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
18... A	1050	6170	103	7.0	14.0	2.0	8.9	--	--	--	--	--
NOV												
17... A	1400	6430	110	7.1	12.0	1.0	11.2	--	--	--	--	--
DEC												
12... A	1030	6260	117	7.0	10.0	2.0	9.6	--	--	--	--	--
JAN												
19... A	1225	6220	125	7.1	10.0	3.0	10.4	--	--	--	--	--
FEB												
21...	0900	4220	102	7.4	7.5	8.4	11.8	36	150	42	0	9.2
21... A	1130	4190	118	7.1	8.5	4.0	11.5	--	--	--	--	--
MAR												
21...	0900	3720	128	7.7	9.0	1.8	11.8	29	K17	49	0	11
27... A	1330	3950	128	7.2	9.0	2.0	11.4	--	--	--	--	--
APR												
23... A	1125	8880	132	7.1	8.5	1.0	10.3	--	--	--	--	--
24...	1000	8820	113	7.8	9.0	1.0	10.2	9	K7	45	4	10
MAY												
23...	1000	8160	113	7.1	9.0	1.3	11.6	K4	K3	46	4	10
29... A	1430	8390	--	7.4	13.0	.00	10.5	--	--	46	0	10
JUN												
20...	0845	10800	107	7.3	9.5	2.3	10.0	10	K6	44	0	10
20... A	1035	10900	123	7.1	11.5	3.0	10.5	--	--	--	--	--
JUL												
24...	0830	14000	112	6.9	10.5	2.5	9.4	K6	K5	44	0	9.9
24... A	1050	13900	121	7.0	12.5	3.0	9.7	--	--	--	--	--
AUG												
17... A	1020	8750	112	7.1	13.0	.00	9.2	--	--	47	2	9.0
21...	0830	8710	105	6.5	12.0	1.1	9.0	29	10	41	3	8.3
SEP												
11... A	0625	5650	--	7.5	12.0	.00	9.9	--	--	47	0	9.0
18...	0830	5140	108	6.6	12.0	1.6	9.9	14	21	46	3	9.4

DATE	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT												
18... A	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
17... A	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
12... A	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
19... A	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
21...	4.7	5.9	23	.4	1.0	42	6.0	2.2	.1	20	67	75
21... A	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
21...	5.3	6.9	23	.4	1.4	49	8.9	2.6	.1	22	91	88
27... A	--	--	--	--	--	--	--	--	--	--	--	--
APR												
23... A	--	--	--	--	--	--	--	--	--	--	--	--
24...	4.9	6.3	23	.4	1.4	41	8.8	2.5	.1	24	81	83
MAY												
23...	5.0	6.0	22	.4	1.4	42	7.3	2.2	.1	20	73	77
29... A	5.0	7.0	--	.5	--	50	--	2.0	--	--	--	--
JUN												
20...	4.7	6.5	24	.4	1.3	53	5.1	2.3	.1	20	78	82
20... A	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
24...	4.8	5.6	21	.4	1.3	49	6.2	1.8	.1	21	74	85
24... A	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
17... A	6.0	5.0	--	.3	--	45	--	2.0	--	--	--	--
21...	4.8	4.9	20	.3	1.0	38	11	1.9	.1	21	--	64
SEP												
11... A	6.0	12	--	.8	--	56	--	2.0	--	--	--	--
18...	5.4	6.1	22	.4	1.2	43	12	2.0	.1	21	70	93

See footnotes at end of table.

SACRAMENTO RIVER BASIN

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, KJEL- DAHL, TOTAL (MG/L AS N)	NITRO- GEN, NH ₄ + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT											
18... A	--	--	.04	.20	--	--	.24	--	.01	--	--
NOV											
17... A	--	--	.01	.30	--	--	.31	--	.02	--	--
DEC											
12... A	--	--	.01	.10	--	--	.11	--	.02	--	--
JAN											
19... A	--	--	--	--	--	--	.30	--	.02	--	--
FEB											
21... A	.09	.08	.01	.43	.44	.37	.07	.52	.03	.04	--
21... A	--	--	--	--	--	--	.20	--	.02	--	--
MAR											
21... A	.12	.07	.01	.08	.09	.02	.07	.16	.02	.05	.8
27... A	--	--	--	--	--	--	.20	--	.02	--	--
APR											
23... A	--	--	--	--	--	--	.10	--	.02	--	--
24... A	.11	.09	.01	.15	.16	.05	.11	.25	.01	.01	--
MAY											
23... A	.10	.08	.02	.04	.06	.01	.05	.14	.02	.01	--
29... A	--	--	--	--	--	--	.10	--	.02	--	1.5
JUN											
20... A	.11	.07	.08	.01	.09	.08	.01	.16	.01	.02	1.2
20... A	--	--	--	--	--	--	.40	--	.03	--	--
JUL											
24... A	.10	.08	.02	3.5	3.5	.40	3.1	3.6	.02	.04	1.8
24... A	--	--	--	--	--	--	.30	--	.02	--	--
AUG											
17... A	--	--	--	--	--	--	--	--	--	--	--
21... A	.11	.06	.00	.23	.23	.01	.22	.29	.01	.02	--
SEP											
11... A	--	--	--	--	--	--	.30	--	.02	--	1.2
18... A	.10	.08	.01	.28	.29	.00	.29	.37	.01	.01	.8

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
FEB										
21... A	0900	2	1	0	0	0	1	0	1	0
MAY										
23... A	1000	2	2	0	0	0	1	0	1	0
AUG										
21... A	0830	1	1	100	80	20	1	0	<1	0

DATE	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
FEB										
21... A	0	0	1	1	0	26	16	10	350	280
MAY										
23... A	0	0	0	0	0	22	14	8	200	190
AUG										
21... A	0	0	0	0	<3	11	7	4	210	180

See footnotes at end of table.

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE 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 RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
FEB 21...	70	5	5	0	20	0	20	.4	.0	.4
MAY 23...	10	7	7	0	0	0	10	.2	.0	.2
AUG 21...	30	4	0	4	0	0	3	.1	.0	.1

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
FEB 21...	0	0	0	1	1	0	70	20	50
MAY 23...	0	0	0	0	0	0	60	10	50
AUG 21...	0	0	0	0	0	4	30	30	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 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	MAR 21,79 0900	MAY 22,79 1000	JUN 20,79 0845	JUL 24,79 0830	AUG 21,79 0830	SEP 18,79 0830		
TOTAL CELLS/ML	1300	100	64	240	440	270		
DIVERSITY: DIVISION	1.0	1.0	1.4	1.0	0.3	0.9		
..CLASS	1.0	1.0	1.4	1.0	0.3	0.9		
..ORDER	1.3	1.9	1.4	1.5	0.7	1.4		
...FAMILY	1.5	2.3	1.4	2.4	0.7	2.7		
....GENUS	1.9	2.3	1.4	2.7	0.7	2.9		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....OOCYSTACEAE								
...ANKISTRODESMUS	--	-	13 13	--	-	--	-	10 4
...SCENEDESMACEAE								
...SCENEDESMUS	170	13	26# 25	39# 60	100# 44	--	-	81# 30
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	--	-	26# 25	--	-	--	-	--

See footnotes at end of table.

SACRAMENTO RIVER BASIN

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF
BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	MAR 21,79 0900		MAY 22,79 1000		JUN 20,79 0845		JUL 24,79 0830		AUG 21,79 0830		SEP 18,79 0830	
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
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
..CENTRALES												
..COSCONODISCACEAE												
....CYCLOTELLA	160	12					9	4	13	3	30	11
....MELOSIRA	770#	60	26#	25			37#	16			5	2
..PENNALES												
....ACHNANTHACEAE												
....ACHNANTHES	--	--	--	--			29	12	13	3	15	6
....RHOICOSPHENIA	*	0					5	2			5	2
....CYMBELLACEAE												
....CYMBELLA	*	0					1	1				
....DIATOMACEAE												
....DIATOMA	--	--	--	--			21	9			10	4
....EUNOTIACEAE												
....EUNOTIA	--	--	--	--			1	1				
....FRAGILARIACEAE												
....ASTERIONELLA	30	2					3	1				
....FRAGILARIA	--	--	--	--			3	1				
....SYNEDRA	--	--	--	--			9	4			5	2
....GOMPHONEMACEAE												
....GOMPHONEMA	*	0					1	1				
....NAVICULACEAE												
....NAVICULA	10	1					5	2			45#	17
....NITZSCHIA			13	13	13#	20	8	3			55#	20
....TABELLARIACEAE												
....TABELLARIA	--	--	--	--							10	4
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
..CHROOCOCCALES												
....CHROOCOCCACEAE					13#	20			26	6		
....ANACYSTIS	--	--	--	--								
....HORMOGONALES												
....NOSTOCACEAE												
....ANABAENA	76	6										
....OSCILLATORIA	51	4							390#	88		
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
..EUGLENALES												
....EUGLENACEAE												
....TRACHELOMONAS	*	0										

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

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

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
MAY 23...	29	7.72	6.06	30.0	.000	55.3	Polyethylene
JUL 24...	34	5.20	3.70	13.8	.570	109	strip
AUG 21...	28	1.34	1.10	3.56	.000	67.4	do

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 05...	1140	5910	--	2	32	79
FEB 21...	0900	4220	7.5	7	80	98
MAR 21...	0900	3720	9.0	1	10	--
APR 24...	1000	8820	9.0	2	48	81
MAY 23...	1000	8160	9.0	1	22	91
JUN 20...	0845	10800	9.5	2	58	68
JUL 24...	0830	14000	10.5	3	113	74
AUG 21...	0830	8710	12.0	2	47	79
SEP 18...	0830	5140	12.0	3	42	86

SACRAMENTO RIVER BASIN

11371000 CLEAR CREEK AT FRENCH GULCH, CA

LOCATION.--Lat 40°41'42", long 122°38'08", unsurveyed, Shasta County, Hydrologic Unit 18020112, on right bank 1,200 ft (366 m) downstream from French Gulch, 0.3 mi (0.5 km) south of town of French Gulch, and 15 mi (24 km) northwest of Redding.

DRAINAGE AREA.--115 mi² (298 km²).

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 1285: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,320.60 ft (402.519 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 28, 1959, water-stage recorder at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good. No large diversion above station. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--29 years, 215 ft³/s (6.089 m³/s), 155,800 acre-ft/yr (192 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,600 ft³/s (413 m³/s) Jan. 16, 1974, gage height, 14.99 ft (4.569 m), from rating curve extended above 5,200 ft³/s (147 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 1.5 ft³/s (0.042 m³/s) July 19-22, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge 3,400 ft³/s (96.3 m³/s) Mar. 27 (1800 hrs), gage height, 8.98 ft (2.737 m), no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily 11 ft³/s (0.31 m³/s) Sept. 6, 16-18.

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	21	20	33	26	42	407	435	217	72	30	14	21
2	21	20	30	26	40	341	379	197	69	30	13	27
3	21	20	29	26	38	290	336	182	66	30	13	20
4	20	20	28	26	41	247	303	174	64	31	14	15
5	20	21	29	26	38	243	281	236	61	33	15	13
6	20	20	27	25	38	322	270	266	57	31	15	11
7	21	19	27	28	38	423	264	325	57	30	15	14
8	20	18	25	73	39	426	242	311	56	29	15	15
9	20	18	29	87	45	385	212	283	54	28	15	15
10	20	18	28	125	51	340	198	259	52	34	16	14
11	20	20	28	202	82	315	188	236	49	32	16	14
12	19	24	28	197	130	301	174	217	47	30	16	14
13	18	25	27	141	760	274	161	201	47	25	16	13
14	17	25	26	232	620	256	152	187	45	22	18	12
15	17	24	26	298	391	343	145	179	47	22	19	12
16	19	25	26	206	316	442	153	166	47	20	18	11
17	20	25	25	146	269	378	146	155	50	20	18	11
18	19	25	24	113	351	336	134	142	49	19	17	11
19	18	36	22	91	344	302	125	133	47	18	16	13
20	19	59	20	80	374	270	117	131	44	18	18	13
21	19	74	21	78	425	249	112	125	42	18	21	13
22	19	61	21	79	399	266	123	122	40	19	20	12
23	18	41	23	74	346	239	187	116	38	19	17	12
24	18	34	22	69	286	224	249	108	35	18	15	13
25	19	31	20	63	247	215	204	102	34	17	14	18
26	19	29	22	56	260	218	211	96	33	16	12	19
27	19	28	23	53	256	2050	263	91	33	16	12	16
28	19	28	22	51	355	1780	256	89	31	16	14	15
29	18	28	20	44	---	953	235	85	29	15	18	14
30	19	28	21	48	---	666	223	83	28	15	25	13
31	19	---	25	46	---	523	---	78	---	14	23	---
TOTAL	596	864	777	2835	6621	14024	6478	5292	1423	715	508	434
MEAN	19.2	28.8	25.1	91.5	236	452	216	171	47.4	23.1	16.4	14.5
MAX	21	74	33	298	760	2050	435	325	72	34	25	27
MIN	17	18	20	25	38	215	112	78	28	14	12	11
AC-FT	1180	1710	1540	5620	13130	27820	12850	10500	2820	1420	1010	861
CAL YR 1978	TOTAL	128805	MEAN 353	MAX 6450	MIN 17	AC-FT 255500						
WTR YR 1979	TOTAL	40567	MEAN 111	MAX 2050	MIN 11	AC-FT 80460						

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

LOCATION.--Lat 40°38'49", long 122°37'34", Shasta County, Hydrologic Unit 18010211, at powerplant 1.6 mi (2.6 km) downstream from Mill Creek, and 3.8 mi (6.1 km) south of French Gulch.

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Recorded powerplant output.

REMARKS.--Water is diverted from Trinity River at NW¼SE¼ sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (station 11371700). See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records furnished by Water and Power Resources Service, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--16 years, 1,597 ft³/s (45.23 m³/s), 1,157,000 acre-ft/yr (1.43 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,910 ft³/s (111 m³/s) Feb. 11, 1970; no flow for several days in many years.

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	503	421	2970	275	0	0	0	383	664	2650	2630	2610
2	579	1540	2980	328	0	0	0	0	495	2650	2530	2610
3	559	1480	2990	311	0	0	0	0	500	2640	2550	2620
4	573	1500	3010	304	0	0	0	0	509	2640	2720	2610
5	635	1480	1910	324	0	0	0	0	788	2640	2630	1530
6	559	1480	2970	289	0	0	0	0	609	2640	2620	1500
7	515	1480	2960	311	0	0	0	0	515	2560	2600	1510
8	495	1480	2970	307	0	0	0	0	450	2630	2650	1620
9	503	1490	2970	293	0	116	0	0	680	2630	2530	1560
10	571	1470	2980	166	0	0	0	0	609	2610	2580	1450
11	508	1480	2950	308	0	0	0	0	790	2610	2650	1710
12	505	1470	2980	0	0	0	0	0	716	2610	2680	1730
13	547	1480	2960	0	264	0	0	208	613	2190	2620	1470
14	556	1470	3000	0	0	0	0	204	668	2210	2610	1450
15	496	1480	3530	0	122	0	0	193	528	2120	2580	1520
16	496	1480	3530	0	0	0	352	261	523	2140	2590	1500
17	499	1460	3530	0	0	0	0	195	510	2120	2750	1490
18	601	1470	3330	0	0	0	0	272	375	2060	2770	1520
19	493	1470	3290	0	0	0	309	509	515	2140	2700	1470
20	505	1480	3510	0	0	0	0	499	512	2120	2690	1490
21	487	1470	2970	0	206	0	0	510	581	2100	2610	1550
22	497	1580	2980	0	0	0	149	767	738	2090	2650	1530
23	510	3010	2990	0	0	0	0	823	2580	2050	2570	1530
24	545	2960	2990	136	0	0	0	680	523	2130	2570	948
25	562	2970	2990	0	0	0	0	679	580	1740	2600	1050
26	519	2980	2980	0	0	0	0	680	508	1600	2610	1110
27	505	2980	2980	0	0	0	0	675	496	1600	2610	1330
28	610	3000	2990	0	8.0	0	512	700	500	1570	2610	1130
29	583	2960	1470	0	---	0	542	511	502	1570	2600	1110
30	513	3010	1470	0	---	0	510	493	655	1610	2610	1320
31	737	---	1480	0	---	0	---	630	---	1700	2610	---
TOTAL	16766	55481	89610	3352	600.0	116	2374	9812	19232	68370	81330	47578
MEAN	541	1849	2891	108	21.4	3.74	79.1	317	641	2205	2624	1586
MAX	737	3010	3530	328	264	116	542	823	2580	2650	2770	2620
MIN	487	421	1470	0	0	0	0	0	375	1570	2530	948
AC-FT	33260	110000	177700	6650	1190	230	4710	19460	38150	135600	161300	94370
CAL YR 1978 TOTAL	248453.00			MEAN 681	MAX 3530	MIN 0	AC-FT 492800					
WTR YR 1979 TOTAL	394621.00			MEAN 1081	MAX 3530	MIN 0	AC-FT 782700					

SACRAMENTO RIVER BASIN

11371600 SPRING CREEK POWERPLANT AT KESWICK, CA

LOCATION.--Lat 40°37'41", long 122°27'59", in NE¼SE¼ sec.18, T.32 N., R.5 W., Shasta County, Hydrologic Unit 18020112, at powerplant on Spring Creek, 0.4 mi (0.6 km) northwest of Keswick, and 4.9 mi (7.9 km) northwest of Redding.

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Discharge computed from powerplant output.

REMARKS.--Water is released from Whiskeytown Lake (station 11371700) at lat 40°37'03", long 122°31'31", through a tunnel to powerplant and then into Keswick Reservoir. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records furnished by Water and Power Resources Service, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--15 years, 1,982 ft³/s (56.13 m³/s), 1,436,000 acre-ft/yr (1.77 km³).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,700 ft³/s (133 m³/s) Jan. 21, 1971; no flow for many days in 1974-79.

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	1220	566	3140	311	0	221	718	632	738	2220	2470	2710
2	1290	997	3040	290	0	467	517	0	587	2550	2460	2700
3	1290	1480	3060	387	0	462	557	0	582	2800	2620	2680
4	1310	1550	3130	292	0	691	595	0	581	2560	2610	2700
5	1310	1730	3030	281	0	615	480	0	742	2560	2590	1460
6	1280	1900	2960	277	0	358	559	0	601	2340	2350	1560
7	1260	1650	2760	383	0	423	495	215	686	2830	2590	1480
8	1290	1700	2950	522	0	443	364	783	552	2790	2600	1570
9	1290	1670	2940	390	0	447	366	964	877	2760	2610	1570
10	1800	1590	2980	576	0	632	315	433	623	2850	2660	1670
11	1810	1440	2970	1240	0	617	230	515	810	2710	2580	1640
12	1820	1440	2950	962	0	448	235	236	665	2610	2240	1630
13	1830	1460	2970	318	897	407	0	0	563	2180	2630	1540
14	1830	1460	3040	47	970	408	0	314	556	1680	2560	1330
15	1830	1630	3490	1060	976	358	0	313	593	2170	2600	1550
16	1040	1520	3500	625	880	803	279	352	638	2320	2740	1550
17	2060	1480	3500	437	965	742	0	424	558	2080	2740	1540
18	1260	1470	3640	183	754	734	0	429	617	2260	2790	1650
19	0	1470	3670	0	774	590	370	742	560	2250	2840	1490
20	0	1360	3480	0	775	520	0	724	561	2290	2790	1500
21	0	1460	2960	0	1020	234	0	740	585	2220	2970	1580
22	0	1630	2950	0	999	312	215	873	653	2390	2880	1490
23	422	3470	3040	0	952	359	0	795	2590	2310	2790	1570
24	511	2990	3130	0	810	288	0	802	560	2350	2830	1480
25	483	3060	3160	0	843	0	0	836	805	1650	2570	1480
26	432	3050	3160	0	524	0	0	989	555	1630	2530	1480
27	530	3070	3140	0	0	0	0	914	557	1740	2520	1500
28	538	2770	3140	0	237	0	492	796	579	1650	2450	1530
29	524	2980	1740	0	---	0	506	674	556	1620	2620	1500
30	534	3150	1730	0	---	0	485	537	973	1580	2620	1300
31	513	---	1680	0	---	171	---	604	---	1690	2580	---
TOTAL	31307	57193	93030	8581	12376	11750	7778	15636	21103	69640	81430	50430
MEAN	1010	1906	3001	277	442	379	259	504	703	2246	2627	1681
MAX	2060	3470	3670	1240	1020	803	718	989	2590	2850	2970	2710
MIN	0	566	1680	0	0	0	0	0	552	1580	2240	1300
AC-FT	62100	113400	184500	17020	24550	23310	15430	31010	41860	138100	161500	100000
CAL YR 1978	TOTAL	491805.00	MEAN	1347	MAX	4530	MIN	0	AC-FT	975500		
WTR YR 1979	TOTAL	460254.00	MEAN	1261	MAX	3670	MIN	0	AC-FT	912900		

11371700 WHISKEYTOWN LAKE NEAR IGO, CA

LOCATION.--Lat 40°37'03", long 122°31'31", unsurveyed, Shasta County, Hydrologic Unit 18010112, at outlet works to Spring Creek powerplant on Clear Creek, 1.8 mi (2.9 km) downstream from Whiskey Creek, and 7.8 mi (12.6 km) northeast of Igo.

DRAINAGE AREA.--200 mi² (518 km²).

PERIOD OF RECORD.--May 1963 to current year. Prior to October 1964 published as Whiskeytown Reservoir near Igo.

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 earth- and rockfill dam. Storage began in May 1963. Capacity, 241,100 acre-ft (297 hm³) between elevations 1,100.00 ft (335.280 m), minimum operating level and 1,210.00 ft (368.808 m), crest of spillway. No dead storage. Transbasin water enters the reservoir through Judge Francis Carr powerplant (station 11525430) and is released through Spring Creek tunnel to Spring Creek powerplant (station 11371600) and Keswick Reservoir. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records furnished by Water and Power Resources Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 253,100 acre-ft (312 hm³) Mar. 30, 1974, elevation, 1,213.69 ft (369.933 m); minimum since reservoir was first filled, 159,000 acre-ft (196 hm³) Oct. 25, 1970, elevation, 1,181.48 ft (360.115 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 240,000 acre-ft (296 hm³) July 15, elevation, 1,210.90 ft (369.082 m); minimum, 197,200 acre-ft (243 hm³) Oct. 18, elevation, 1,195.59 ft (364.416 m).

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

1,015	714	1,080	15,100
1,020	994	1,100	27,500
1,030	1,800	1,120	40,700
1,040	3,060	1,140	74,000
1,050	4,900	1,180	155,300
1,060	7,420	1,220	274,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228700	202400	201800	201400	202500	203800	224400	236000	239100	238000	237500	239000
2	227300	203400	201900	201500	202500	203800	224600	236600	239100	238300	237800	239000
3	225900	203300	202000	201400	202500	203700	224600	237100	239000	238200	237600	239000
4	224500	203500	202200	201400	202600	203000	224400	237600	239000	238500	237900	239000
5	223200	203000	201100	201600	202600	202500	224300	238500	239300	238800	238000	239200
6	221800	202200	200100	201600	202700	202600	224100	239500	239300	239600	238500	238800
7	220400	201600	200700	201700	202700	202800	223900	239900	239100	239100	238500	239200
8	218900	201200	200900	201900	202700	203000	223900	239100	239000	239000	238500	239200
9	217400	200800	201200	202000	202800	203300	223800	238100	238600	238900	238500	239100
10	215100	200500	201400	202200	203000	202800	223700	237900	238700	238600	238400	238700
11	212600	200500	201700	202400	203100	202400	223900	237500	238700	238500	238600	238800
12	210000	200600	202000	201000	204100	202300	224000	237600	238900	238600	239300	239000
13	207500	200700	202400	200700	206300	202100	224500	238500	239000	238800	239400	238800
14	205000	200700	202300	202500	206300	202100	225000	238800	239200	239900	239600	239000
15	202500	200400	202500	201700	206100	202900	225400	239000	239100	240000	239600	238900
16	201500	200200	203000	201100	205500	202800	226100	239300	238900	239700	239500	238800
17	198500	200200	203400	200700	204500	202600	226600	239300	238800	239800	239600	238700
18	197200	200200	203000	200600	204400	202200	227000	239300	238600	239600	239800	238500
19	198200	200500	202500	200800	204000	201900	227200	239300	238600	239400	239500	238500
20	199300	200800	202700	200900	204600	201700	227600	239100	238500	239100	239500	238400
21	200300	201300	203000	201100	204700	202100	228000	239000	238400	238900	238800	238600
22	201300	201300	203200	201300	204200	202300	228500	239100	238500	238400	238500	238500
23	201500	200700	203300	201400	203500	202300	229700	239500	238700	238000	238200	238400
24	201600	200800	203300	201800	202700	202300	230500	239600	238700	237600	237700	237400
25	201800	200900	203100	201900	202000	202900	231200	239500	238300	237900	237900	236600
26	202000	201000	203000	202000	201800	203900	232100	239200	238200	237800	238100	235900
27	202000	201100	202900	202000	202500	212200	232900	238900	238100	237600	238300	235600
28	202100	201700	202800	202100	203200	217900	234000	238800	238000	237500	238500	234900
29	202300	201900	202400	202200	---	221000	234800	238700	237800	237400	238800	234100
30	202200	201800	201900	202300	---	223100	235600	238900	237000	237500	239600	234100
31	202700	---	201500	202400	---	224400	---	239000	---	237400	239000	---
MAX	228700	203500	203400	202500	206300	224400	235600	239900	239300	240000	239800	239200
MIN	197200	200200	200100	200600	201800	201700	223700	236000	237000	237400	237500	234100
†	1197.48	1197.19	1197.08	1197.38	1197.64	1204.70	1208.29	1209.36	1208.73	1208.83	1029.36	1207.82
‡	-27400	-900	-300	+900	+800	+21200	+11200	+3400	-2000	+400	+1600	-4900
††	760	270	140	130	130	380	740	1310	1850	1920	1650	1220

CAL YR 1978 ‡ -9300
WTR YR 1979 ‡ +4000

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SACRAMENTO RIVER BASIN

11372000 CLEAR CREEK NEAR IGO, CA

LOCATION.--Lat 40°30'48", long 122°31'23", unsurveyed, Shasta County, Hydrologic Unit 18020112, on left bank at old highway bridge on Redding-Igo Road 1.0 mi (1.6 km) northeast of Igo, 8.3 mi (13.4 km) southwest of Redding, and 10.4 mi (16.7 km) upstream from mouth.

DRAINAGE AREA.--228 mi² (590 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1345: Drainage area. WSP 1395: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 672.99 ft (205.127 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow regulated by Whiskeytown Lake since May 1963 (station 11371700). Transbasin diversion from Trinity River through Judge Francis Carr powerplant to Whiskeytown Lake began in April 1963 (station 11525430). Diversions from Whiskeytown Lake to Spring Creek powerplant (station 11371600) began in December 1963. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE (adjusted for change in contents and diversions in and out of Whiskeytown Lake).--39 years, 458 ft³/s (12.97 m³/s), 331,800 acre-ft/yr (409 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s (694 m³/s) Dec. 21, 1955, gage height, 13.75 ft (4.191 m); minimum, 8.6 ft³/s (0.24 m³/s) Sept. 4, 6, 7, 1950. Maximum discharge since construction of Whiskeytown Dam in 1963, 9,940 ft³/s (282 m³/s) Dec. 22, 1964, gage height, 9.23 ft (2.813 m); minimum daily, 30 ft³/s (0.85 m³/s) Oct. 10, 11, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 906 ft³/s (25.7 m³/s) Feb. 20, gage height, 4.79 ft (1.460 m); minimum daily, 48 ft³/s (1.36 m³/s) Aug. 13, 28, 29.

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	50	68	102	86	52	126	136	95	60	53	49	54
2	50	99	101	50	52	115	124	89	59	53	49	54
3	50	98	101	50	51	110	115	88	59	52	49	58
4	50	97	101	50	51	102	109	84	58	52	49	53
5	50	97	101	49	50	97	103	117	59	52	49	49
6	50	97	99	49	50	95	107	111	64	52	49	49
7	50	97	99	51	50	94	98	113	58	52	49	49
8	50	97	99	76	50	90	94	107	57	52	49	51
9	50	97	99	70	51	86	90	97	56	52	49	56
10	50	97	99	162	52	86	88	91	56	52	49	51
11	50	97	99	306	53	86	86	87	55	54	49	50
12	50	99	99	93	53	75	83	83	55	54	49	50
13	50	99	99	71	305	70	82	80	56	52	48	50
14	50	99	99	288	330	66	80	78	61	51	50	50
15	50	99	99	289	160	90	79	77	58	50	51	51
16	50	99	99	108	201	122	84	75	63	50	50	50
17	50	99	99	81	134	105	82	74	60	50	49	50
18	50	99	100	70	325	88	80	71	57	50	49	50
19	50	106	99	65	191	77	77	72	55	50	49	50
20	50	107	99	61	467	70	75	69	54	50	50	50
21	50	121	99	60	360	63	74	69	54	50	51	50
22	50	108	100	58	301	67	89	68	53	50	53	50
23	50	103	101	57	237	60	138	70	53	50	52	50
24	50	102	101	56	169	55	200	73	52	50	49	50
25	50	101	101	56	138	50	170	66	52	49	49	53
26	50	101	101	55	165	53	160	67	52	50	49	51
27	49	101	101	54	131	600	120	76	53	50	49	51
28	49	101	101	53	137	309	101	68	52	50	48	51
29	49	101	101	53	---	217	97	64	52	49	48	51
30	49	101	100	53	---	176	93	62	53	49	50	50
31	49	---	100	53	---	150	---	61	---	49	53	---
TOTAL	1545	2987	3098	2733	4366	3650	3114	2502	1686	1579	1535	1532
MEAN	49.8	99.6	99.9	88.2	156	118	104	80.7	56.2	50.9	49.5	51.1
MAX	50	121	102	306	467	600	200	117	64	54	53	58
MIN	49	68	99	49	50	50	74	61	52	49	48	49
AC-FT	3060	5920	6140	5420	8660	7240	6180	4960	3340	3130	3040	3040
MEAN ‡	85.2	147	206	274	593	844	485	345	116	129	105	83.5
AC-FT ‡	5240	8720	12680	16820	32940	51900	28850	21220	6900	7920	6470	4970
CAL YR 1978	TOTAL	63804	MEAN 175	MAX 4920	MIN 49	AC-FT 126600	MEAN ‡ 843	AC-FT ‡ 610200				
WTR YR 1979	TOTAL	30327	MEAN 83.1	MAX 600	MIN 48	AC-FT 60150	MEAN ‡ 283	AC-FT ‡ 204600				

‡ Adjusted for change in contents in and evaporation from Whiskeytown Lake, diversion from Trinity River through Judge Francis Carr powerplant, and diversion to Spring Creek powerplant, furnished by Water and Power Resources Service.

11372000 CLEAR CREEK NEAR IGO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-79.

CHEMICAL ANALYSES: Water years 1958-66.

WATER TEMPERATURES: Water years 1965-79 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1965 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from March 1965 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 22.0°C Sept. 6, 1977; minimum recorded, 2.0°C sometime during periods Jan. 3 to Feb. 1, 1968, and Jan. 13 to Feb. 6, 1975.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 16.0°C Oct. 4-7; minimum recorded, 2.5°C Jan. 26.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	12.5	11.0	10.0	8.5	6.5	5.5				
2	---	---	13.0	11.0	9.0	8.0	6.5	5.5				
3	---	---	13.5	11.0	9.0	7.5	6.5	5.5				
4	16.0	14.5	13.5	11.5	9.5	8.0	6.5	6.0				
5	16.0	14.5	13.0	11.5	9.0	8.0	7.5	7.0				
6	16.0	15.0	13.0	11.5	8.0	7.0	7.5	6.5				
7	16.0	14.5	13.0	11.5	8.0	6.5	8.0	7.0				
8	15.5	14.5	13.0	11.0	8.5	7.0	8.0	7.5				
9	15.5	14.0	13.0	11.5	8.5	8.0	8.5	8.0				
10	15.5	13.5	10.5	9.0	9.5	8.0	9.0	8.5				
11	15.0	14.0	10.0	9.0	9.5	9.0	9.5	9.0				
12	15.5	14.0	10.0	9.0	9.0	8.0	9.5	8.0				
13	15.5	14.0	11.0	9.5	8.5	7.0	8.0	6.5				
14	15.0	13.5	10.5	9.0	8.5	7.0	7.5	7.0				
15	15.0	14.5	10.5	8.5	8.0	7.0	8.0	7.0				
16	15.0	14.0	10.5	10.0	8.0	7.0	7.0	6.5				
17	15.0	14.0	10.5	9.5	8.0	7.5	7.0	5.5				
18	15.5	14.0	11.0	10.5	8.0	7.5	6.0	5.0				
19	15.0	14.0	10.5	10.0	8.0	7.0	6.0	5.0				
20	14.5	14.0	11.0	10.5	8.0	6.5	6.5	5.5				
21	15.0	14.0	10.5	10.0	8.0	7.0	7.0	6.0				
22	15.0	13.0	11.0	10.5	8.0	7.5	6.5	5.0				
23	14.0	12.5	10.5	9.0	8.0	7.5	5.0	4.0				
24	14.0	13.0	11.0	9.0	8.5	7.0	5.5	5.0				
25	14.0	12.0	11.0	9.5	8.5	7.0	5.0	4.0				
26	13.5	12.0	10.0	8.5	8.5	7.5	4.5	2.5				
27	13.0	12.0	10.0	8.5	8.0	7.5	4.0	3.0				
28	13.0	11.5	10.0	9.0	8.0	6.0	4.0	3.0				
29	12.5	11.5	10.0	9.0	7.0	6.0	---	---				
30	12.0	11.0	10.0	9.0	7.0	5.5	---	---				
31	11.5	11.0	---	---	7.0	5.5	---	---				
MONTH	16.0	11.0	13.5	8.5	10.0	5.5	9.5	2.5				

SACRAMENTO RIVER BASIN

11374000 COW CREEK NEAR MILLVILLE, CA

LOCATION.--Lat 40°30'19", long 122°13'56", in NE&NW¼ sec.32, T.31 N., R.3 W., Shasta County, Hydrologic Unit 18020101, on right bank 2.9 mi (4.7 km) upstream from mouth, 4.2 mi (6.8 km) southwest of Millville, and 4.3 mi (6.9 km) downstream from Little Cow Creek.

DRAINAGE AREA.--425 mi² (1,100 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 388.7 ft (118.48 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Numerous small diversions above station for irrigation.

AVERAGE DISCHARGE.--30 years, 673 ft³/s (19.06 m³/s), 487,600 acre-ft/yr (601 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,200 ft³/s (1,280 m³/s) Dec. 27, 1951, gage height, 21.55 ft (6.568 m); minimum daily, 0.02 ft³/s (<0.001 m³/s) July 29, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1937 or 1940 reached a stage of 23.8 ft (7.25 m) from floodmarks. Probable backwater effect from high flows on the Sacramento River.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (283 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 14	unknown	*22,600	640	14.67	4.471
Feb. 28	1615	13,200	374	11.32	3.450

Minimum daily, 8.0 ft³/s (0.23 m³/s) Aug. 6.

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	47	59	124	95	140	3350	609	1070	205	38	12	73
2	44	65	133	99	135	1610	551	889	194	37	10	68
3	39	69	115	97	135	1330	509	733	188	37	11	63
4	37	68	109	98	135	1090	478	695	182	44	11	55
5	38	68	108	99	135	881	467	1540	154	47	12	52
6	38	72	106	97	133	803	491	1530	142	47	8.0	48
7	42	67	102	101	133	793	509	1810	126	48	9.1	32
8	44	65	100	432	133	766	462	1200	114	46	12	27
9	50	61	109	770	135	713	461	991	113	40	10	26
10	47	56	108	1100	133	654	451	821	107	34	9.7	25
11	45	67	106	5770	150	609	432	719	101	36	11	23
12	46	81	105	1130	188	576	418	657	87	35	12	17
13	41	107	104	539	9770	550	416	618	76	32	11	16
14	39	106	101	2590	10300	534	439	611	71	27	11	15
15	41	100	98	5650	2040	824	438	586	72	27	18	12
16	51	99	98	1320	3350	1250	502	577	76	19	14	14
17	52	101	116	686	1480	1030	800	539	80	20	13	14
18	49	103	213	457	3610	1730	679	505	83	21	13	14
19	45	125	139	346	1930	1190	510	496	84	22	16	15
20	51	427	116	298	4460	846	462	478	78	23	20	16
21	55	334	109	267	5640	702	437	465	78	19	23	19
22	54	274	108	239	4640	665	443	456	73	19	21	20
23	51	182	104	217	3850	580	585	437	69	18	25	19
24	52	148	103	204	2210	522	1610	393	63	20	22	15
25	49	133	105	192	1300	496	868	367	60	20	17	22
26	54	124	104	176	1570	487	712	349	57	18	19	38
27	48	119	103	162	998	1180	1000	317	54	19	10	40
28	51	117	101	156	4980	1070	742	296	47	23	17	32
29	55	116	97	146	---	902	655	269	42	18	54	30
30	54	114	88	146	---	1050	610	246	37	17	95	31
31	57	---	91	147	---	723	---	223	---	13	111	---
TOTAL	1466	3627	3423	23826	63813	29506	17746	20883	2913	884	657.8	891
MEAN	47.3	121	110	769	2279	952	592	674	97.1	28.5	21.2	29.7
MAX	57	427	213	5770	10300	3350	1610	1810	205	48	111	73
MIN	37	56	88	95	133	487	416	223	37	13	8.0	12
AC-FT	2910	7190	6790	47260	126600	58530	35200	41420	5780	1750	1300	1770
CAL YR 1978	TOTAL	329887.0	MEAN	904	MAX	16700	MIN	20	AC-FT	654300		
WTR YR 1979	TOTAL	169635.8	MEAN	465	MAX	10300	MIN	8.0	AC-FT	336500		

11374000 COW CREEK NEAR MILLVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-71, 1973-76, 1978-79.

CHEMICAL ANALYSES: Water years 1959-66.

WATER TEMPERATURES: Water years 1966-71, 1973-76, 1978-79 (discontinued).

SEDIMENT RECORDS: Water year 1978.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1965 to September 1971, October 1972 to September 1976, October 1977 to January 1979 (discontinued).

SEDIMENT RECORDS: November 1977 to May 1978.

INSTRUMENTATION.--Temperature recorder October 1965 to September 1971, October 1972 to September 1976, and from October 1977 to January 1979.

REMARKS.--Since Sept. 14, 1973, temperature recorder 2.6 mi (4.2 km) upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 35.5°C July 25, 1976; minimum recorded, 0.0°C Dec. 14, 15, 1967, Jan. 10, 11, 1968.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum 23.5°C Oct. 1; minimum, 1.5°C Dec. 31.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

SACRAMENTO RIVER BASIN

11374400 MIDDLE FORK COTTONWOOD CREEK NEAR ONO, CA

LOCATION.--Lat 40°22'03", long 122°34'19", in SW¼NW¼ sec.17, T.29 N., R.6 W., Shasta County, Hydrologic Unit 18020102, on left bank 700 ft (213 m) downstream from Poverty Gulch, 4.6 mi (7.4 km) upstream from North Fork Cottonwood Creek, and 7.8 mi (12.6 km) southeast of Ono.

DRAINAGE AREA.--244 mi² (632 km²).

PERIOD OF RECORD.--Water years 1964-72, 1977-79.

WATER TEMPERATURES: Water years 1964-65, 1968-72, January 1977 to September 1979 (discontinued).

SEDIMENT RECORDS: Water years 1963-70.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to September 1965, July 1968 to September 1972, January 1977 to September 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder July 24, 1968 to Sept. 30, 1972, and Jan. 24, 1977 to September 1979.

REMARKS.--Prior to June 24, 1970, water temperature data collected at site 4.2 mi (6.8 km) downstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 37.0°C Aug. 6, 1978, July 18, 1979; minimum recorded, 0.0°C on several days in 1968, 1971, 1972, 1977, 1978 and 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 37.0°C July 18; minimum recorded, 0.0°C Dec. 21, Dec. 29 to Jan. 3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	26.0	17.5	16.0	7.5	11.5	7.0	1.5	0.0	6.0	0.5	10.0	5.0
2	26.0	16.5	15.5	7.5	9.5	5.0	2.5	0.0	7.0	0.5	8.0	5.5
3	26.5	16.5	16.0	8.0	9.5	4.0	4.5	0.0	8.5	1.0	8.5	6.5
4	26.0	16.0	16.0	9.0	9.5	3.5	6.5	3.0	10.5	3.0	12.5	6.5
5	25.5	16.0	16.5	9.0	8.0	3.0	8.0	4.0	11.5	5.0	14.5	9.0
6	25.0	16.0	17.0	9.5	6.0	1.0	7.0	2.5	13.5	6.0	15.0	10.0
7	25.0	15.0	17.0	9.5	3.5	0.5	5.5	4.0	12.5	6.5	14.5	9.0
8	25.0	15.0	16.0	8.5	3.5	0.5	6.0	5.0	11.5	6.5	14.5	9.0
9	24.0	14.5	14.0	8.0	5.5	1.0	8.0	6.5	12.0	8.5	14.0	8.0
10	24.5	15.0	9.5	4.5	8.0	3.0	8.5	7.5	9.0	8.0	14.5	8.5
11	25.5	15.0	8.5	3.0	8.0	5.0	8.5	7.0	11.5	8.5	14.0	9.5
12	25.0	16.0	5.0	2.5	9.0	5.5	9.0	6.0	10.0	9.0	16.0	9.5
13	25.0	15.5	9.5	4.0	9.5	4.5	6.5	5.0	9.5	8.0	15.5	9.0
14	24.5	15.5	9.5	3.0	9.0	3.0	6.0	5.5	9.5	7.0	13.0	10.5
15	24.5	16.0	8.0	2.5	7.5	2.0	8.0	6.0	7.0	5.0	11.5	9.5
16	23.5	15.5	9.5	6.0	6.5	1.0	7.0	4.0	10.0	5.5	9.5	7.5
17	23.5	15.0	11.5	5.0	6.0	3.0	6.5	3.5	8.5	5.5	13.0	8.0
18	23.5	14.5	11.0	4.5	7.0	2.5	7.5	4.0	9.0	7.0	11.5	9.0
19	21.0	14.5	8.5	7.5	5.5	0.5	8.0	4.0	10.5	6.0	15.0	7.5
20	21.0	13.5	10.0	6.5	3.0	0.5	8.5	4.0	8.5	7.5	15.0	8.5
21	22.5	15.5	9.5	8.5	5.5	0.0	10.0	5.0	11.0	7.0	13.5	8.0
22	21.0	13.0	10.5	7.0	5.5	0.5	8.5	4.0	9.5	6.5	13.0	10.0
23	20.5	12.0	10.5	5.0	6.5	0.5	7.5	2.5	9.0	6.0	16.0	8.5
24	19.0	12.5	10.5	5.0	7.0	1.5	7.0	3.5	10.0	7.0	16.5	9.0
25	21.0	11.5	10.0	4.5	7.0	1.0	7.0	1.5	10.5	7.5	16.0	9.5
26	19.5	11.5	10.0	4.0	7.0	3.0	6.0	0.5	12.0	7.0	13.0	10.5
27	19.5	11.5	10.0	4.0	7.0	3.0	8.0	1.5	10.5	6.0	11.5	9.5
28	18.5	11.0	10.5	5.0	6.5	1.5	7.0	2.0	10.0	8.0	13.0	8.5
29	16.5	10.0	12.0	8.0	4.0	0.0	5.5	0.5	---	---	15.0	8.0
30	14.5	8.5	11.0	6.5	2.0	0.0	4.0	2.5	---	---	15.0	7.5
31	14.0	7.5	---	---	1.5	0.0	6.0	2.5	---	---	15.5	8.0
MONTH	26.5	7.5	17.0	2.5	11.5	0.0	10.0	0.0	13.5	0.5	16.5	5.0

11374400 MIDDLE FORK COTTONWOOD CREEK NEAR ONO, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	8.5	20.5	13.5	28.0	19.0	32.0	20.0	35.5	22.5	26.5	20.0
2	16.5	8.5	22.5	13.0	30.0	19.5	32.5	20.5	34.5	22.0	28.5	20.0
3	16.0	9.0	22.5	14.5	31.5	21.5	31.5	21.5	34.5	23.0	28.5	19.5
4	18.5	10.0	20.0	15.5	31.0	22.0	31.5	21.5	33.0	22.0	30.5	19.0
5	19.0	11.5	19.0	13.5	31.5	21.5	31.5	21.0	33.5	22.0	31.5	19.5
6	16.0	11.5	14.5	10.5	29.0	19.0	31.5	21.0	33.0	19.5	32.0	21.0
7	18.5	10.0	15.5	9.0	27.0	18.0	31.5	20.0	33.0	21.0	32.0	21.5
8	18.0	11.0	17.5	8.5	29.0	18.0	31.5	20.5	33.0	21.0	31.0	20.0
9	16.5	9.5	19.5	9.5	30.5	19.5	26.0	21.0	34.5	21.0	29.5	19.0
10	15.5	8.5	21.0	11.0	31.0	20.5	31.0	19.5	35.0	23.0	28.5	19.0
11	18.5	10.5	23.0	13.0	32.0	20.5	32.5	20.5	34.5	22.5	29.5	19.0
12	19.0	10.5	24.5	14.5	32.0	21.5	33.0	20.5	32.5	22.0	31.0	19.5
13	20.0	12.0	25.5	16.0	30.5	19.5	33.0	21.5	29.5	21.5	31.5	20.5
14	20.0	12.0	25.5	17.0	29.0	17.0	35.0	22.0	31.5	20.5	31.5	20.5
15	20.5	12.5	25.0	17.0	30.0	18.5	35.0	22.5	31.0	20.5	31.0	20.5
16	18.0	13.5	25.5	17.0	25.0	17.0	35.5	22.5	31.5	20.5	31.0	20.5
17	19.0	11.0	26.0	18.0	24.5	14.5	35.5	23.0	32.0	20.5	30.0	20.0
18	18.0	9.0	27.0	18.5	28.5	16.0	37.0	22.5	32.0	20.5	28.0	18.0
19	18.5	9.5	27.5	19.0	30.5	19.0	35.5	23.5	28.5	21.0	29.0	18.0
20	20.0	11.0	27.5	19.0	31.0	20.0	32.5	23.5	28.5	19.0	29.5	18.0
21	21.0	12.0	27.5	20.5	31.0	20.0	32.5	24.5	29.0	19.5	28.5	19.0
22	16.0	13.5	26.0	20.0	32.5	20.0	35.0	22.5	30.5	19.0	28.0	18.0
23	13.5	11.5	25.0	18.5	34.0	21.0	36.5	24.5	31.0	19.5	27.0	17.0
24	18.5	10.0	27.0	17.0	33.5	22.5	35.0	24.5	31.5	20.0	27.5	17.0
25	19.0	10.5	28.5	19.5	33.0	22.0	35.5	23.0	31.5	20.5	25.0	19.5
26	16.0	13.5	28.0	20.0	33.0	22.0	34.5	24.0	31.5	19.5	28.0	16.5
27	16.0	12.0	24.5	16.5	34.5	21.5	34.0	23.0	29.0	20.5	28.0	18.0
28	20.0	11.0	22.5	15.0	33.5	22.5	34.0	21.5	28.5	19.0	28.0	17.5
29	19.0	12.5	23.5	14.5	32.0	20.5	35.5	22.0	27.5	19.0	28.0	17.0
30	19.0	13.0	25.0	16.0	31.0	17.0	35.5	22.5	25.5	18.5	28.5	18.5
31	---	---	26.5	16.5	---	---	35.0	23.0	30.5	18.5	---	---
MONTH	21.0	8.5	28.5	8.5	34.5	14.5	37.0	19.5	35.5	18.5	32.0	16.5

11375700 NORTH FORK COTTONWOOD CREEK NEAR IGO, CA

LOCATION.--Lat 40°26'32", long 122°32'57", in SE¼NW¼ sec.21, T.30 N., R.6 W., Shasta County, Hydrologic Unit 18020102, near right bank on downstream side of bridge on Gas Point Road, 1.2 mi (1.9 km) downstream from Huling Creek, 4.4 mi (7.1 km) south of Igo, and 4.5 mi (7.2 km) upstream from Middle Fork.

DRAINAGE AREA.--88.7 mi² (229.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1956 to current year.

REVISED RECORDS.--WSP 1931: 1960(M).

GAGE.--Water-stage recorder. Altitude of gage is 630 ft (192 m), from topographic map.

REMARKS.--Some storage for irrigation above station in Rainbow Lake, capacity, 4,800 acre-ft (5.92 hm³). Some flow diverted upstream to Clear Creek basin by Happy Valley Irrigation Canal.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--23 years, 166 ft³/s (4.701 m³/s), 120,300 acre-ft/yr (148 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Dec. 22, 1964, gage height, 39.45 ft (12.024 m) in gage well 41.7 ft (12.71 m), from floodmarks, from rating curve extended above 4,400 ft³/s (125 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 0.30 ft³/s (0.008 m³/s) Sept. 5, 11-15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a peak discharge of 14,300 ft³/s (405 m³/s) by slope-area measurement at site 1.2 mi (1.9 km) upstream (above Huling Creek) adjusted for intervening drainage area.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,920 ft³/s (54.4 m³/s) Mar. 27, gage height, 33.20 ft (10.119 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Sept. 24.

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	13	13	37	30	49	243	306	179	66	17	4.6	18
2	13	14	36	25	48	205	286	162	62	14	4.0	21
3	13	14	35	24	45	189	275	154	60	14	4.0	19
4	13	14	36	23	45	173	270	150	56	14	3.8	17
5	12	12	40	23	44	171	265	182	50	15	4.6	15
6	13	11	38	22	43	188	262	172	49	13	4.6	14
7	13	11	38	23	35	211	247	179	49	12	4.4	10
8	13	11	38	50	34	214	236	181	49	13	4.4	9.4
9	13	12	38	49	35	208	219	172	48	12	3.7	8.8
10	12	12	38	242	35	199	198	163	47	16	3.2	7.8
11	12	14	38	629	39	194	173	158	46	14	3.1	6.7
12	11	18	38	151	89	189	164	153	45	12	3.0	5.4
13	10	21	38	113	682	181	160	148	42	10	3.0	5.5
14	10	19	38	462	447	193	156	142	36	8.7	4.8	5.6
15	10	17	37	499	342	320	150	139	37	5.8	5.5	5.8
16	11	17	38	179	388	452	154	118	37	8.3	4.6	4.4
17	11	17	38	127	274	431	146	115	39	8.9	4.2	4.4
18	11	17	38	90	307	384	140	110	40	6.6	4.1	3.9
19	11	23	37	80	337	320	135	102	38	3.2	3.2	4.0
20	12	37	37	73	739	285	127	98	36	3.2	4.4	3.2
21	13	50	37	72	495	435	116	95	35	3.4	6.8	2.7
22	13	36	35	70	516	355	124	91	34	3.9	8.0	2.1
23	11	25	30	66	364	266	272	89	32	4.6	7.0	1.8
24	11	36	30	63	281	243	264	85	31	4.4	7.0	1.7
25	12	35	30	61	245	228	179	80	30	3.2	5.0	2.4
26	12	34	30	58	293	233	205	77	30	3.3	8.2	2.9
27	12	34	30	56	228	1020	251	75	30	3.1	8.6	2.7
28	11	34	25	54	287	652	212	74	29	3.0	14	2.6
29	11	34	24	52	---	466	193	72	28	3.0	24	2.4
30	11	34	24	52	---	385	181	71	28	2.9	25	2.2
31	12	---	32	51	---	334	---	70	---	3.8	21	---
TOTAL	366	676	1078	3569	6766	9567	6066	3856	1239	259.3	215.8	212.4
MEAN	11.8	22.5	34.8	115	242	309	202	124	41.3	8.36	6.96	7.08
MAX	13	50	40	629	739	1020	306	182	66	17	25	21
MIN	10	11	24	22	34	171	116	70	28	2.9	3.0	1.7
AC-FT	726	1340	2140	7080	13420	18980	12030	7650	2460	514	428	421
CAL YR 1978 TOTAL	98122.5			MEAN 269	MAX 3840	MIN 5.6	AC-FT 194600					
WTR YR 1979 TOTAL	33870.5			MEAN 92.8	MAX 1020	MIN 1.7	AC-FT 67180					

SACRAMENTO RIVER BASIN

11375700 NORTH FORK COTTONWOOD CREEK NEAR IGO, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	7.0	18.0	12.5	26.0	14.5	28.0	19.0	33.5	23.0	23.5	20.0
2	13.5	7.5	19.5	11.0	27.0	15.5	28.0	20.5	32.5	22.0	24.0	19.0
3	13.0	7.5	20.0	12.0	28.5	16.5	27.5	21.0	32.5	22.5	25.0	19.5
4	15.5	9.0	16.0	14.0	28.0	18.0	28.0	21.0	30.5	21.5	25.5	19.0
5	16.0	9.5	17.5	12.5	28.5	18.0	28.0	20.0	30.5	21.5	26.0	19.5
6	13.5	10.0	12.0	10.5	27.0	17.5	27.5	20.5	30.5	19.5	26.5	19.5
7	15.5	9.0	15.0	8.5	25.0	15.5	27.0	19.5	31.0	20.5	27.0	19.5
8	15.0	9.5	15.0	8.5	26.0	14.5	28.0	21.0	31.0	20.5	27.0	20.5
9	14.5	9.5	16.5	9.0	26.0	15.5	23.5	21.0	32.0	21.0	26.0	18.0
10	12.5	8.0	18.5	10.0	27.5	16.5	26.5	19.5	32.5	21.5	26.0	18.5
11	15.5	9.5	20.0	11.0	28.0	16.5	28.5	20.0	33.0	22.5	26.0	18.0
12	16.0	9.5	21.5	12.0	27.5	17.5	29.5	21.0	31.5	21.0	27.0	18.0
13	18.0	10.0	22.0	13.5	26.5	16.5	30.5	21.5	28.0	21.0	28.0	18.5
14	17.5	10.0	22.5	14.0	26.0	15.0	31.0	22.0	28.5	20.0	28.5	20.0
15	18.5	10.5	22.5	14.5	26.5	15.5	32.5	23.0	28.5	21.0	28.0	19.5
16	15.0	11.0	23.5	14.5	22.0	15.5	32.0	22.5	28.5	20.5	27.5	19.0
17	15.5	10.0	24.0	15.0	21.5	13.5	32.0	23.5	29.5	20.0	27.0	19.0
18	15.0	7.5	24.5	15.0	25.0	13.5	33.5	23.0	29.0	20.0	25.0	17.0
19	16.0	7.5	25.5	16.0	27.0	15.5	33.0	23.5	28.0	20.0	25.5	17.0
20	17.0	8.5	25.5	16.0	25.5	17.5	31.5	24.0	26.5	19.5	26.5	17.0
21	18.5	10.5	25.5	17.0	27.5	18.5	30.5	24.5	25.5	20.0	28.5	16.5
22	14.5	11.0	23.0	17.0	28.5	17.0	32.0	22.5	26.5	19.5	29.5	14.5
23	11.0	10.5	23.5	17.0	29.5	18.0	33.5	24.5	27.5	19.0	32.0	13.5
24	15.0	9.0	25.0	14.5	29.0	19.0	34.0	25.0	28.0	19.0	33.0	14.0
25	16.0	8.5	26.0	16.0	28.5	19.5	34.0	24.0	29.0	19.5	25.5	18.5
26	12.5	11.5	25.5	16.0	29.0	18.5	33.5	23.5	28.0	19.5	26.0	16.0
27	14.5	11.5	23.0	15.5	29.0	19.0	32.0	23.0	27.0	20.0	27.0	16.0
28	18.0	10.5	22.0	13.5	29.0	20.0	33.5	21.5	27.0	20.5	28.0	15.5
29	16.0	11.0	22.5	12.5	28.0	19.0	33.5	21.0	24.0	18.5	27.5	15.0
30	17.5	12.0	23.5	13.5	27.0	17.5	35.0	22.0	22.5	18.5	29.5	15.5
31	---	---	24.5	14.0	---	---	33.5	21.5	25.5	18.0	---	---
MONTH	18.5	7.0	26.0	8.5	29.5	13.5	35.0	19.0	33.5	18.0	33.0	13.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN								
11...	1040	555	9.0	219	328	41	53	65
FEB								
14...	1315	375	9.0	46	47	--	--	--
21...	1140	535	8.0	102	147	--	--	--
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
JAN								
11...	76	83	87	90	93	96	98	100
FEB								
14...	--	--	84	87	90	93	97	100
21...	--	--	52	55	59	67	86	100

11375700 NORTH FORK COTTONWOOD CREEK NEAR IGO, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)
JAN					
05...	1130	25	4.0	22	1.5
11...	1040	555	9.0	219	328
11...	1045	555	9.0	254	381
15...	1030	440	6.0	124	147
FEB					
14...	1315	375	9.0	46	47
14...	1320	375	9.0	52	53
21...	1140	535	8.0	102	147
21...	1145	535	8.0	107	155
MAR					
05...	1400	171	13.0	5	2.3
APR					
04...	1320	270	14.0	10	7.3
MAY					
02...	1415	162	17.5	8	3.5
JUN					
07...	1310	50	20.0	3	.40

SACRAMENTO RIVER BASIN

11375810 COTTONWOOD CREEK NEAR OLINDA, CA

LOCATION.--Lat 40°23'06", long 122°28'31", in SE¼NW¼ sec.7, T.29 N., R.5 W., Shasta County, Hydrologic Unit 18020102, on left bank 1.0 mi (1.6 km) downstream from Dutch Gulch, and 5.5 mi (8.8 km) southwest of Olinda.

DRAINAGE AREA.--395 mi² (1,023 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 515 ft (157 m), from topographic map.

REMARKS.--Records good. Numerous pumping diversions above station.

AVERAGE DISCHARGE.--8 years, 425 ft³/s (12.04 m³/s), 307,900 acre-ft/yr (380 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,900 ft³/s (1,050 m³/s) Jan. 16, 1974, gage height, 21.44 ft (6.535 m) from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of slope-area measurement of peak flow; no flow Aug. 30, Sept. 7, 8, 1972, and many days in 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 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. 11	0530	3,260 92.3	9.75 2.972	Feb. 18	1200	3,630 103	9.95 3.033
Jan. 15	0030	3,210 90.9	9.72 2.963	Feb. 20	1715	*5,580 158	11.36 3.463
Feb. 14	0100	3,750 106	10.04 3.060	Mar. 27	1315	5,060 143	11.01 3.356

Minimum daily, 2.1 ft³/s (0.059 m³/s) Aug. 7.

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	23	26	64	32	90	921	686	488	159	51	7.0	25
2	24	27	66	42	85	714	622	452	153	43	5.8	23
3	26	27	61	50	79	632	572	405	143	40	5.0	27
4	25	26	52	47	82	562	536	385	141	39	4.4	24
5	25	25	57	46	81	540	515	452	125	41	3.3	23
6	25	24	59	45	78	686	547	518	116	41	2.4	21
7	25	22	52	48	71	843	511	588	113	37	2.1	19
8	24	22	48	106	68	817	477	560	113	36	3.9	18
9	24	22	63	162	68	745	450	511	110	34	4.7	17
10	24	21	59	313	71	665	420	476	108	36	4.3	16
11	23	22	59	1930	79	621	385	444	104	35	4.5	15
12	23	23	59	588	102	601	362	418	101	29	6.0	15
13	22	35	59	323	2040	552	349	394	94	25	6.9	14
14	22	36	60	879	1860	521	337	380	81	24	11	13
15	21	34	59	1640	982	646	325	367	75	23	15	13
16	22	30	59	532	1210	1040	329	339	80	19	13	11
17	22	31	57	344	717	1260	325	320	80	20	13	8.2
18	23	31	57	253	2030	979	303	309	93	19	12	7.8
19	23	38	59	199	1080	809	290	295	91	16	12	7.6
20	23	81	53	162	2550	690	279	282	83	15	14	7.4
21	25	125	55	148	1710	836	264	274	79	16	15	7.5
22	26	116	60	136	1470	841	272	264	75	16	18	7.9
23	25	81	50	135	1130	610	523	257	73	18	19	6.9
24	24	74	49	120	803	545	745	250	67	18	18	6.6
25	24	66	46	114	652	511	443	230	64	18	17	9.5
26	24	61	46	104	724	497	460	212	60	16	13	13
27	25	59	46	97	618	2290	657	197	58	14	9.5	14
28	25	58	42	97	849	1470	582	188	56	15	12	12
29	23	56	36	83	---	1090	528	180	54	14	35	10
30	23	57	29	88	---	896	492	173	54	13	74	9.5
31	24	---	28	97	---	774	---	163	---	9.0	30	---
TOTAL	737	1356	1649	8960	21379	25204	13586	10771	2803	790.0	410.8	421.9
MEAN	23.8	45.2	53.2	289	764	813	453	347	93.4	25.5	13.3	14.1
MAX	26	125	66	1930	2550	2290	745	588	159	51	74	27
MIN	21	21	28	32	68	497	264	163	54	9.0	2.1	6.6
AC-FT	1460	2690	3270	17770	42410	49990	26950	21360	5560	1570	815	837

CAL YR 1978	TOTAL	249682.9	MEAN 684	MAX 10100	MIN 9.9	AC-FT 495200
WTR YR 1979	TOTAL	88067.7	MEAN 241	MAX 2550	MIN 2.1	AC-FT 174700

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1973 to current year.

CHEMICAL ANALYSES: Water year 1971.

WATER TEMPERATURES: Water years 1973 to current year.

SEDIMENT RECORDS: Water years 1977 to current year.

TURBIDITY: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1973 to current year.

SEDIMENT RECORDS: January 1977 to current year (storm season only).

INSTRUMENTATION.--Temperature recorder since February 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 33.5°C Aug. 6, 7, 1978; minimum recorded, 1.0°C Dec. 31, 1978.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,600 mg/L Jan. 16, 1978; minimum daily mean, 0 mg/L Nov. 1, 1978.

SEDIMENT DISCHARGE: Maximum daily, 113,000 tons (103,000 metric tons) Jan. 16, 1978; minimum daily, 0 ton (0 metric ton) Nov. 1, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 33.0°C July 18, 23; minimum recorded, 1.0°C Dec. 31.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 1,100 mg/L Feb. 20; minimum daily mean, 0 mg/L Nov. 1.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 12,200 tons (11,100 metric tons) Feb. 20; minimum daily, 0 ton (0 metric ton) Nov. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.0	19.0	15.5	11.0	10.5	8.0	4.0	3.0	6.0	3.5	10.0	6.5
2	23.5	18.0	15.0	11.0	8.5	6.0	4.0	2.0	5.5	2.5	8.5	6.0
3	23.5	17.5	15.5	11.0	8.0	5.0	4.5	2.0	6.5	2.5	8.5	7.0
4	23.5	17.5	15.0	11.5	8.0	5.0	6.0	4.5	8.0	4.0	12.0	7.0
5	23.0	17.5	15.5	11.5	8.0	4.5	7.0	4.5	8.5	5.5	13.5	10.0
6	23.0	18.0	16.0	11.5	6.0	3.5	6.5	4.5	9.5	5.5	14.5	10.5
7	22.5	17.0	15.5	11.5	4.5	2.0	6.0	5.5	10.0	6.5	14.0	10.0
8	22.5	17.0	15.5	11.0	4.5	1.5	6.5	6.0	10.0	6.5	14.0	9.5
9	---	---	14.0	10.0	5.0	3.0	7.5	6.5	11.0	8.5	13.5	9.0
10	---	---	10.5	7.5	6.5	4.0	9.0	7.5	9.0	8.0	14.0	9.0
11	---	---	10.0	6.5	7.5	6.0	9.5	8.5	10.0	8.5	14.5	10.0
12	---	---	7.5	6.5	8.0	6.5	9.0	7.0	9.5	9.0	15.0	10.0
13	---	---	10.5	7.5	8.0	5.5	7.5	6.0	9.0	8.5	15.0	10.0
14	---	---	10.0	6.0	7.5	4.5	7.0	6.5	9.0	8.5	14.0	11.0
15	---	---	8.5	5.5	6.5	4.0	7.5	6.5	8.5	6.5	11.0	10.0
16	---	---	10.0	8.0	5.5	3.0	7.5	6.5	8.5	6.5	10.0	8.5
17	---	---	11.0	7.0	5.5	4.5	6.5	5.5	8.5	7.0	12.5	8.5
18	---	---	10.5	7.0	6.5	4.5	6.5	5.5	8.5	7.5	11.5	9.5
19	---	---	9.5	9.0	5.0	2.5	6.5	5.0	9.0	7.0	13.5	8.0
20	---	---	9.5	8.5	4.5	1.5	7.0	5.0	9.0	7.5	14.0	9.0
21	---	---	9.5	9.0	5.0	2.5	7.5	6.0	10.0	7.0	13.5	8.0
22	---	---	10.0	8.0	5.0	2.5	7.0	5.5	9.0	7.0	12.5	9.5
23	---	---	9.5	6.5	5.5	2.5	6.0	5.0	8.5	6.5	15.0	9.0
24	---	---	9.5	6.5	6.0	3.5	6.0	5.5	10.0	7.5	15.5	10.0
25	---	---	9.0	6.0	5.5	3.5	5.5	4.5	10.0	8.0	14.5	10.5
26	---	---	9.0	6.0	6.5	4.5	5.0	4.0	11.5	8.5	13.0	11.5
27	---	---	9.0	6.0	6.5	4.5	5.5	4.0	10.5	7.0	11.0	10.0
28	---	---	9.5	7.0	6.5	4.0	6.0	4.5	9.5	8.5	12.0	8.5
29	---	---	10.5	8.0	5.5	3.0	5.5	4.0	---	---	13.5	8.5
30	---	---	9.5	7.0	4.5	1.5	5.0	4.5	---	---	13.5	8.0
31	---	---	---	---	4.5	1.0	6.0	5.0	---	---	14.0	8.5
MONTH	---	---	16.0	5.5	10.5	1.0	9.5	2.0	11.5	2.5	15.5	6.0

SACRAMENTO RIVER BASIN

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	9.0	19.5	14.0	26.0	18.5	29.5	22.0	32.5	24.0	24.0	21.5
2	15.0	9.0	20.5	13.5	27.5	20.0	29.5	22.5	31.0	23.0	26.0	21.0
3	14.5	9.5	21.0	15.0	28.0	21.0	29.0	22.0	31.0	23.5	26.5	21.0
4	16.5	10.5	19.5	16.0	28.5	22.0	28.5	22.0	30.0	23.5	28.0	21.0
5	17.0	12.0	18.0	14.0	29.0	22.0	29.5	22.0	30.0	22.5	29.0	21.0
6	15.0	12.0	15.5	11.5	27.0	21.0	28.5	22.0	30.5	21.5	29.5	21.5
7	17.0	10.5	15.0	9.5	25.0	19.5	28.5	22.0	30.5	22.5	29.0	21.5
8	16.0	11.5	16.0	9.5	26.0	19.0	29.0	22.5	30.5	22.0	28.0	21.5
9	15.0	11.0	17.5	10.5	27.0	20.0	25.0	22.5	31.5	22.0	28.0	20.5
10	13.5	9.5	19.0	12.0	27.5	21.0	28.5	21.0	31.5	23.5	27.0	20.5
11	16.5	11.0	21.0	13.5	28.5	21.0	30.0	22.0	31.0	23.5	27.5	19.5
12	16.5	11.0	22.5	15.0	28.0	21.5	30.5	22.5	30.0	22.5	28.5	20.0
13	18.5	13.0	23.0	16.5	27.5	21.0	30.5	23.0	27.5	22.5	29.0	20.5
14	18.0	12.5	23.5	17.0	26.5	19.0	31.0	23.0	28.5	21.5	29.5	21.0
15	18.5	13.0	23.5	17.5	27.0	20.0	32.0	23.5	29.0	21.5	29.5	21.0
16	16.5	13.5	24.0	17.5	24.5	19.5	32.0	23.5	29.5	21.5	29.0	21.0
17	17.0	12.0	24.0	18.5	22.5	17.5	32.0	24.0	30.0	21.5	28.0	20.5
18	15.5	10.5	25.0	18.5	25.0	17.5	33.0	23.5	29.5	21.5	26.5	19.0
19	16.0	10.5	25.5	19.5	27.0	20.0	32.5	24.5	27.5	22.0	27.0	19.0
20	17.5	11.0	26.0	20.0	27.0	21.0	31.0	24.5	27.0	21.0	27.5	19.0
21	19.0	13.0	26.0	20.5	28.0	21.5	30.5	25.0	28.0	21.5	27.0	19.5
22	16.5	12.0	24.5	20.5	28.5	21.0	32.0	23.5	28.0	20.5	26.0	19.0
23	13.5	11.5	23.5	19.5	29.5	22.0	33.0	24.5	28.0	21.0	25.5	18.0
24	16.0	10.5	25.0	18.0	29.5	23.0	32.0	25.0	29.0	21.0	25.5	18.5
25	17.0	11.0	26.5	19.5	29.5	22.5	32.5	24.0	29.0	21.5	24.5	20.5
26	15.5	13.5	26.0	20.5	29.0	22.5	32.0	24.0	29.5	21.5	26.0	18.5
27	16.0	12.5	23.5	19.0	30.0	22.5	31.0	23.5	28.0	21.0	26.0	19.0
28	18.5	11.5	21.5	17.0	30.0	23.0	31.5	23.0	27.5	21.5	26.0	18.5
29	17.5	13.0	22.0	15.5	29.0	22.0	32.0	23.5	26.0	21.5	25.5	18.5
30	18.0	13.5	23.0	16.5	28.5	21.0	32.5	24.0	24.5	21.0	26.5	19.5
31	---	---	24.5	17.5	---	---	32.5	24.0	27.0	20.5	---	---
MONTH	19.0	9.0	26.5	9.5	30.0	17.5	33.0	21.0	32.5	20.5	29.5	18.0

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER			NOVEMBER			DECEMBER		
DAY	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				26	0	0	64	1	.17
2				27	2	.15	66	1	.18
3				27	4	.29	61	1	.16
4				26	5	.35	52	1	.14
5				25	4	.27	57	1	.15
6				24	4	.26	59	1	.16
7				22	4	.24	52	1	.14
8				22	4	.24	48	1	.13
9				22	4	.24	63	1	.17
10				21	5	.28	59	1	.16
11				22	6	.36	59	1	.16
12				23	6	.37	59	2	.32
13				35	7	.66	59	2	.32
14				36	8	.78	60	2	.32
15				34	5	.46	59	2	.32
16				30	4	.32	59	2	.32
17				31	4	.33	57	2	.31
18				31	3	.25	57	2	.31
19				38	3	.31	59	2	.32
20				81	5	1.1	53	3	.43
21				125	10	3.4	55	3	.45
22				116	8	2.5	60	3	.49
23				81	4	.87	50	2	.27
24				74	2	.40	49	2	.26
25				66	2	.36	46	2	.25
26				61	2	.33	46	2	.25
27				59	2	.32	46	2	.25
28				58	2	.31	42	2	.23
29				56	1	.15	36	2	.19
30				57	1	.15	29	2	.16
31				---	---	---	28	3	.23
TOTAL				1356	---	16.05	1649	---	7.72

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1973 to current year.

CHEMICAL ANALYSES: Water year 1971.

WATER TEMPERATURES: Water years 1973 to current year.

SEDIMENT RECORDS: Water years 1977 to current year.

TURBIDITY: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1973 to current year.

SEDIMENT RECORDS: January 1977 to current year (storm season only).

INSTRUMENTATION.--Temperature recorder since February 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 33.5°C Aug. 6, 7, 1978; minimum recorded, 1.0°C Dec. 31, 1978.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,600 mg/L Jan. 16, 1978; minimum daily mean, 0 mg/L Nov. 1, 1978.

SEDIMENT DISCHARGE: Maximum daily, 113,000 tons (103,000 metric tons) Jan. 16, 1978; minimum daily, 0 ton (0 metric ton) Nov. 1, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 33.0°C July 18, 23; minimum recorded, 1.0°C Dec. 31.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 1,100 mg/L Feb. 20; minimum daily mean, 0 mg/L Nov. 1.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 12,200 tons (11,100 metric tons) Feb. 20; minimum daily, 0 ton (0 metric ton) Nov. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.0	19.0	15.5	11.0	10.5	8.0	4.0	3.0	6.0	3.5	10.0	6.5
2	23.5	18.0	15.0	11.0	8.5	6.0	4.0	2.0	5.5	2.5	8.5	6.0
3	23.5	17.5	15.5	11.0	8.0	5.0	4.5	2.0	6.5	2.5	8.5	7.0
4	23.5	17.5	15.0	11.5	8.0	5.0	6.0	4.5	8.0	4.0	12.0	7.0
5	23.0	17.5	15.5	11.5	8.0	4.5	7.0	4.5	8.5	5.5	13.5	10.0
6	23.0	18.0	16.0	11.5	6.0	3.5	6.5	4.5	9.5	5.5	14.5	10.5
7	22.5	17.0	15.5	11.5	4.5	2.0	6.0	5.5	10.0	6.5	14.0	10.0
8	22.5	17.0	15.5	11.0	4.5	1.5	6.5	6.0	10.0	6.5	14.0	9.5
9	---	---	14.0	10.0	5.0	3.0	7.5	6.5	11.0	8.5	13.5	9.0
10	---	---	10.5	7.5	6.5	4.0	9.0	7.5	9.0	8.0	14.0	9.0
11	---	---	10.0	6.5	7.5	6.0	9.5	8.5	10.0	8.5	14.5	10.0
12	---	---	7.5	6.5	8.0	6.5	9.0	7.0	9.5	9.0	15.0	10.0
13	---	---	10.5	7.5	8.0	5.5	7.5	6.0	9.0	8.5	15.0	10.0
14	---	---	10.0	6.0	7.5	4.5	7.0	6.5	9.0	8.5	14.0	11.0
15	---	---	8.5	5.5	6.5	4.0	7.5	6.5	8.5	6.5	11.0	10.0
16	---	---	10.0	8.0	5.5	3.0	7.5	6.5	8.5	6.5	10.0	8.5
17	---	---	11.0	7.0	5.5	4.5	6.5	5.5	8.5	7.0	12.5	8.5
18	---	---	10.5	7.0	6.5	4.5	6.5	5.5	8.5	7.5	11.5	9.5
19	---	---	9.5	9.0	5.0	2.5	6.5	5.0	9.0	7.0	13.5	8.0
20	---	---	9.5	8.5	4.5	1.5	7.0	5.0	9.0	7.5	14.0	9.0
21	---	---	9.5	9.0	5.0	2.5	7.5	6.0	10.0	7.0	13.5	8.0
22	---	---	10.0	8.0	5.0	2.5	7.0	5.5	9.0	7.0	12.5	9.5
23	---	---	9.5	6.5	5.5	2.5	6.0	5.0	8.5	6.5	15.0	9.0
24	---	---	9.5	6.5	6.0	3.5	6.0	5.5	10.0	7.5	15.5	10.0
25	---	---	9.0	6.0	5.5	3.5	5.5	4.5	10.0	8.0	14.5	10.5
26	---	---	9.0	6.0	6.5	4.5	5.0	4.0	11.5	8.5	13.0	11.5
27	---	---	9.0	6.0	6.5	4.5	5.5	4.0	10.5	7.0	11.0	10.0
28	---	---	9.5	7.0	6.5	4.0	6.0	4.5	9.5	8.5	12.0	8.5
29	---	---	10.5	8.0	5.5	3.0	5.5	4.0	---	---	13.5	8.5
30	---	---	9.5	7.0	4.5	1.5	5.0	4.5	---	---	13.5	8.0
31	---	---	---	---	4.5	1.0	6.0	5.0	---	---	14.0	8.5
MONTH	---	---	16.0	5.5	10.5	1.0	9.5	2.0	11.5	2.5	15.5	6.0

SACRAMENTO RIVER BASIN

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	9.0	19.5	14.0	26.0	18.5	29.5	22.0	32.5	24.0	24.0	21.5
2	15.0	9.0	20.5	13.5	27.5	20.0	29.5	22.5	31.0	23.0	26.0	21.0
3	14.5	9.5	21.0	15.0	28.0	21.0	29.0	22.0	31.0	23.5	26.5	21.0
4	16.5	10.5	19.5	16.0	28.5	22.0	28.5	22.0	30.0	23.5	28.0	21.0
5	17.0	12.0	18.0	14.0	29.0	22.0	29.5	22.0	30.0	22.5	29.0	21.0
6	15.0	12.0	15.5	11.5	27.0	21.0	28.5	22.0	30.5	21.5	29.5	21.5
7	17.0	10.5	15.0	9.5	25.0	19.5	28.5	22.0	30.5	22.5	29.0	21.5
8	16.0	11.5	16.0	9.5	26.0	19.0	29.0	22.5	30.5	22.0	28.0	21.5
9	15.0	11.0	17.5	10.5	27.0	20.0	25.0	22.5	31.5	22.0	28.0	20.5
10	13.5	9.5	19.0	12.0	27.5	21.0	28.5	21.0	31.5	23.5	27.0	20.5
11	16.5	11.0	21.0	13.5	28.5	21.0	30.0	22.0	31.0	23.5	27.5	19.5
12	16.5	11.0	22.5	15.0	28.0	21.5	30.5	22.5	30.0	22.5	28.5	20.0
13	18.5	13.0	23.0	16.5	27.5	21.0	30.5	23.0	27.5	22.5	29.0	20.5
14	18.0	12.5	23.5	17.0	26.5	19.0	31.0	23.0	28.5	21.5	29.5	21.0
15	18.5	13.0	23.5	17.5	27.0	20.0	32.0	23.5	29.0	21.5	29.5	21.0
16	16.5	13.5	24.0	17.5	24.5	19.5	32.0	23.5	29.5	21.5	29.0	21.0
17	17.0	12.0	24.0	18.5	22.5	17.5	32.0	24.0	30.0	21.5	28.0	20.5
18	15.5	10.5	25.0	18.5	25.0	17.5	33.0	23.5	29.5	21.5	26.5	19.0
19	16.0	10.5	25.5	19.5	27.0	20.0	32.5	24.5	27.5	22.0	27.0	19.0
20	17.5	11.0	26.0	20.0	27.0	21.0	31.0	24.5	27.0	21.0	27.5	19.0
21	19.0	13.0	26.0	20.5	28.0	21.5	30.5	25.0	28.0	21.5	27.0	19.5
22	16.5	12.0	24.5	20.5	28.5	21.0	32.0	23.5	28.0	20.5	26.0	19.0
23	13.5	11.5	23.5	19.5	29.5	22.0	33.0	24.5	28.0	21.0	25.5	18.0
24	16.0	10.5	25.0	18.0	29.5	23.0	32.0	25.0	29.0	21.0	25.5	18.5
25	17.0	11.0	26.5	19.5	29.5	22.5	32.5	24.0	29.0	21.5	24.5	20.5
26	15.5	13.5	26.0	20.5	29.0	22.5	32.0	24.0	29.5	21.5	26.0	18.5
27	16.0	12.5	23.5	19.0	30.0	22.5	31.0	23.5	28.0	21.0	26.0	19.0
28	18.5	11.5	21.5	17.0	30.0	23.0	31.5	23.0	27.5	21.5	26.0	18.5
29	17.5	13.0	22.0	15.5	29.0	22.0	32.0	23.5	26.0	21.5	25.5	18.5
30	18.0	13.5	23.0	16.5	28.5	21.0	32.5	24.0	24.5	21.0	26.5	19.5
31	---	---	24.5	17.5	---	---	32.5	24.0	27.0	20.5	---	---
MONTH	19.0	9.0	26.5	9.5	30.0	17.5	33.0	21.0	32.5	20.5	29.5	18.0

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER			NOVEMBER			DECEMBER		
DAY	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			26	0	0	64	1		.17
2			27	2	.15	66	1		.18
3			27	4	.29	61	1		.16
4			26	5	.35	52	1		.14
5			25	4	.27	57	1		.15
6			24	4	.26	59	1		.16
7			22	4	.24	52	1		.14
8			22	4	.24	48	1		.13
9			22	4	.24	63	1		.17
10			21	5	.28	59	1		.16
11			22	6	.36	59	1		.16
12			23	6	.37	59	2		.32
13			35	7	.66	59	2		.32
14			36	8	.78	60	2		.32
15			34	5	.46	59	2		.32
16			30	4	.32	59	2		.32
17			31	4	.33	57	2		.31
18			31	3	.25	57	2		.31
19			38	3	.31	59	2		.32
20			41	5	1.1	53	3		.43
21			125	10	3.4	55	3		.45
22			116	8	2.5	60	3		.49
23			81	4	.87	50	2		.27
24			74	2	.40	49	2		.26
25			66	2	.36	46	2		.25
26			61	2	.33	46	2		.25
27			59	2	.32	46	2		.25
28			58	2	.31	42	2		.23
29			56	1	.15	36	2		.19
30			57	1	.15	29	2		.16
31			---	---	---	28	3		.23
TOTAL			1356	---	---	1649	---		7.72

SACRAMENTO RIVER BASIN

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11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	32	2	.17	90	2	.49	921	57	142
2	42	2	.23	85	2	.46	714	34	66
3	50	2	.27	79	2	.43	632	16	27
4	47	3	.38	82	2	.44	562	10	15
5	46	4	.50	81	2	.44	540	10	15
6	45	4	.49	78	2	.42	686	60	115
7	48	4	.52	71	2	.38	843	88	201
8	106	6	1.7	68	2	.37	817	71	157
9	162	8	3.5	68	3	.55	745	53	107
10	313	46	86	71	3	.58	665	35	63
11	1930	548	3570	79	3	.64	621	19	32
12	588	95	151	102	4	1.1	601	12	19
13	323	15	13	2040	1090	7550	552	9	13
14	879	271	1420	1860	594	4200	521	9	13
15	1640	553	3270	982	144	491	646	25	44
16	532	105	151	1210	234	865	1040	95	293
17	344	54	50	717	90	174	1260	162	684
18	253	24	16	2030	590	4630	979	61	161
19	199	10	5.4	1080	85	248	809	44	96
20	162	6	2.6	2550	1100	12200	690	30	56
21	148	5	2.0	1710	216	997	836	88	427
22	136	4	1.5	1470	187	812	841	85	260
23	135	4	1.5	1130	170	552	610	20	33
24	120	3	.97	803	71	154	545	19	28
25	114	3	.92	652	30	53	511	18	25
26	104	3	.84	724	130	254	497	18	24
27	97	3	.79	618	112	187	2290	670	5620
28	97	3	.79	849	123	299	1470	64	254
29	83	2	.45	---	---	---	1090	48	141
30	88	2	.48	---	---	---	896	39	94
31	97	2	.52	---	---	---	774	32	67
TOTAL	8960	---	8753.52	21379	---	33672.30	25204	---	9292
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	686	27	50	488	15	20			
2	622	20	34	452	10	12			
3	572	13	20	405	9	9.8			
4	536	13	19	385	9	9.4			
5	515	10	14	452	17	21			
6	547	10	15	518	12	17			
7	511	10	14	588	27	43			
8	477	10	13	560	17	26			
9	450	10	12	511	13	18			
10	420	10	11	476	12	15			
11	385	10	10	444	11	13			
12	362	10	9.8	418	10	11			
13	349	10	9.4	394	10	11			
14	337	10	9.1	380	9	9.2			
15	325	10	8.8	367	8	7.9			
16	329	10	8.9	339	8	7.3			
17	325	9	7.9	320	8	6.9			
18	303	8	6.5	309	8	6.7			
19	290	7	5.5	295	8	6.4			
20	279	7	5.3	282	8	6.1			
21	264	6	4.3	274	8	5.9			
22	272	10	7.3	264	8	5.7			
23	523	86	237	257	7	4.9			
24	745	138	341	250	7	4.7			
25	443	17	20	230	7	4.3			
26	460	17	21	212	6	3.4			
27	657	47	83	197	6	3.2			
28	582	22	35	188	5	2.5			
29	528	12	17	180	4	1.9			
30	492	11	15	173	3	1.4			
31	---	---	---	163	3	1.3			
TOTAL	13586	---	1063.8	10771	---	315.9			
PERIOD	82905	---	53121.29						

SACRAMENTO RIVER BASIN

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	1356.00	16.05	0	16
DECEMBER ...	1649.00	7.72	0	8
JANUARY 1979	8960.00	8753.52	930	9680
FEBRUARY ...	21379.00	33872.30	3680	37400
MARCH	25204.00	9292.00	2660	12000
APRIL	13586.00	1063.80	389	1450
MAY	10771.00	315.90	153	469
PERIOD.....	82905.00	53121.29	7812	61023

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. DIAM. % FINER THAN .002 MM	SED. SUSP. DIAM. % FINER THAN .004 MM	SED. SUSP. DIAM. % FINER THAN .008 MM
JAN 15...	1305	1320	7.0	282	1010	40	54	64
FEB 18...	1045	3440	8.0	1270	11800	34	46	60
21...	1400	1580	9.0	195	832	--	--	--
MAR 02...	1535	696	8.0	23	43	--	--	--
27...	1425	4610	11.0	493	6140	46	58	75

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
JAN 15...	74	81	84	87	90	96	100
FEB 18...	73	84	91	97	100	--	--
21...	--	--	72	78	85	96	100
MAR 02...	--	--	70	74	82	100	--
27...	89	91	92	98	99	100	--

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
NOV						
01...	1600	26	15.5	0	.00	1.0
04...	1600	25	15.0	5	.34	1.0
06...	1600	22	16.0	4	.24	1.0
09...	1630	22	13.0	4	.24	1.0
11...	1600	22	9.5	6	.36	2.0
14...	1540	37	9.5	1	.10	1.0
21...	1430	132	9.0	10	3.6	2.0
24...	1645	78	9.5	2	.42	1.0
25...	1600	66	9.0	2	.36	1.0
27...	1415	59	9.0	2	.32	1.0
DEC						
01...	1600	66	10.5	1	.18	1.0
04...	1700	52	7.5	1	.14	1.0
07...	1600	52	4.5	1	.14	1.0
09...	1630	64	5.0	1	.17	1.0
11...	1510	59	7.5	1	.16	1.0
12...	1630	59	8.0	2	.32	1.0
15...	1605	59	6.0	2	.32	1.0
17...	1630	59	5.5	2	.32	1.0

SACRAMENTO RIVER BASIN

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11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
DEC						
20...	1630	57	4.5	3	.46	1.0
22...	1445	59	5.0	3	.48	1.0
25...	1445	46	5.5	2	.25	1.0
27...	1000	46	5.0	2	.25	1.0
29...	0900	37	3.0	2	.20	1.0
31...	1600	21	4.5	3	.17	1.0
JAN						
01...	1230	22	3.0	2	.12	1.0
03...	1600	49	4.5	2	.26	1.0
05...	1410	46	7.0	4	.50	1.0
05...	1430	46	7.0	6	.75	1.0
05...	1530	46	7.0	5	.62	3.0
08...	1700	120	6.5	5	1.6	3.0
10...	1500	143	8.0	7	2.7	3.0
11...	0730	3000	9.0	1400	11300	550
11...	1515	1540	9.0	383	1590	190
11...	1600	1520	9.5	364	1490	190
11...	2200	1090	9.5	339	998	200
12...	1500	503	9.0	28	38	17
12...	1800	461	9.0	34	42	17
13...	0915	332	6.0	9	8.1	6.0
13...	1000	329	6.0	10	8.9	6.0
14...	1000	340	7.0	33	30	14
14...	1445	791	7.0	272	581	140
14...	1730	1000	7.0	254	686	130
14...	2030	2100	7.0	1100	6240	400
15...	0830	1980	6.5	240	1280	100
15...	1300	1320	7.0	312	1110	140
15...	1305	1320	7.0	282	1010	150
15...	1630	993	7.0	397	1060	95
15...	1700	965	7.0	170	443	95
15...	2345	688	7.5	1120	2080	400
16...	0845	540	6.5	368	537	100
16...	1400	494	6.5	30	40	16
17...	0830	360	5.5	70	68	10
17...	1700	326	6.5	26	23	8.0
17...	1800	321	6.5	1	.87	1.0
18...	1600	243	6.5	2	1.3	1.0
18...	1700	243	6.5	24	16	11
19...	1730	189	6.5	7	3.6	4.0
20...	1700	157	6.5	7	3.0	3.0
21...	1000	147	6.0	6	2.4	3.0
22...	1145	135	5.5	3	1.1	2.0
23...	0900	124	5.0	7	2.3	2.0
24...	0800	117	5.5	3	.95	2.0
25...	0830	114	4.5	2	.62	1.0
26...	0830	104	4.0	3	.84	1.0
27...	0915	94	4.0	4	1.0	2.0
28...	0800	97	4.5	3	.79	2.0
29...	1650	83	5.0	2	.45	1.0
30...	0900	83	4.5	2	.45	2.0
31...	0820	97	5.0	2	.52	1.0
FEB						
01...	0830	93	4.5	2	.50	1.0
01...	1500	93	5.0	1	.25	2.0
02...	1115	83	3.5	9	2.0	2.0
02...	1730	83	5.0	2	.45	1.0
03...	1055	74	3.5	2	.40	2.0
04...	1715	86	8.0	1	.23	1.0
05...	1730	80	8.0	2	.43	1.0
06...	1145	79	7.5	4	.85	1.0
07...	1700	69	10.0	2	.37	2.0
08...	1600	69	10.0	2	.37	1.0
11...	1600	80	10.0	3	.65	2.0
12...	1700	99	9.5	2	.53	1.0
13...	0830	1480	8.5	394	1570	160
13...	1600	2920	8.5	476	3750	180
13...	2330	3340	8.5	243	2190	180
14...	1000	1710	8.5	511	2360	120
14...	1145	1550	8.5	377	1580	120
14...	1730	1210	8.5	876	2860	110
15...	1630	776	6.5	52	109	30
15...	2130	1590	6.5	47	202	30
16...	0900	1680	6.5	444	2010	65
16...	1700	1010	7.5	142	387	65
17...	1730	661	7.5	90	161	65
18...	0930	2760	8.0	1260	9390	500
18...	1045	3440	8.0	1270	11800	500
18...	1300	3600	8.0	1290	12500	500
18...	1730	2400	8.0	1260	8170	500
19...	1700	937	8.5	1240	3140	500
20...	1030	1870	8.0	644	3250	200
20...	1115	2320	8.0	764	4790	200
21...	1400	1580	9.0	195	832	80
21...	1630	1440	10.0	870	3380	55
22...	1630	1540	8.5	180	748	95

SACRAMENTO RIVER BASIN

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
FEB						
23...	1630	1000	8.0	179	483	100
24...	1630	760	10.0	30	62	130
25...	1730	626	10.0	21	35	10
26...	1605	706	11.5	407	776	18
27...	1655	610	10.5	133	219	19
28...	1730	1260	9.5	177	602	60
MAR						
01...	1630	863	10.0	18	42	7.0
03...	1400	627	8.0	12	20	7.0
06...	1300	724	13.0	89	174	21
12...	1600	602	15.0	10	16	4.0
13...	1200	560	11.5	10	15	5.0
17...	0700	1380	8.5	166	619	85
17...	0815	1300	8.5	173	607	85
21...	0700	639	9.0	21	36	6.0
27...	0800	1390	10.5	462	1730	200
27...	0920	1490	10.5	441	1770	210
27...	1425	4610	11.0	493	6140	190
27...	1545	3860	11.0	39	406	5.0
29...	1800	1030	13.5	32	89	8.0
30...	1300	892	11.0	41	99	6.0
30...	1800	859	13.5	34	79	8.0
APR						
03...	1155	574	11.5	13	20	5.0
04...	1200	539	13.0	12	17	5.0
05...	1330	520	15.5	9	13	4.0
15...	1900	322	18.5	10	8.7	3.0
21...	1400	264	17.5	6	4.3	2.0
23...	0730	362	12.0	30	29	4.0
23...	1800	426	13.0	207	238	90
23...	1820	441	13.0	130	155	90
23...	1845	457	13.0	116	143	80
23...	1915	498	12.5	127	171	80
24...	1000	706	11.0	191	364	110
24...	1400	615	13.5	179	297	110
25...	1215	444	14.0	15	18	8.0
30...	1900	483	18.0	11	14	4.0
MAY						
02...	1100	441	14.5	7	8.3	5.0
03...	1940	395	21.0	10	11	3.0
08...	1010	555	10.0	16	24	6.0
21...	1900	274	25.5	8	5.9	1.0
24...	1145	256	20.0	8	5.5	3.0
24...	1430	250	23.0	5	3.4	2.0
27...	1730	199	23.5	6	3.2	2.0
31...	1015	165	19.0	3	1.3	2.0
JUN						
07...	1145	113	21.0	4	1.2	1.0
07...	1245	113	23.5	3	.92	1.0

SACRAMENTO RIVER BASIN

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11375820 SOUTH FORK COTTONWOOD CREEK NEAR COTTONWOOD, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 40°18'59", long 122°26'52", in SW¼SE¼ sec.32, T.29 N., R.5 W., Tehama County, Hydrologic Unit 18020102, on right bank 15 ft (5 m) downstream from highway bridge, 0.7 mi (1.1 km) upstream from Dry Fork, and 10.3 mi (16.6 km) southwest of Cottonwood.

DRAINAGE AREA.--217 mi² (562 km²).

PERIOD OF RECORD.--Water years 1957, 1959-66, 1977-79.

CHEMICAL ANALYSES: Water years 1957, 1959-66. Prior to water year 1963 published as sta 11375900.

WATER TEMPERATURES: Water years 1977 to September 1979 (discontinued).

SEDIMENT RECORDS: Water years 1963-70.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1977 to September 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from January 1977 to September 1979.

REMARKS.--Prior to October 1965, chemical-quality and sediment samples were collected 6.6 mi (10.6 km) downstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 37.5°C Aug. 6, 7, 1978; minimum recorded, 0.5°C Dec. 31, 1978, Jan. 1, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 35.0°C Aug. 3; minimum recorded, 0.5°C Dec. 31, Jan. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	25.5	17.0	16.5	9.5	13.0	8.5	6.0	0.5	7.0	2.5	10.0	5.5
2	25.5	16.0	16.5	9.5	10.5	6.0	5.5	2.5	7.5	2.0	8.0	6.0
3	25.5	15.5	17.0	10.5	10.0	5.5	6.5	3.0	9.0	2.5	8.5	7.0
4	26.0	15.5	15.5	10.0	10.5	5.5	8.0	5.5	11.0	4.0	12.5	6.5
5	25.5	15.5	16.0	10.0	9.5	6.0	9.0	5.5	11.0	5.5	14.0	9.5
6	25.0	15.5	---	---	---	---	8.5	4.5	12.0	6.0	14.0	9.5
7	25.0	15.0	---	---	6.0	2.0	7.0	6.0	12.0	7.0	13.0	8.5
8	25.0	14.5	16.5	9.5	6.0	1.5	8.0	7.0	12.5	6.5	13.5	8.5
9	24.0	14.5	14.5	7.0	7.0	3.5	9.0	8.0	13.0	9.0	13.5	7.5
10	24.0	15.0	10.0	5.0	9.0	5.0	9.5	9.0	9.5	8.5	14.0	8.5
11	24.5	14.5	---	---	10.0	7.0	10.0	7.5	11.5	9.5	14.0	9.5
12	24.5	16.0	---	---	10.0	7.5	10.5	7.5	10.0	9.5	15.5	9.5
13	25.0	15.0	11.5	5.5	10.0	5.5	7.5	6.0	9.5	7.5	15.0	9.0
14	24.5	15.0	11.5	4.5	9.5	5.0	7.0	6.5	9.0	7.0	13.0	10.5
15	24.0	16.0	10.0	4.5	8.5	4.0	7.5	6.5	6.5	5.0	11.0	9.5
16	23.5	15.5	---	---	7.5	3.0	8.5	5.0	9.5	6.0	11.0	8.0
17	23.5	15.0	---	---	7.5	5.5	8.5	4.5	9.0	6.0	12.5	8.0
18	23.5	15.0	---	---	8.5	5.5	9.5	6.0	8.0	7.0	11.0	9.0
19	20.5	15.0	---	---	6.5	2.5	9.5	5.5	10.5	6.0	14.0	7.0
20	21.5	14.5	---	---	5.5	1.5	9.5	5.5	8.5	7.5	15.0	8.5
21	22.0	15.5	---	---	7.5	2.5	10.5	6.0	11.0	7.0	13.5	8.0
22	21.0	13.5	11.5	9.5	7.0	3.0	9.0	5.0	9.5	7.5	12.0	10.0
23	20.5	12.0	11.5	6.5	7.5	3.0	8.5	4.0	9.5	7.0	16.0	9.0
24	19.0	13.0	11.0	6.5	8.0	4.0	8.5	5.5	11.0	7.5	17.0	10.0
25	20.5	12.5	11.0	6.0	8.0	4.0	8.0	3.5	11.0	8.0	15.5	10.5
26	20.0	12.5	11.0	6.5	8.5	5.5	7.5	2.5	13.5	8.5	13.0	11.0
27	19.5	12.5	10.5	6.0	8.5	5.5	8.0	3.0	12.0	7.0	11.5	10.0
28	19.0	12.0	11.5	7.5	8.5	5.0	7.5	3.5	10.0	8.5	12.0	8.5
29	17.0	11.0	13.0	9.5	7.0	3.5	6.5	1.5	---	---	14.5	8.5
30	15.5	10.0	11.0	7.5	5.5	1.0	6.0	4.0	---	---	14.5	8.5
31	15.5	9.5	---	---	5.5	0.5	7.5	4.5	---	---	15.5	9.0
MONTH	26.0	9.5	---	---	13.0	0.5	10.5	0.5	13.5	2.0	17.0	5.5

SACRAMENTO RIVER BASIN

11375820 SOUTH FORK COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	9.5	20.0	14.5	27.5	17.5	---	---	34.5	19.5		
2	16.5	9.5	21.5	13.5	29.0	18.5	---	---	34.0	17.5		
3	16.5	10.0	22.5	15.0	30.0	20.0	---	---	35.0	18.0		
4	18.5	10.5	19.5	15.5	30.5	21.5	29.5	22.0	30.5	17.5		
5	19.0	12.5	18.0	13.0	30.5	21.0	30.5	21.5	32.5	15.5		
6	16.0	13.0	15.0	11.5	27.5	19.0	30.0	21.5	---	---		
7	18.0	10.5	14.5	10.0	24.5	16.5	30.5	21.5	---	---		
8	17.5	11.5	17.0	9.0	27.5	16.5	30.5	22.0	---	---		
9	16.5	11.0	19.0	10.5	28.5	18.5	26.0	22.0	---	---		
10	14.0	9.5	21.0	12.0	29.0	19.5	29.5	21.0	---	---		
11	17.5	11.0	22.5	14.0	30.0	19.5	31.0	21.5	---	---		
12	18.5	11.5	24.0	15.0	29.5	20.0	30.5	22.0	---	---		
13	20.0	13.0	25.0	16.5	29.0	19.5	31.0	22.5	---	---		
14	20.0	12.5	25.5	17.5	28.0	17.5	32.0	22.0	---	---		
15	20.0	13.0	24.5	17.5	29.0	19.0	33.0	23.0	---	---		
16	17.0	13.5	25.0	17.0	26.0	19.0	33.0	22.5	---	---		
17	18.0	12.0	24.5	17.5	24.0	16.0	33.0	23.5	---	---		
18	17.5	10.5	25.5	18.0	27.5	17.0	34.5	22.5	---	---		
19	18.0	10.0	26.5	18.5	29.0	19.0	33.0	23.0	---	---		
20	19.5	11.0	26.5	19.0	29.0	20.5	31.5	23.0	---	---		
21	19.0	12.5	26.5	19.0	30.0	21.0	30.0	23.5	---	---		
22	16.0	13.0	25.0	19.0	31.0	20.5	33.0	21.5	---	---		
23	14.0	11.5	24.0	19.0	32.0	21.5	33.5	23.5	---	---		
24	18.0	11.0	25.0	16.5	31.5	22.0	33.0	23.5	---	---		
25	19.0	11.5	27.5	18.5	31.5	22.0	33.5	22.0	---	---		
26	16.5	14.0	27.5	19.5	31.5	22.0	32.5	22.0	---	---		
27	16.0	12.5	24.0	17.5	---	---	32.0	21.0	---	---		
28	19.5	11.5	22.0	15.5	---	---	33.0	19.5	---	---		
29	19.5	13.5	22.5	13.5	---	---	33.5	19.5	---	---		
30	20.5	14.5	24.5	15.5	---	---	34.5	19.5	---	---		
31	---	---	26.0	16.0	---	---	34.0	20.0	---	---		
MONTH	20.5	9.5	27.5	9.0	32.0	16.0	34.5	19.5	---	---		

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA

LOCATION.--Lat 40°19'34", long 122°26'40", in SE¼NE¼ sec.32, T.29 N., R.5 W., Tehama County, Hydrologic Unit 18020102, on left bank 250 ft (76 m) downstream from Dry Creek and 8.0 mi (12.9 km) south of Olinda.

DRAINAGE AREA.--371 mi² (961 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 540 ft (165 m), from topographic map.

REMARKS.--Records good. No regulation or diversion upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s (467 m³/s) Jan. 9, 1978, gage height, 10.86 ft (3.310 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 13.5 ft (4.11 m) Jan. 16, 1974, from floodmarks, discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,700 ft³/s (218 m³/s) Mar. 27 (1400 hrs), gage height 7.54 ft (2.298 m), no other peak above base of 2,500 ft³/s (70.8 m³/s); no flow many days.

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	6.3	5.3	20	9.5	46	575	322	250	88	16	.78	
2	6.0	5.7	20	11	41	353	291	245	79	15	.65	
3	5.9	6.0	21	13	38	270	265	224	75	15	.42	
4	5.6	6.2	20	15	37	257	248	223	72	14	.25	
5	5.6	6.9	18	17	41	302	243	253	70	16	.04	
6	5.5	7.1	18	17	39	532	282	393	65	16	0	
7	5.5	7.1	17	19	39	745	257	372	63	15	0	
8	5.3	7.1	14	40	39	748	227	331	60	15	0	
9	5.3	7.0	12	73	39	661	211	283	56	14	0	
10	5.3	6.7	15	58	39	520	199	253	53	13	0	
11	5.4	6.9	16	793	40	467	191	232	49	13	0	
12	5.3	7.3	16	407	51	429	180	220	46	13	0	
13	5.0	8.0	17	159	1100	377	175	215	43	11	0	
14	5.0	8.2	17	616	1440	329	173	220	42	9.2	0	
15	4.8	8.4	14	1110	749	340	172	230	40	8.0	0	
16	5.1	8.4	15	307	829	374	179	227	39	6.4	0	
17	5.2	8.9	16	158	419	554	180	218	38	6.2	0	
18	5.3	9.4	15	111	874	424	162	212	38	5.4	0	
19	5.3	11	15	90	586	422	150	213	37	4.7	0	
20	5.6	13	15	86	848	356	142	207	35	4.0	0	
21	6.4	29	12	74	678	305	135	204	33	3.7	0	
22	6.3	51	14	69	462	282	140	203	31	3.9	0	
23	5.7	39	15	65	492	239	208	190	28	4.0	0	
24	5.6	28	16	61	297	220	304	192	25	3.7	0	
25	5.6	22	16	58	221	205	169	157	23	3.4	0	
26	5.6	20	15	51	215	206	190	143	22	2.9	0	
27	5.6	18	15	45	194	2510	405	133	22	2.3	0	
28	5.6	18	15	49	281	916	317	123	20	2.0	0	
29	5.6	16	15	43	---	562	271	112	18	1.7	0	
30	5.4	17	12	39	---	434	247	103	17	1.4	0	
31	5.3	---	9.1	47	---	365	---	95	---	1.1	0	---
TOTAL	171.0	412.6	485.1	4710.5	10174	15279	6635	6676	1327	260.0	2.14	0
MEAN	5.52	13.8	15.6	152	363	493	221	215	44.2	8.39	.069	0
MAX	6.4	51	21	1110	1440	2510	405	393	88	16	.78	0
MIN	4.8	5.3	9.1	9.5	37	205	135	95	17	1.1	0	0
AC-FT	339	818	962	9340	20180	30310	13160	13240	2630	516	4.2	0
CAL YR 1978 TOTAL	150323.10			MEAN 412	MAX 7340	MIN 4.2	AC-FT 298200					
WTR YR 1979 TOTAL	46132.34			MEAN 126	MAX 2510	MIN 0	AC-FT 91500					

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

WATER TEMPERATURES: Water years 1977 to current year.

SEDIMENT RECORDS: Water years 1977 to current year.

TURBIDITY: Water years 1977-79 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1976 to current year.

SEDIMENT RECORDS: January 1977 to current year (storm season only).

INSTRUMENTATION.--Temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 36.5°C Aug. 6, 1978; minimum recorded, 0.5°C at times during 1977-79.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,300 mg/L Jan. 9, 16, 1978; minimum daily mean, no flow on many days during November 1977.

SEDIMENT DISCHARGE: Maximum daily, 175,000 tons (159,000 metric tons) Jan. 9, 1978; minimum daily, 0 ton (0 metric ton) on many days during 1977 and Jan. 29, 30, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 35.5°C Aug. 1; minimum recorded, 0.5°C Dec. 31, Jan. 1.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 1,940 mg/L Jan. 11; minimum daily mean, 0 mg/L Jan. 29, 30.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 14,900 tons (13,500 metric tons) Mar. 27; minimum daily, 0 ton (0 metric ton) Jan. 29, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.5	16.5	16.5	8.5	12.5	8.5	5.5	0.5	6.5	1.0	9.5	8.0
2	24.5	15.5	16.5	9.0	10.5	5.5	5.5	2.0	7.5	1.5	9.0	8.0
3	25.0	15.0	17.0	9.0	10.0	5.0	6.5	2.5	8.5	1.5	8.5	8.0
4	25.5	15.0	15.5	10.0	10.5	5.5	8.0	5.5	11.0	3.5	11.0	7.5
5	25.0	15.0	16.0	9.5	9.0	5.5	8.5	5.5	11.0	5.0	12.5	10.5
6	24.5	15.0	17.0	9.5	7.0	3.0	8.0	4.0	12.5	5.0	13.0	11.0
7	24.0	14.5	17.0	9.5	5.5	1.5	6.0	5.5	12.0	6.0	13.5	10.5
8	24.0	14.0	17.0	9.0	5.5	1.0	7.0	6.0	12.5	6.0	13.5	10.5
9	23.5	14.0	14.0	7.5	6.5	3.0	8.5	7.0	13.0	9.0	13.5	9.5
10	23.5	14.5	9.5	4.5	8.5	4.5	9.0	8.0	9.5	8.0	14.5	9.5
11	23.5	14.0	9.5	4.0	9.5	7.0	9.5	8.5	11.5	9.0	15.0	10.5
12	24.0	15.5	6.5	4.0	10.0	7.5	10.5	8.0	9.5	9.0	15.5	10.5
13	24.0	15.0	11.5	6.0	10.0	5.5	8.0	6.5	9.0	7.5	15.5	10.5
14	24.0	14.5	10.5	4.0	9.5	4.5	7.0	6.5	9.5	7.0	14.0	11.5
15	23.5	15.5	9.5	4.0	8.5	3.5	8.0	6.0	7.0	5.0	11.5	11.0
16	23.0	15.5	11.0	8.0	7.0	2.5	8.5	4.5	9.0	5.5	11.0	9.0
17	23.0	14.5	12.5	6.0	7.0	5.0	8.0	4.0	8.5	6.5	13.0	9.5
18	23.0	14.5	11.5	5.5	8.5	4.5	9.5	5.0	8.5	7.5	12.5	10.5
19	20.5	14.0	9.5	8.5	6.5	2.0	9.5	4.5	10.5	6.5	14.0	8.5
20	21.5	14.0	11.5	9.0	5.5	1.0	9.5	4.5	9.0	7.5	15.5	10.5
21	21.5	15.0	10.5	9.0	7.5	2.0	10.0	5.5	9.0	8.0	14.0	10.0
22	20.5	13.0	11.0	8.0	7.0	2.5	9.0	4.0	9.0	8.5	13.0	11.0
23	20.0	11.5	11.0	5.5	7.5	2.5	9.0	3.0	8.5	8.0	16.5	10.0
24	19.0	12.5	11.0	6.0	8.0	4.0	8.5	5.0	10.0	8.0	18.0	10.5
25	20.5	12.0	10.5	5.5	8.0	3.5	7.5	2.5	10.0	9.0	16.5	11.5
26	20.0	12.0	11.0	6.0	8.5	5.5	7.5	1.5	12.0	9.5	14.0	12.0
27	19.5	11.5	10.5	5.5	8.5	5.5	8.0	2.0	11.0	8.5	12.5	10.5
28	19.0	11.5	11.5	7.0	9.0	4.5	7.5	2.5	11.0	10.0	13.5	9.5
29	17.0	11.0	13.0	9.5	7.0	3.0	6.0	1.0	---	---	16.0	10.0
30	15.0	9.5	10.5	7.0	6.0	1.0	5.0	3.5	---	---	16.5	9.5
31	15.5	9.5	---	---	6.0	0.5	7.0	3.5	---	---	17.5	10.0
MONTH	25.5	9.5	17.0	4.0	12.5	0.5	10.5	0.5	13.0	1.0	18.0	7.5

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	10.5	22.5	15.5	27.5	17.5	---	---	35.5	21.5		
2	18.5	10.5	23.5	15.0	29.5	19.0	---	---	34.0	20.0		
3	18.5	10.5	24.5	16.0	30.5	20.0	---	---	34.0	20.5		
4	20.5	11.5	20.5	16.5	30.5	21.5	29.0	20.5	32.0	20.5		
5	21.0	13.0	19.0	14.0	30.5	21.5	30.0	21.0	32.5	19.5		
6	17.5	13.5	15.5	12.5	27.5	19.0	29.5	21.0	---	---		
7	20.5	11.0	16.0	10.5	24.5	17.0	30.0	15.5	---	---		
8	19.5	12.0	19.0	10.0	27.5	17.0	30.5	21.0	---	---		
9	18.0	11.0	21.0	11.5	28.5	19.0	25.5	21.5	---	---		
10	15.5	10.0	23.0	13.0	29.5	19.5	29.5	20.0	---	---		
11	19.0	11.5	25.0	15.0	29.5	20.0	30.5	21.0	---	---		
12	20.0	12.0	26.0	16.0	29.5	20.0	31.0	21.0	---	---		
13	21.5	13.5	27.0	17.5	28.5	20.0	30.0	21.5	---	---		
14	21.5	13.0	27.0	18.0	27.5	18.5	32.5	20.5	---	---		
15	21.5	14.0	26.0	18.0	---	---	33.5	20.5	---	---		
16	18.0	14.0	26.5	17.5	---	---	34.0	22.0	---	---		
17	19.0	12.5	25.5	18.0	---	---	34.5	21.5	---	---		
18	19.0	10.5	26.5	18.5	---	---	35.0	21.0	---	---		
19	19.5	10.0	27.5	19.0	---	---	34.0	21.0	---	---		
20	21.0	11.0	27.5	19.5	---	---	31.5	21.5	---	---		
21	20.5	13.0	27.5	19.5	---	---	31.0	21.0	---	---		
22	16.0	13.0	26.0	19.0	---	---	34.0	22.0	---	---		
23	15.5	12.5	25.0	19.5	---	---	35.0	22.5	---	---		
24	19.5	11.0	26.0	17.5	---	---	34.0	20.5	---	---		
25	21.5	12.0	28.0	19.0	---	---	35.0	23.0	---	---		
26	17.5	15.0	28.0	19.0	---	---	34.5	21.0	---	---		
27	18.0	13.5	24.5	18.0	---	---	33.5	21.5	---	---		
28	22.0	13.0	22.0	16.0	---	---	34.0	21.0	---	---		
29	21.0	14.5	22.5	13.5	---	---	35.0	21.0	---	---		
30	22.5	15.5	24.5	15.5	---	---	35.0	21.5	---	---		
31	---	---	26.0	16.5	---	---	35.0	22.0	---	---		
MONTH	22.5	10.0	28.0	10.0	---	---	35.0	15.5	---	---		

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				5.3	2	.03	20	1	.05
2				5.7	2	.03	20	1	.05
3				6.0	2	.03	21	1	.06
4				6.2	2	.03	20	2	.11
5				6.9	2	.04	18	2	.10
6				7.1	2	.04	18	2	.10
7				7.1	2	.04	17	2	.09
8				7.1	2	.04	14	2	.08
9				7.0	2	.04	12	2	.06
10				6.7	1	.02	15	2	.08
11				6.9	1	.02	16	1	.04
12				7.3	1	.02	16	1	.04
13				8.0	1	.02	17	1	.05
14				8.2	2	.04	17	2	.09
15				8.4	2	.05	14	2	.08
16				8.4	2	.05	15	3	.12
17				8.9	2	.05	16	2	.09
18				9.4	2	.05	15	2	.08
19				11	2	.06	15	2	.08
20				13	3	.11	15	2	.08
21				29	24	1.8	12	2	.06
22				51	17	2.3	14	2	.08
23				39	11	1.2	15	2	.08
24				28	7	.53	16	2	.09
25				22	4	.24	16	2	.09
26				29	3	.16	15	1	.04
27				18	2	.10	15	1	.04
28				18	2	.10	15	1	.04
29				16	2	.09	15	1	.04
30				17	1	.05	12	1	.03
31				---	---	---	9.1	1	.02
TOTAL				412.6	---	7.38	485.1	---	2.14

SACRAMENTO RIVER BASIN

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	9.5	1	.03	46	1	.12	575	163	266
2	11	1	.03	41	1	.11	353	53	51
3	13	1	.04	38	1	.10	270	22	16
4	15	1	.04	37	1	.10	257	19	13
5	17	1	.05	41	1	.11	302	44	36
6	17	1	.05	39	1	.11	532	315	493
7	19	2	.10	39	1	.11	745	416	837
8	40	11	1.3	39	1	.11	748	248	501
9	73	34	7.1	39	1	.11	661	174	311
10	58	28	4.4	39	1	.11	520	114	160
11	793	1940	5360	40	1	.11	467	84	106
12	407	396	641	51	1	.14	429	64	74
13	159	52	22	1100	1330	4970	377	50	51
14	616	332	1440	1440	659	2990	329	40	36
15	1110	376	1520	749	186	399	340	42	39
16	307	31	26	829	136	317	374	48	48
17	158	12	5.1	419	55	62	554	133	210
18	111	8	2.4	874	212	696	424	89	102
19	90	5	1.2	586	64	101	422	75	85
20	86	4	.93	848	271	902	356	71	68
21	74	3	.60	678	87	159	305	68	56
22	69	2	.37	462	56	74	282	65	49
23	65	2	.35	492	78	115	239	60	39
24	61	2	.33	297	32	26	220	58	34
25	58	1	.16	221	24	14	205	54	30
26	51	1	.14	215	17	9.9	206	51	28
27	45	1	.12	194	13	6.8	2510	1430	14900
28	49	1	.13	281	57	68	916	404	1150
29	43	0	0	---	---	---	562	110	167
30	39	0	0	---	---	---	434	61	71
31	47	1	.13	---	---	---	365	36	35
TOTAL	4710.5	---	9034.10	10174	---	10911.04	15279	---	20062

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	322	23	20	250	20	13			
2	291	18	14	245	17	11			
3	265	15	11	224	16	9.7			
4	248	12	8.9	223	15	9.0			
5	243	10	6.6	253	37	29			
6	282	20	15	393	143	155			
7	257	24	17	372	60	60			
8	227	19	12	331	31	28			
9	211	14	8.0	243	22	17			
10	199	10	5.4	253	18	12			
11	191	8	4.1	232	14	8.8			
12	180	6	2.9	220	13	7.7			
13	175	5	2.4	215	13	7.5			
14	173	4	1.9	220	16	9.5			
15	172	5	2.3	230	19	12			
16	179	5	2.4	227	19	12			
17	180	5	2.4	218	16	9.4			
18	162	5	2.2	212	15	8.6			
19	150	4	1.6	213	16	9.2			
20	142	4	1.5	207	18	10			
21	135	4	1.5	204	19	10			
22	140	7	2.8	203	18	9.9			
23	208	48	36	190	14	7.2			
24	304	148	143	192	86	44			
25	169	17	7.8	157	81	34			
26	190	33	24	143	43	17			
27	405	217	245	133	28	10			
28	317	43	37	123	21	7.0			
29	271	26	19	112	16	4.8			
30	247	21	14	103	14	3.9			
31	---	---	---	95	12	3.1			
TOTAL	6635	---	670.8	6076	---	589.3			
PERIOD	44372.2	---	41276.76						

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	412.60	7.38	0	7
DECEMBER ...	485.10	2.14	0	2
JANUARY 1979	4710.50	9034.10	456	9490
FEBRUARY ...	10174.00	10911.04	1370	12300
MARCH	15279.00	20062.00	1880	21900
APRIL	6635.00	670.80	201	872
MAY	6676.00	589.30	196	785
PERIOD.....	44372.20	41276.76	4103	45356

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
JAN									
09...	0925	85	7.0	64	15	--	--	--	--
11...	1045	951	9.5	2400	6160	--	48	64	79
11...	1330	1110	8.5	--	--	--	48	69	87
11...	1400	1130	9.5	2720	8300	--	47	67	83
FEB									
13...	1400	1520	8.5	2210	9070	--	38	51	67
14...	0820	1700	7.0	753	3460	34	45	57	69
14...	1115	1420	8.0	623	2390	33	44	57	69
20...	1500	1500	8.0	817	3310	29	39	49	59
MAR									
07...	1140	777	11.0	420	881	33	43	55	69
22...	1000	307	11.0	--	--	--	82	91	98
22...	1110	293	12.0	67	53	--	--	--	--
27...	1310	5840	12.0	2740	43200	--	38	51	67
APR									
05...	1000	232	15.5	--	--	--	--	--	--
24...	1215	275	14.0	131	97	--	--	--	--

DATE	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. FALL DIAM. % FINER THAN .125 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
JAN								
09...	--	--	100	--	--	--	--	--
11...	90	--	94	--	97	99	100	--
11...	97	99	--	100	--	--	--	--
11...	92	--	95	--	98	100	--	--
FEB								
13...	83	--	92	--	97	100	--	--
14...	79	--	85	--	93	99	100	--
14...	78	--	83	--	87	92	99	100
20...	71	--	79	--	92	99	100	--
MAR								
07...	80	--	86	--	92	98	100	--
22...	98	--	100	--	--	--	--	--
22...	--	--	99	--	99	100	--	--
27...	85	--	95	--	99	100	--	--
APR								
05...	--	--	82	--	--	--	--	--
24...	--	--	98	--	99	99	100	--

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE (DEG C)	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JAN								
11...	1120	9.5	1	1030	--	0	1	2
11...	1127	9.5	1	1030	0	1	1	4
11...	1130	9.5	1	1030	--	--	0	2
11...	1135	9.5	1	1030	4	9	16	22
11...	1140	9.5	1	1030	--	--	0	10
FEB								
14...	1145	8.0	1	1350	--	--	--	--
14...	1150	8.0	1	1350	0	1	1	2
14...	1155	8.0	1	1350	--	0	1	6
14...	1200	8.0	1	1350	--	0	1	14
14...	1205	8.0	1	1350	2	4	5	35
MAR								
07...	1325	11.5	1	810	--	0	1	2
07...	1330	11.5	1	810	--	0	1	3
07...	1335	11.5	1	810	--	0	1	2
07...	1340	11.5	1	810	--	0	6	43
07...	1345	11.5	1	810	5	10	20	55
APR								
24...	1250	14.0	1	269	--	--	0	1
24...	1255	14.0	1	269	--	0	1	4
24...	1300	14.0	1	269	--	0	1	11
24...	1305	14.0	1	269	--	0	2	18
24...	1310	14.0	1	269	--	0	1	7

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JAN							
11...	6	12	20	41	74	100	--
11...	12	22	33	46	64	100	--
11...	8	22	43	68	92	100	--
11...	36	56	82	100	--	--	--
11...	19	29	51	83	100	--	--
FEB							
14...	0	1	1	2	12	100	--
14...	9	27	47	78	100	--	--
14...	14	24	35	51	79	100	--
14...	25	32	45	65	93	100	--
14...	56	70	84	100	--	--	--
MAR							
07...	5	14	20	27	34	52	100
07...	7	16	26	36	66	100	--
07...	3	6	11	30	56	100	--
07...	55	63	72	84	92	100	--
07...	70	85	100	--	--	--	--
APR							
24...	1	2	4	8	19	52	100
24...	5	7	10	18	29	65	100
24...	25	40	61	92	100	--	--
24...	54	79	93	100	--	--	--
24...	12	17	24	39	56	83	100

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
NOV						
01...	0840	5.3	9.0	2	.03	1.0
03...	0945	5.9	12.0	2	.03	1.0
05...	0845	6.6	11.0	2	.04	2.0
07...	0900	7.1	11.0	1	.02	1.0
09...	0850	7.1	11.0	2	.04	1.0
12...	0845	7.1	5.0	1	.02	1.0
13...	0925	8.0	8.0	1	.02	1.0
14...	0940	8.0	6.0	1	.02	1.0
16...	0915	8.4	9.0	2	.05	1.0
18...	0920	9.4	7.0	2	.05	1.0
19...	0950	9.9	9.5	2	.05	1.0
20...	0900	13	10.0	3	.11	1.0
21...	0900	29	10.0	28	2.2	9.0
22...	0915	43	10.0	18	2.1	6.0

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued
 PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
 CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
NOV						
23...	0915	40	7.0	46	5.0	35
24...	0905	28	7.0	21	1.6	21
25...	0920	22	7.0	4	.24	4.0
26...	0850	20	7.0	3	.16	2.0
27...	0910	18	7.0	2	.10	2.0
28...	0925	18	9.0	2	.10	1.0
29...	0930	16	11.0	1	.04	2.0
30...	0910	16	7.0	1	.04	1.0
DEC						
01...	0920	19	9.0	2	.10	2.0
02...	0900	19	6.0	1	.05	1.0
03...	0950	21	7.0	2	.11	1.0
04...	0950	20	7.0	3	.16	1.0
05...	0920	19	7.0	1	.05	1.0
06...	0940	18	4.0	1	.05	1.0
06...	1000	18	3.0	2	.10	1.0
06...	1005	18	3.0	3	.15	1.0
07...	0910	16	2.5	1	.04	1.0
08...	0925	13	2.0	1	.04	1.0
09...	0950	11	6.0	1	.03	1.0
10...	0945	15	6.0	1	.04	2.0
11...	0950	16	8.0	1	.04	1.0
12...	0905	16	8.0	1	.04	1.0
13...	0930	16	6.0	1	.04	1.0
14...	0930	17	6.0	1	.05	1.0
15...	0930	14	5.0	2	.08	1.0
16...	1010	15	5.0	5	.20	3.0
17...	0950	16	6.0	1	.04	1.0
18...	1325	15	8.5	1	.04	1.0
19...	0945	15	4.0	3	.12	1.0
20...	1000	14	3.0	1	.04	1.0
21...	0950	12	4.0	1	.03	1.0
22...	1015	13	4.0	2	.07	1.0
23...	0950	15	4.0	2	.08	1.0
24...	0950	15	5.0	1	.04	1.0
25...	0950	16	5.0	1	.04	1.0
26...	1000	15	6.0	1	.04	1.0
27...	0950	15	6.0	1	.04	1.0
28...	1015	15	6.0	1	.04	1.0
29...	1110	15	6.0	0	.00	1.0
30...	1030	12	4.0	0	.00	1.0
31...	0945	8.9	1.0	3	.07	1.0
JAN						
01...	1000	8.4	2.0	0	.00	1.0
02...	0940	9.9	3.0	0	.00	1.0
03...	1100	13	4.0	1	.04	1.0
04...	0945	15	6.0	1	.04	1.0
05...	0910	16	7.0	1	.04	1.0
05...	1010	17	6.0	1	.05	1.0
05...	1110	17	6.0	1	.05	1.0
06...	0940	17	5.0	2	.09	1.0
07...	0900	17	6.0	1	.05	1.0
08...	1040	43	7.0	15	1.7	8.0
09...	0925	85	7.0	64	15	40
09...	0930	85	8.5	62	14	32
09...	0940	84	7.0	63	14	30
09...	1015	84	7.5	48	11	30
10...	1020	54	9.0	25	3.6	23
11...	1020	881	9.5	2590	6160	1100
11...	1040	935	9.5	1570	3960	700
11...	1045	951	9.5	2400	6160	700
11...	1400	1130	9.5	2720	8300	1500
12...	0930	400	8.0	254	274	130
13...	0930	162	6.5	52	23	45
14...	1000	149	7.0	31	12	20
15...	1000	1170	7.0	386	1220	220
15...	1440	870	8.0	272	639	170
16...	1010	244	6.0	36	24	30
17...	1005	158	6.0	12	5.1	9.0
18...	1010	111	7.0	8	2.4	6.0
19...	1005	90	7.0	5	1.2	4.0
20...	0945	86	6.0	3	.70	3.0
21...	1000	74	7.0	3	.60	3.0
22...	0950	69	4.0	2	.37	2.0
22...	0955	69	4.0	2	.37	2.0
23...	1000	65	5.0	2	.35	2.0
24...	1000	60	7.0	1	.16	1.0
25...	1045	58	6.0	1	.16	2.0
26...	1120	52	5.0	1	.14	2.0
27...	1120	46	6.0	4	.50	1.0
28...	1045	49	5.0	1	.13	2.0
29...	1000	43	3.0	0	.00	1.0
30...	1310	39	5.0	0	.00	1.0
31...	0930	46	6.0	1	.12	1.0

SACRAMENTO RIVER BASIN

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued
 PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
 CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
FEB						
01...	1010	46	4.0	1	.12	1.0
02...	0930	41	3.0	1	.11	1.0
02...	1425	41	7.0	1	.11	1.0
03...	1010	38	4.0	1	.10	1.0
04...	1000	37	6.0	1	.10	1.0
05...	0945	41	7.0	1	.11	1.0
06...	0930	39	7.0	1	.11	1.0
07...	1000	39	8.0	0	.00	1.0
08...	1000	39	8.0	1	.11	1.0
09...	1015	39	10.0	1	.11	1.0
10...	0945	39	9.0	1	.11	1.0
11...	0945	40	10.0	1	.11	1.0
12...	1005	51	10.0	1	.14	1.0
13...	0950	920	9.0	2370	5890	750
13...	1400	1520	8.5	2210	9070	750
14...	0820	1700	7.0	753	3460	280
14...	1115	1420	8.0	623	2390	280
14...	1120	1390	8.0	623	2340	270
15...	0950	611	6.0	152	251	85
16...	0940	866	7.0	137	320	90
17...	0920	439	7.0	54	64	40
18...	1100	1150	8.0	402	1250	150
19...	0930	602	7.0	60	98	45
20...	0930	480	8.0	44	57	25
20...	1500	1500	8.0	817	3310	120
21...	1320	664	9.0	84	151	55
22...	0900	410	8.5	37	41	18
23...	0920	428	8.0	49	57	33
24...	0900	307	9.0	28	23	12
25...	0925	220	9.0	31	18	11
26...	0840	213	9.5	12	6.9	8.0
27...	0825	195	8.5	13	6.8	8.0
28...	0925	188	10.0	12	6.1	6.0
MAR						
01...	0845	619	8.0	189	316	120
02...	0915	360	8.0	45	44	26
03...	0940	274	8.0	22	16	10
04...	0920	256	8.0	19	13	8.0
05...	1100	312	12.0	41	35	21
06...	1000	575	12.0	349	542	65
07...	0910	784	10.5	555	1180	210
07...	1040	784	11.0	417	883	160
07...	1140	777	11.0	420	881	170
08...	0945	814	10.5	248	545	120
09...	0900	704	9.5	169	321	75
10...	0830	540	10.0	93	136	45
11...	0920	494	11.0	76	101	36
12...	1030	439	12.0	70	83	33
13...	0850	382	11.0	50	52	26
14...	0900	333	12.0	34	31	17
15...	0845	312	11.0	37	31	20
16...	0840	382	9.0	46	47	22
17...	0845	704	9.5	128	243	55
18...	0820	399	10.5	28	30	12
19...	0830	445	9.0	32	38	17
20...	0900	360	10.5	20	19	10
21...	0835	307	10.0	18	15	9.0
22...	0830	312	11.0	22	19	9.0
22...	1110	293	12.0	67	53	50
23...	0845	240	10.0	19	12	9.0
24...	0820	220	11.0	12	7.1	7.0
25...	0810	202	12.0	10	5.5	5.0
26...	0840	202	12.0	10	5.5	5.0
27...	0830	1780	12.0	2160	10400	700
27...	1110	2800	12.0	1610	12200	700
27...	1310	5840	12.0	2740	43200	800
28...	0835	958	10.0	449	1160	160
29...	0820	589	10.0	126	200	55
30...	0840	445	10.0	66	79	28
31...	0845	371	10.0	43	43	18
APR						
01...	0920	323	11.0	24	21	15
02...	0815	293	11.0	19	15	11
03...	1100	265	14.0	13	9.3	7.0
04...	0825	248	12.0	14	9.4	7.0
05...	0815	232	14.0	12	7.5	2.0
05...	1005	232	15.5	10	6.3	5.0
05...	1010	232	15.5	8	5.0	5.0
06...	0840	298	14.0	22	18	6.0
06...	1315	298	17.0	366	294	320
07...	0845	265	13.0	39	28	19
08...	0840	224	13.0	22	13	11
09...	0940	209	13.0	13	7.3	6.0
10...	0850	198	13.0	10	5.3	6.0
11...	0850	191	13.0	7	3.6	5.0

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
APR						
12...	0900	178	14.0	7	3.4	4.0
13...	0800	171	15.0	4	1.8	2.0
14...	0845	171	14.0	4	1.8	2.0
15...	0835	168	15.0	4	1.8	2.0
16...	0815	171	15.0	5	2.3	3.0
17...	0805	184	13.0	5	2.5	3.0
18...	0850	164	12.0	4	1.8	3.0
19...	0800	152	11.0	4	1.6	2.0
20...	0910	143	13.0	5	1.9	2.0
21...	0900	134	15.0	5	1.8	2.0
22...	0845	131	15.0	4	1.4	3.0
23...	0905	178	13.0	19	9.1	9.0
24...	0800	328	12.0	180	159	120
24...	1215	275	14.0	131	97	90
24...	1220	278	14.0	131	98	90
25...	0815	171	13.0	16	7.4	7.0
26...	0850	161	16.0	9	3.9	5.0
27...	0810	445	14.0	365	439	160
28...	0850	323	14.0	47	41	22
29...	0930	274	15.0	27	20	13
30...	0940	248	16.0	19	13	9.0
MAY						
01...	0845	252	15.5	20	14	8.0
02...	0930	248	15.0	14	9.4	8.0
03...	0945	224	17.0	14	8.5	7.0
03...	1435	228	23.5	16	9.8	7.0
04...	0940	220	17.0	15	8.9	4.0
05...	0915	220	14.0	14	8.3	5.0
06...	0920	410	12.5	174	193	80
07...	0940	371	12.0	58	58	25
08...	0855	338	11.0	38	35	17
09...	0920	288	12.0	25	19	12
10...	0845	256	13.0	17	12	10
11...	0855	232	15.0	16	10	8.0
12...	0900	216	16.0	12	7.0	7.0
13...	0935	213	18.0	14	8.1	6.0
14...	0825	213	18.0	17	9.8	7.0
15...	0850	232	18.0	20	13	8.0
16...	0815	224	18.0	19	11	8.0
17...	0830	216	19.0	16	9.3	8.0
18...	0845	216	19.0	14	8.2	7.0
19...	0800	213	19.0	15	8.6	7.0
20...	0810	209	20.0	18	10	8.0
21...	0825	205	20.0	18	10	6.0
22...	0745	202	20.0	19	10	9.0
23...	0740	191	20.0	14	7.2	6.0
25...	0810	158	20.0	95	41	60
26...	0850	140	21.0	44	17	20
27...	0855	134	19.0	30	11	15
28...	0810	126	16.0	22	7.5	10
29...	0745	113	14.0	16	4.9	7.0
30...	0800	104	16.0	14	3.9	7.0
31...	0845	96	18.0	12	3.1	5.0
JUN						
07...	0845	63	17.0	6	1.0	3.0
07...	0850	63	17.0	7	1.2	2.0

11375970 COTTONWOOD CREEK AT COTTONWOOD, CA

LOCATION.--Lat 40°22'35", long 122°16'57", in SW¼SE¼ sec.11, T.29 N., R.4 W., Shasta County, Hydrologic Unit 18020102, at bridge on U.S. Highway 99 business route, 0.7 mi (1.1 km) south of Cottonwood.

DRAINAGE AREA, --836 mi² (2,165 km²).

PERIOD OF RECORD. - -

CHEMICAL ANALYSES: Water years 1951 to current year. Prior to 1975 water year published as station 11376000 Cottonwood Creek near Cottonwood.

REMARKS.--Records of discharge given for Cottonwood Creek near Cottonwood (station 11376000).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)
OCT 18...	0945	138	146	7.3	16.0	2.0	10.0	--	--	--
NOV 17...	1200	72	271	7.5	12.0	1.0	12.1	--	--	--
DEC 12...	0940	89	276	7.3	8.0	1.0	11.3	--	--	--
JAN 19...	1015	422	296	7.3	7.0	6.0	11.3	--	--	--
FEB 21...	0920	4530	79	7.1	8.0	70	11.0	18	0	4.0
MAR 20...	1240	1340	232	7.9	14.0	9.0	10.5	--	--	--
APR 23...	0925	686	217	7.6	14.0	8.0	9.7	--	--	--
MAY 21...	1250	575	217	8.1	26.5	2.0	10.1	--	--	--
JUN 20...	0935	166	149	7.3	22.5	2.0	8.3	--	--	--
JUL 24...	0825	72	174	7.0	24.5	1.0	6.7	73	0	16
AUG 17...	0925	51	214	7.1	24.5	4.0	6.6	--	--	--
SEP 24...	0900	65	223	7.1	19.5	2.0	7.5	--	--	--

[illegible]

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA

LOCATION.--Lat 40°23'14", long 122°14'15", in NE¼NE¼ sec.7, T.29 N., R.3 W., Shasta County, Hydrologic Unit 18020102, on left bank 2.2 mi (3.5 km) east of Cottonwood, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--927 mi² (2,401 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1345: 1943, 1944(M), 1946-47, 1949(M), 1951-52. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 364.0 ft (110.95 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 26, 1963, at site 100 ft (30 m) downstream on right bank at datum 3.59 ft (1.094 m) higher. July 26, 1963, to Sept. 13, 1972, at site 250 ft (76.2 m) downstream on right bank. Sept. 21, 1967, to Jan. 14, 1968, supplementary gage at a site 1,450 ft (442 m) downstream on right bank at datum 2.35 ft (0.716 m) higher.

REMARKS.--Records good. Small diversions for irrigation above station. At times during irrigation season, Cottonwood Creek receives water above station from Sacramento River by way of Anderson-Cottonwood Canal.

AVERAGE DISCHARGE.--39 years, 844 ft³/s (23.90 m³/s), 611,500 acre-ft/yr (754 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,000 ft³/s (1,980 m³/s) Jan. 16, 1974, gage height, 20.15 ft (6.142 m); minimum, 15 ft³/s (0.42 m³/s) for several days in September 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,100 ft³/s (201 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 15	0345	8,240 233	11.56 3.523
Feb. 20	1930	9,380 266	11.93 3.636
Mar. 27	1645	*13,200 374	12.94 3.944

Minimum daily, 33 ft³/s (0.93 m³/s) Aug. 9.

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	119	123	95	56	186	2110	1260	878	316	94	55	122
2	116	84	102	56	174	1510	1180	859	288	94	56	99
3	100	71	101	61	165	1270	1090	789	283	108	53	90
4	99	71	98	64	155	1140	1010	745	276	81	46	87
5	102	73	95	70	163	1090	916	868	266	88	50	83
6	90	76	94	69	156	1330	950	1140	233	82	46	69
7	88	80	93	70	153	1670	881	1190	219	88	40	65
8	94	80	89	108	150	1680	769	1190	211	91	37	63
9	96	71	87	179	146	1520	713	1040	207	88	33	57
10	101	77	90	180	146	1360	658	979	210	83	40	57
11	126	82	88	2640	151	1190	594	874	198	86	42	50
12	115	80	89	1440	171	1220	568	824	187	79	43	64
13	109	83	91	665	2390	1150	528	774	185	72	48	74
14	119	78	92	1350	4310	1050	539	763	174	67	51	51
15	116	74	93	5320	1880	1100	575	748	170	74	54	55
16	112	74	89	1390	2820	1510	600	687	165	62	55	55
17	120	72	89	782	1580	2030	549	647	159	68	51	54
18	138	72	87	548	3450	1730	469	621	156	62	48	53
19	133	72	86	422	2500	1600	436	563	155	66	47	55
20	127	89	85	357	4370	1340	412	580	166	62	50	52
21	133	156	81	320	4530	1200	406	575	152	56	51	49
22	145	183	79	282	2650	1620	403	562	136	60	56	53
23	125	156	79	277	2600	1170	686	544	147	55	53	52
24	104	127	74	260	1900	1010	1330	535	137	72	57	65
25	94	119	72	247	1400	941	818	500	134	71	55	88
26	101	109	72	228	1430	909	774	499	126	58	57	87
27	127	104	72	211	1250	4830	1230	434	110	55	55	89
28	138	97	72	206	1510	3270	1130	390	114	52	59	85
29	152	96	68	196	---	2020	988	364	100	64	57	76
30	174	93	65	179	---	1570	897	349	92	56	94	81
31	165	---	59	185	---	1330	---	320	---	56	108	---
TOTAL	3678	2822	2626	18418	42486	48470	23359	21831	5472	2250	1647	2080
MEAN	119	94.1	84.7	594	1517	1564	779	704	182	72.6	53.1	69.3
MAX	174	183	102	5320	4530	4830	1330	1190	316	108	108	122
MIN	88	71	59	56	146	909	403	320	92	52	33	49
AC-FT	7300	5600	5210	36530	84270	96140	46330	43300	10850	4460	3270	4130
CAL YR 1978 TOTAL	509145			1395	MAX 22300	MIN 50	AC-FT 1010000					
WTR YR 1979 TOTAL	175139			480	MAX 5320	MIN 33	AC-FT 347400					

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-67, 1977 to current year.

WATER TEMPERATURES: Water years 1963-67, 1977 to current year.

SEDIMENT RECORDS: Water years 1957-67, 1977 to current year.

TURBIDITY: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to September 1967, December 1976 to current year.

SEDIMENT RECORDS: October 1962 to September 1967, November 1977 to current year (storm season record only for water years 1978-79).

INSTRUMENTATION.--Temperature recorder June 1965 to June 1967, and since December 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 31.0°C June 27, 1977; minimum recorded, 2.5°C Nov. 23, 1977.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,650 mg/L Jan. 5, 1978; minimum daily mean, 1 mg/L on many days during 1963-65, July 29, 30, 1967, Nov. 27, 28, Dec. 5-7, 1978.

SEDIMENT DISCHARGE: Maximum daily, 597,000 tons (542,000 metric tons) Dec. 22, 1964; minimum daily, 0.1 ton (0.09 metric ton) Sept. 30, Oct. 1, 6, 1964.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 30.5°C Aug. 1; minimum recorded, 4.5°C Dec. 20, Jan. 29, Feb. 1, 2.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 1,330 mg/L Mar. 27; minimum daily mean, 1 mg/L Nov. 27, 28, Dec. 5-7.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 28,200 tons (25,600 metric tons) Mar. 27; minimum daily, 0.25 ton (0.23 metric ton) Dec. 6, 7.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.0	11.5	20.5	16.5	26.5	19.0	28.5	20.5	30.5	22.5	23.0	18.5
2	16.0	11.5	22.0	16.0	28.0	20.0	27.5	21.0	29.0	21.5	24.0	18.5
3	16.0	12.5	22.5	17.0	29.5	21.5	26.5	19.5	29.5	22.0	24.5	19.0
4	18.0	12.5	20.5	17.5	29.5	22.5	26.5	20.0	28.0	21.5	25.5	19.0
5	19.0	14.0	18.0	15.0	29.5	22.5	27.0	20.5	28.0	21.0	25.0	19.0
6	16.5	14.5	16.0	13.0	26.5	21.5	27.0	20.0	28.0	19.5	26.0	19.5
7	18.0	12.5	15.5	12.0	24.0	17.5	26.5	19.5	28.0	20.5	27.0	19.5
8	18.0	14.0	17.5	12.0	26.5	19.0	26.5	19.5	28.5	20.5	27.0	20.5
9	17.0	13.5	19.0	13.0	27.5	20.0	22.0	19.5	29.0	21.0	25.5	19.5
10	15.5	11.5	21.0	14.5	28.0	20.5	26.5	18.5	29.0	22.0	24.5	18.5
11	18.5	12.5	22.5	16.0	28.5	20.5	27.5	20.0	28.5	22.5	25.5	18.5
12	18.5	13.5	24.0	17.5	28.0	21.0	27.0	20.5	28.0	21.5	26.0	19.0
13	20.5	14.5	25.0	18.5	27.0	20.5	27.0	19.5	25.5	20.5	26.0	19.0
14	20.0	14.5	25.5	19.5	27.0	19.0	28.5	20.0	26.0	20.0	27.0	20.0
15	20.0	15.0	25.5	19.5	27.0	19.5	29.0	21.5	26.0	20.0	26.5	20.0
16	17.5	15.0	25.5	19.5	24.5	20.0	29.0	21.0	26.5	20.0	26.5	20.0
17	18.0	13.5	25.5	20.0	24.0	17.5	29.5	22.0	27.0	19.5	25.5	19.5
18	18.5	13.0	26.0	20.0	26.0	18.0	30.0	21.5	27.0	20.0	24.0	18.5
19	18.0	12.5	27.0	20.0	27.5	19.5	29.0	22.0	25.0	20.5	24.5	18.5
20	19.5	13.0	27.5	21.5	27.0	20.5	28.0	22.0	25.0	19.5	25.5	18.5
21	20.0	14.5	27.5	21.5	27.5	20.0	26.5	22.5	25.0	19.5	24.5	19.0
22	17.5	14.5	26.5	21.5	28.0	20.0	29.0	21.5	25.5	19.0	23.5	18.5
23	15.5	13.5	26.0	21.0	29.0	21.0	30.0	22.5	26.0	19.5	23.5	17.5
24	17.0	12.0	26.0	20.0	28.5	21.0	27.0	22.5	26.5	19.5	23.5	17.5
25	19.0	13.5	28.0	20.5	28.5	21.0	27.5	21.0	26.5	19.5	22.0	18.5
26	16.5	15.0	28.0	21.0	28.0	21.0	29.5	21.5	27.0	20.0	21.0	16.0
27	18.5	14.5	25.0	19.5	29.0	21.0	28.5	22.0	26.5	20.5	22.0	16.5
28	19.5	14.0	22.0	17.5	29.0	22.0	29.5	21.5	24.5	19.5	22.0	17.0
29	19.0	15.5	22.5	15.0	28.0	21.0	30.0	22.0	24.5	19.5	22.0	16.5
30	21.0	16.0	24.0	17.0	27.0	19.5	30.0	22.5	24.5	19.5	22.5	18.0
31	---	---	25.5	18.0	---	---	30.0	22.5	26.0	19.0	---	---
MONTH	21.0	11.5	28.0	12.0	29.5	17.5	30.0	18.5	30.5	19.0	27.0	16.0

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				123	4	1.3	95	2	.51
2				84	3	.68	102	2	.55
3				71	3	.58	101	2	.55
4				71	3	.58	98	2	.53
5				73	3	.59	95	1	.26
6				76	4	.82	94	1	.25
7				80	5	1.1	93	1	.25
8				80	6	1.3	89	2	.48
9				71	7	1.3	87	3	.70
10				77	7	1.5	90	3	.73
11				82	8	1.8	88	3	.71
12				80	9	1.9	89	4	.96
13				83	10	2.2	91	6	1.5
14				78	10	2.1	92	7	1.7
15				74	8	1.6	93	8	2.0
16				74	7	1.4	89	8	1.9
17				72	7	1.4	89	9	2.2
18				72	6	1.2	87	10	2.3
19				72	5	.97	86	8	1.9
20				89	11	2.6	85	5	1.1
21				156	52	22	81	3	.66
22				183	26	13	79	2	.43
23				156	6	2.5	79	2	.43
24				127	2	.69	74	2	.40
25				119	2	.64	72	2	.39
26				109	2	.59	72	3	.58
27				104	1	.28	72	3	.58
28				97	1	.26	72	2	.39
29				96	2	.52	68	3	.55
30				93	2	.50	65	3	.53
31				---	---	---	59	3	.48
TOTAL				2822	---	67.90	2626	---	26.50

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	56	3	.45	186	3	1.5	2110	104	567
2	56	3	.45	174	3	1.4	1510	57	232
3	61	3	.49	165	4	1.8	1270	42	144
4	64	3	.52	155	3	1.3	1140	30	92
5	70	3	.57	163	3	1.3	1090	23	68
6	69	3	.56	156	2	.84	1330	45	162
7	70	4	.76	153	2	.83	1670	141	636
8	108	24	7.0	150	2	.81	1680	111	503
9	179	33	16	146	2	.79	1520	67	275
10	180	15	7.3	146	4	1.6	1360	42	154
11	2640	1020	9230	151	6	2.4	1190	27	87
12	1440	190	739	171	18	8.3	1220	19	63
13	665	45	81	2390	865	11100	1150	20	62
14	1350	235	1980	4310	1110	15700	1050	22	62
15	5320	986	18300	1880	137	778	1100	22	65
16	1390	56	210	2820	356	2900	1510	81	330
17	782	23	49	1580	96	410	2030	190	1060
18	548	12	18	3450	711	10200	1730	75	350
19	422	10	11	2500	162	1330	1600	35	151
20	357	5	4.8	4370	1080	23300	1340	25	90
21	320	5	4.3	4530	351	5130	1200	24	78
22	282	5	3.8	2650	135	966	1620	158	661
23	277	7	5.2	2600	115	807	1170	64	202
24	260	7	4.9	1900	66	339	1010	16	44
25	247	6	4.0	1400	27	102	941	13	33
26	228	4	2.5	1430	21	81	909	11	27
27	211	4	2.3	1250	19	64	4830	1330	28200
28	206	5	2.8	1510	56	264	3270	160	1630
29	196	5	2.6	---	---	---	2020	33	180
30	179	4	1.9	---	---	---	1570	32	136
31	185	4	2.0	---	---	---	1330	30	108
TOTAL	18418	---	30693.20	42486	---	73493.87	48470	---	36452
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	1260	29	99	878	30	71			
2	1180	27	86	859	29	67			
3	1090	25	74	789	26	55			
4	1010	22	60	745	20	40			
5	916	20	49	868	31	73			
6	950	28	72	1140	25	77			
7	881	21	50	1190	35	112			
8	769	16	33	1190	37	119			
9	713	12	23	1040	16	45			
10	658	10	18	979	13	34			
11	594	9	14	874	12	28			
12	568	9	14	824	11	24			
13	528	9	13	774	11	23			
14	539	9	13	763	11	23			
15	575	9	14	748	11	22			
16	600	8	13	687	11	20			
17	549	8	12	647	11	19			
18	469	8	10	621	11	18			
19	436	9	11	563	10	15			
20	412	9	10	580	10	16			
21	406	9	9.9	575	10	16			
22	403	9	9.8	562	10	15			
23	686	24	62	544	10	15			
24	1330	54	210	535	11	16			
25	818	32	71	500	11	15			
26	774	28	59	499	11	15			
27	1230	75	249	434	11	13			
28	1130	46	140	390	11	12			
29	988	31	83	364	11	11			
30	897	30	73	349	10	9.4			
31	---	---	---	320	10	8.6			
TOTAL	23359	---	1654.7	21831	---	1047.0			
PERIOD	100012	---	143435.17						

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	2822.00	67.90	0	68
DECEMBER ...	2626.00	26.50	0	26
JANUARY 1979	18418.00	30693.20	903	31600
FEBRUARY ...	42486.00	73493.87	1750	75200
MARCH	48470.00	36452.00	896	37300
APRIL	23359.00	1654.70	15	1670
MAY	21831.00	1047.00	9	1060
PERIOD.....	160012.00	143435.17	3573	146924

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDIM- ENT, SUS- PENDED (MG/L)	SEDIM- ENT 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								
11...	1630	3520	9.5	1260	12000	--	45	59
15...	1100	6030	7.0	665	10800	27	35	44
FEB								
13...	1400	2830	9.0	577	4410	40	52	66
14...	1140	4530	8.5	834	10200	32	42	53
18...	1500	6250	8.0	1780	30000	20	27	34
20...	1730	8870	8.0	1550	37100	--	35	46
MAR								
02...	1200	1500	8.0	52	211	--	--	--
APR								
06...	1215	899	16.0	24	58	--	--	--
25...	1130	772	15.0	33	69	--	--	--

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								
11...	68	76	80	85	91	99	100	--
15...	52	58	63	71	82	97	100	--
FEB								
13...	80	90	93	100	--	--	--	--
14...	64	71	75	80	86	96	100	--
18...	43	51	58	65	75	84	95	100
20...	58	73	86	96	100	--	--	--
MAR								
02...	--	--	68	74	86	98	100	--
APR								
06...	--	--	63	76	89	100	--	--
25...	--	--	86	92	98	100	--	--

SACRAMENTO RIVER BASIN

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
JAN							
15...	1130	1	5850	7.0	0	1	4
15...	1135	1	5820	7.0	0	0	1
15...	1140	1	5790	7.0	0	0	0
15...	1145	1	5760	7.0	1	3	4
15...	1150	1	5670	7.0	0	0	0
MAR							
02...	1250	1	1490	8.0	0	0	6
02...	1255	1	1490	8.0	0	0	1
02...	1300	1	1490	8.0	0	0	0
02...	1305	1	1480	8.0	0	0	1
02...	1310	1	1480	8.0	0	1	5

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JAN							
15...	24	37	51	68	86	100	--
15...	42	66	81	92	96	100	--
15...	2	8	31	56	72	82	100
15...	16	34	58	80	100	--	--
15...	0	1	3	10	22	50	100
MAR							
02...	20	65	93	98	100	--	--
02...	3	25	63	72	74	79	100
02...	5	55	91	98	99	100	--
02...	18	51	70	90	100	--	--
02...	8	14	27	46	65	79	100

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
OCT						
02...	1010	110	18.0	13	3.9	3.0
09...	1335	97	20.0	9	2.4	2.0
16...	1130	116	19.0	4	1.3	2.0
22...	0930	146	15.0	4	1.6	1.0
31...	1645	156	14.5	4	1.7	1.0
NOV						
03...	1215	70	17.0	3	.57	1.0
05...	1210	70	16.5	3	.57	1.0
07...	1700	81	17.0	66	14	5.0
09...	1230	70	15.0	7	1.3	2.0
16...	1010	74	11.5	16	3.2	3.0
18...	1110	72	11.0	2	.39	1.0
20...	1000	82	13.0	9	2.0	1.0
22...	1630	177	12.0	16	7.6	4.0
24...	1430	127	12.5	2	.69	1.0
27...	1400	104	12.0	1	.28	1.0
29...	1005	96	12.0	5	1.3	1.0
DEC						
01...	1100	95	13.0	1	.26	1.0
02...	1105	102	11.0	2	.55	1.0
06...	1145	94	8.5	0	.00	1.0
06...	1505	93	8.5	0	.00	1.0
06...	1545	93	8.5	1	.25	1.0
08...	1000	90	6.0	2	.49	1.0
09...	1300	84	8.0	4	.91	1.0
10...	1130	90	9.0	2	.49	1.0
13...	0900	90	8.5	8	1.9	2.0
15...	0930	91	7.5	8	2.0	3.0
18...	1300	88	8.0	14	3.3	4.0
22...	0755	79	6.0	2	.43	2.0
23...	0930	79	5.5	2	.43	1.0
26...	0900	72	7.5	3	.58	1.0
28...	1030	72	7.5	2	.39	1.0
29...	1005	68	7.0	3	.55	2.0
31...	1030	60	5.0	4	.65	1.0

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
JAN						
01...	0900	54	5.5	3	.44	1.0
02...	1200	57	6.0	1	.15	1.0
04...	1000	63	8.0	1	.17	1.0
05...	1245	70	9.5	3	.57	2.0
05...	1345	70	9.5	4	.76	1.0
08...	1300	121	8.0	18	5.9	5.0
09...	1210	185	8.5	38	19	7.0
09...	1220	187	8.5	33	17	7.0
09...	1230	188	8.5	43	22	7.0
10...	1200	179	9.0	11	5.3	4.0
11...	1000	3720	9.0	1840	18500	850
11...	1400	4420	10.0	1270	15200	550
11...	1630	3520	9.5	1260	12000	450
11...	1730	3260	9.5	1310	11500	450
12...	1200	1330	9.5	172	618	95
12...	1430	1190	9.5	180	578	90
13...	1100	662	8.0	42	75	45
13...	1400	569	8.0	49	75	30
14...	1100	719	7.5	94	182	55
14...	1240	818	7.5	96	212	55
15...	0910	6960	7.0	814	15300	300
15...	1100	6030	7.0	665	10800	240
15...	1105	6030	7.0	746	12100	240
15...	1300	5120	7.0	509	7040	100
16...	1100	1360	7.0	63	231	45
16...	1245	1270	7.0	54	185	30
17...	0930	803	7.0	24	52	25
17...	1100	787	7.0	22	47	22
18...	1200	539	8.5	12	17	14
18...	1330	521	8.5	12	17	14
19...	0900	442	7.5	8	9.5	9.0
19...	1120	420	7.5	15	17	8.0
20...	1200	354	9.0	4	3.8	6.0
20...	1530	339	9.0	6	5.5	5.0
21...	1130	320	8.5	5	4.3	4.0
22...	1545	282	8.5	5	3.8	3.0
23...	0900	278	6.0	12	9.0	3.0
23...	1200	275	6.5	11	8.2	3.0
24...	1100	261	7.5	8	5.6	2.0
24...	1300	257	7.5	6	4.2	2.0
25...	1200	247	7.5	6	4.0	2.0
26...	1000	230	5.0	3	1.9	2.0
27...	1015	210	5.0	4	2.3	2.0
28...	0900	207	6.0	5	2.8	2.0
29...	0900	197	5.0	6	3.2	2.0
30...	0930	179	5.5	4	1.9	1.0
31...	1030	165	6.0	4	1.8	1.0
FEB						
01...	1000	185	5.0	2	1.0	1.0
01...	1115	185	7.5	3	1.5	2.0
02...	1200	174	7.0	3	1.4	2.0
03...	1145	165	7.5	6	2.7	1.0
04...	1600	152	10.0	3	1.2	1.0
05...	1530	163	10.5	6	2.6	1.0
06...	1050	155	9.5	2	.84	1.0
07...	1000	155	10.0	3	1.3	1.0
08...	1400	149	10.0	2	.80	1.0
09...	1300	146	10.0	2	.79	1.0
10...	1330	146	10.0	3	1.2	1.0
11...	1300	152	10.5	6	2.5	2.0
12...	1200	163	10.0	17	7.5	2.0
13...	1000	811	9.0	128	280	45
13...	1100	1140	9.0	130	400	50
13...	1400	2830	9.0	577	4410	210
14...	1135	4420	8.5	834	9950	290
14...	1140	4420	8.5	703	8390	280
14...	1145	4400	8.5	698	8290	280
14...	1500	3720	9.0	376	3780	210
14...	1630	3420	9.0	380	3510	210
15...	1100	1730	7.0	98	458	70
15...	1400	1520	7.0	97	398	55
16...	0900	2810	8.0	283	2150	70
16...	1230	3150	9.0	194	1650	120
16...	1330	3110	9.0	213	1790	130
17...	1155	1560	9.0	75	316	40
17...	1300	1520	9.0	79	324	35
18...	1400	5520	8.0	1540	23000	400
18...	1430	5880	8.0	1380	21900	290
18...	1500	6250	8.0	1780	30000	340
19...	1330	2180	9.0	108	636	70
19...	1430	2150	9.0	94	546	65
20...	1630	7400	8.0	1580	31600	400
20...	1700	8630	8.0	1560	36400	400

SACRAMENTO RIVER BASIN

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
FEB						
20...	1715	8730	8.0	1440	33900	450
20...	1730	8870	8.0	1550	37100	450
21...	1200	4980	9.0	206	2770	120
21...	1345	4530	8.0	206	2520	110
22...	1100	2330	8.5	67	421	45
22...	1230	2380	8.5	70	450	45
23...	1000	2600	8.0	144	1010	70
23...	1100	2470	8.0	80	534	50
23...	1230	2400	8.5	84	544	50
23...	1330	2310	8.5	88	549	55
24...	1200	1800	11.0	51	248	21
24...	1325	1750	11.0	47	222	22
24...	1400	1740	11.0	50	235	22
25...	1425	1340	10.0	26	94	12
25...	1545	1340	10.0	25	90	13
26...	1600	1440	11.0	17	66	10
27...	1400	1180	12.0	19	61	11
28...	1500	1200	10.0	25	81	10
28...	1530	1320	10.0	27	96	10
28...	1600	1290	10.0	34	118	12
MAR						
01...	1500	1990	11.0	84	451	40
01...	1530	1990	11.0	78	419	45
02...	1200	1500	8.0	52	211	22
02...	1205	1500	8.0	50	202	20
03...	1545	1200	8.5	15	49	9.0
03...	1650	1190	8.5	15	48	10
05...	1300	1010	13.5	24	65	13
05...	1435	1020	13.5	22	61	12
07...	1400	1760	15.0	166	789	75
07...	1430	1760	15.0	171	813	75
07...	1500	1770	15.0	165	789	75
07...	1530	1770	15.0	168	803	75
09...	1230	1550	14.0	66	276	30
09...	1500	1530	14.0	58	240	28
12...	1600	1180	16.0	18	57	10
13...	1800	1080	16.0	18	52	8.0
16...	1000	1530	10.0	85	351	35
16...	1145	1510	10.0	79	322	36
16...	1345	1470	10.0	81	321	36
17...	1130	2200	11.0	278	1650	130
17...	1300	2080	11.0	294	1650	120
19...	1030	1640	12.0	31	137	15
19...	1300	1520	12.0	32	131	16
22...	1130	1530	13.0	249	1030	110
22...	1230	1530	13.0	243	1000	100
26...	0900	907	13.0	12	29	6.0
26...	1115	787	13.0	10	21	5.0
27...	0905	2940	11.5	1510	12000	500
27...	1100	3340	11.5	1460	13200	500
27...	1130	3500	11.5	1490	14100	500
27...	1200	3670	11.5	1510	15000	500
29...	1100	2030	13.0	34	186	15
29...	1500	1980	14.0	32	171	15
30...	1100	1620	13.0	33	144	14
30...	1200	1620	13.0	31	136	13
APR						
01...	1200	1260	15.0	7	24	6.0
02...	1400	1180	15.0	18	57	9.0
06...	1215	908	16.0	24	59	6.0
06...	1220	933	16.0	25	63	6.0
09...	1100	712	15.0	13	25	6.0
09...	1200	712	15.0	11	21	6.0
09...	1300	705	15.0	13	25	5.0
11...	0900	594	13.5	11	18	4.0
11...	1030	594	13.5	8	13	4.0
16...	1230	610	15.0	8	13	4.0
19...	1200	436	15.0	9	11	3.0
25...	1130	772	15.0	33	69	17
25...	1135	772	15.0	30	63	15
25...	1140	772	15.0	31	65	15
MAY						
02...	1400	834	19.0	20	45	9.0
03...	1215	779	19.5	25	53	15
07...	0900	1160	15.5	10	31	4.0
25...	1000	492	23.0	131	174	95
25...	1100	492	23.0	127	169	95
31...	0900	325	20.0	10	8.8	4.0
JUN						
02...	0915	289	20.0	5	3.9	2.0
08...	0910	210	19.0	5	2.8	2.0
08...	0915	210	19.0	5	2.8	2.0

11376550 BATTLE CREEK BELOW COLEMAN FISH HATCHERY, NEAR COTTONWOOD, CA

LOCATION.--Lat 40°23'54", long 122°08'43", in SW¼NE¼ sec.1, T.29 N., R.3 W., Shasta County, Hydrologic Unit 18020101, U.S. Fish and Wildlife service land, on right bank 3.7 mi (6.0 km) downstream from Spring Branch, 5.7 mi (9.2 km) upstream from mouth, and 7.0 mi (11.3 km) east of Cottonwood.

DRAINAGE AREA.--357 mi² (925 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year. October 1940 to September 1961 at site 0.6 mi (1.0 km) upstream published as "near Cottonwood"; low-flow records not equivalent owing to Coleman Fish Hatchery diversion.

GAGE.--Water-stage recorder. Altitude of gage is 415 ft (126 m), from topographic map.

REMARKS.--Records good. Flow regulated by four small powerplants, several small reservoirs, and Coleman Fish Hatchery. Coleman Fish Hatchery diverts from 50 ft³/s (1.42 m³/s) to 90 ft³/s (2.55 m³/s) which is returned above the station. At times, 10 ft³/s (0.28 m³/s) diverted above station for irrigation. Maximum flows considered equivalent to former station, Battle Creek near Cottonwood.

AVERAGE DISCHARGE.--18 years, 506 ft³/s (14.33 m³/s), 366,600 acre-ft/yr (452 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s (688 m³/s) Jan. 24, 1970, gage height, 14.75 ft (4.496 m), from rating curve extended above 4,200 ft³/s (119 m³/s) on basis of slope-area measurement of peak flow; minimum since 1961, 52 ft³/s (1.47 m³/s) Aug. 8, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 15.8 ft (4.82 m) Dec. 11, 1937, from floodmarks at former site and datum, discharge, 35,000 ft³/s (991 m³/s) by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 14	0445	*4,990	141	6.89	2.100
Feb. 21	1115	2,720	77.0	4.92	1.500
Feb. 28	2030	3,170	89.8	5.36	1.634

Minimum daily, 212 ft³/s (6.00 m³/s) Oct. 15.

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	231	218	280	246	269	1400	505	739	479	276	238	238
2	228	220	289	245	265	626	482	596	472	274	233	241
3	226	222	271	249	266	549	468	577	454	274	235	236
4	228	224	270	249	266	506	464	597	442	272	232	225
5	226	234	273	250	268	467	473	790	476	268	232	231
6	226	238	269	250	268	457	490	769	485	266	231	230
7	225	226	262	256	269	467	493	946	455	264	229	228
8	226	223	260	388	268	474	476	764	422	260	227	224
9	226	240	258	387	267	478	512	678	402	260	225	227
10	228	241	263	317	269	476	480	588	387	259	226	227
11	220	274	258	546	276	473	473	560	383	245	225	228
12	229	283	255	512	287	476	475	570	388	256	223	231
13	224	280	256	392	1760	480	470	595	392	267	224	234
14	221	283	250	643	2650	491	472	633	372	254	227	236
15	212	276	251	1050	759	576	477	667	371	254	231	233
16	216	273	252	449	1370	748	495	703	347	254	227	233
17	220	267	257	341	614	591	529	683	342	249	227	231
18	220	268	276	319	1340	539	490	701	328	250	227	233
19	220	269	258	302	1010	521	459	722	330	249	225	231
20	221	305	250	294	981	485	439	742	310	246	225	234
21	223	333	250	290	1510	472	433	745	302	244	226	229
22	220	330	254	283	832	473	431	750	296	244	227	232
23	216	285	254	278	778	459	448	710	291	252	230	229
24	214	272	250	280	524	451	517	655	313	240	228	233
25	216	269	254	278	454	457	476	634	304	245	223	251
26	216	267	253	271	466	461	468	645	307	242	226	243
27	218	265	251	270	427	670	581	640	296	240	223	242
28	217	268	248	272	1110	740	521	607	293	241	225	241
29	216	269	250	265	---	594	495	545	286	239	237	237
30	216	279	247	262	---	656	510	511	281	240	237	240
31	216	---	246	270	---	555	---	493	---	237	257	---
TOTAL	6861	7901	8015	10704	19823	17268	14502	20555	11006	7861	7144	7008
MEAN	221	263	259	345	708	557	483	663	367	254	230	234
MAX	231	333	289	1050	2650	1400	581	946	485	276	273	251
MIN	212	218	246	245	265	451	431	493	281	237	223	224
AC-FT	13610	15670	15900	21230	39320	34250	28760	40770	21830	15590	14170	13900
CAL YR 1978	TOTAL	202332	MEAN 554	MAX 3840	MIN 212	AC-FT 401300						
WTR YR 1979	TOTAL	138648	MEAN 380	MAX 2650	MIN 212	AC-FT 275000						

SACRAMENTO RIVER BASIN

11376550 BATTLE CREEK BELOW COLEMAN FISH HATCHERY, NEAR COTTONWOOD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-79.

CHEMICAL ANALYSES: Water years 1962-66.

WATER TEMPERATURES: Water years 1966-79 (discontinued).

SEDIMENT RECORDS: Water years 1962-70.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1965 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from December 1965 to January 1979.

REMARKS.--Clock stopped Dec. 20-21, 30, Jan 1; range in temperature, 5.5°C to 7.0°C, 5.5°C to 6.5°C, respectively.

COOPERATION.--Temperature record furnished by U.S. Fish and Wildlife Service.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 23.0°C July 20, 1971, July 23, 24, 1975; minimum recorded, 2.0°C Dec. 23, 24, 1968.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 15.0°C Oct. 1-3; minimum recorded, 4.5°C Dec. 8.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

LOCATION.--Lat 40°17'19", long 122°11'08", in NW¼NE¼ sec.15, T.28 N., R.3 W., Tehama County, Hydrologic Unit 18020103, on left bank 2.7 mi (4.3 km) upstream from Bend Bridge, and 8.1 mi (13.0 km) northeast of Red Bluff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1879-88 annual observed maximums only, published in WSP 1315-A. January 1892 to current year. Monthly discharges only for some periods and yearly estimates for some incomplete years, published in WSP 1315-A. Published as "at Red Bluff" 1894-96, as "at Jellys Ferry" 1895-1902, and as "near Red Bluff" 1903-68.

REVISED RECORDS.--WSP 861: 1904, 1907, 1909, 1914-15, 1927-28. WSP 1315-A: 1941(M), 1916(M), 1918(M).
WSP 1931: Drainage area. WDR CA-69-2: 1965.

GAGE.--Water-stage recorder. Datum of gage is 285.77 ft (87.103 m) National Geodetic Vertical Datum of 1929.
See WSP 2131 for history of changes prior to September 1968.

REMARKS.--Records excellent. Flow regulated by Shasta Lake (station 11370000) since Dec. 30, 1943. Diversions, in addition to those on tributaries, for irrigation of 22,000 acres (8,900 ha²) between stations at Keswick and above Bend Bridge. Transbasin diversions from Trinity River to Whiskeytown Lake via Judge Francis Carr powerplant (station 11525430) started in April 1963.

AVERAGE DISCHARGE (prior to transbasin diversion from Trinity River).--71 years (water years 1892-1962), 11,400 ft³/s (323 m³/s), 8,253,000 acre-ft/yr (10.2 km³/yr); 17 years (water years 1963-79), 13,260 ft³/s (375.5 m³/s), 9,607,000 acre-ft/yr (11.8 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291,000 ft³/s (8,240 m³/s) Feb. 28, 1940, gage height, 38.9 ft (11.86 m) site and datum then in use, from rating curve extended above 170,000 ft³/s (4,810 m³/s) on basis of velocity-area studies; minimum (water years 1892-1979). 2,000 ft³/s (56.6 m³/s) Mar. 29, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,200 ft³/s (1,365 m³/s) Feb. 14, gage height, 17.71 ft (5.398 m); minimum daily, 4,230 ft³/s (120 m³/s) Feb. 10.

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	6410	5830	6880	6670	5540	17000	11400	9750	9080	14100	13100	7980
2	6480	5760	6830	6890	5130	9280	11100	9220	8960	14700	13100	7950
3	6340	5770	6790	6710	4880	7980	9610	8750	8930	14700	13100	7710
4	6330	6520	6780	6730	4810	7790	7440	8650	9740	14700	13100	7570
5	6380	6550	6800	6380	4790	7450	7280	10000	10300	14600	13100	7220
6	6360	6590	6810	5930	4580	6810	7300	11600	10400	14400	13100	7020
7	6360	6580	6740	5960	4390	6700	7320	11900	10500	14600	12700	6730
8	6500	6540	6760	6630	4360	6980	7160	10300	10700	14700	11900	6500
9	6420	6520	6750	8220	4290	6970	7100	8490	10900	14700	11500	6500
10	6440	6510	6780	7110	4230	6740	6420	8040	10900	14300	11600	6500
11	6560	6490	6770	21500	4250	6490	5490	8840	10900	14200	11000	6250
12	6540	6580	6770	14100	4350	6290	5410	9830	10900	14100	10200	6120
13	6460	6610	6770	10800	19500	6150	5270	9930	10900	14000	9890	6280
14	6440	6740	6800	15700	29400	6060	5950	9730	10900	14000	9880	6070
15	6440	6670	6750	31100	9790	5950	6890	9600	10900	14000	9230	6070
16	6410	6620	6710	14400	15300	6680	7230	9530	10800	14000	8620	5830
17	6440	6750	6800	10300	9050	7930	7690	9450	10800	14000	8560	5660
18	6480	6770	6920	8070	15900	8070	7590	9360	10800	14000	8610	5660
19	6440	6780	6780	7690	13100	10200	7150	9320	10800	14100	8590	5620
20	6450	7120	6730	7490	16500	7690	6980	9340	10800	14000	8650	5670
21	6520	7390	6770	7370	26200	6810	7570	9300	10800	14000	8670	5690
22	6540	7180	6740	7300	15600	7180	8430	9300	10800	14000	8680	5700
23	6530	6980	6750	6700	16800	6760	10000	9220	10800	14100	8650	5690
24	6440	6880	6720	6300	11200	6260	12700	9110	10800	14100	8360	5680
25	6410	6820	6720	6340	8390	6020	11100	9070	10800	13700	8080	5780
26	6400	6800	6760	6280	8980	5890	9650	9090	10800	13600	8020	5770
27	6430	6830	6750	6120	7740	7980	9750	8980	11800	13500	7830	5780
28	6400	6850	6710	6120	11200	16100	9300	8850	12800	13600	7860	5770
29	6400	6820	6680	6090	---	13700	8920	8730	12800	13600	7960	5750
30	6200	6830	6690	6060	---	13100	8790	8620	12800	13600	8080	5750
31	5760	---	6670	5810	---	12000	---	9080	---	13300	8050	---
TOTAL	198710	199680	209680	278900	290250	257010	243990	290980	323910	437000	309770	188270
MEAN	6410	6656	6764	8997	10370	8291	8133	9386	10800	14100	9993	6

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected 2.7 mi (4.3 km) downstream from gaging station.

PERIOD OF RECORD.--Water years 1955 to current year.

CHEMICAL ANALYSES: Water years 1955 to current year. Reported as "Sacramento River at Bend" May 1955 to September 1973; as Sacramento River at Bend Bridge (sta 11377200) October 1973 to September 1976.

WATER TEMPERATURES: Water years 1955 to current year (water years 1955-63 reported as station 11377200 and water years 1964-70 reported as station 11378000).

SEDIMENT RECORDS: Water years 1958-70 (water years 1958-67 reported as station 11378500 and water years 1968-70 reported as station 11377200), 1977 to current year.

TURBIDITY: Water years 1977 to current year.

PERIOD OF DAILY RECORD:

CHEMICAL ANALYSES: May 1955 to September 1963.

SPECIFIC CONDUCTANCE: May 1955 to September 1963.

WATER TEMPERATURES: May 1955 to current year.

SEDIMENT RECORDS: October 1957 to September 1970, January 1977 to current year (storm season record only for water years 1977, 1979).

INSTRUMENTATION.--Temperature recorder since March 1970.

REMARKS.--Unpublished records of specific conductance available in files of district office.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 19.0°C on several days in 1976; minimum recorded, 4.0°C Dec. 17, 1972, Jan. 9, 10, 1973.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,470 mg/L Jan. 24, 1970; minimum daily mean, 1 mg/L on many days in 1964, 1967, 1978.

SEDIMENT DISCHARGE: Maximum daily, 1,200,000 tons (1,090,000 metric tons) Jan. 24, 1970; minimum daily, 12 tons (11 metric tons) Dec. 8-10, 15, 1964.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 16.0°C Sept. 16, 17; minimum recorded, 7.0°C on several days during January and February.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 917 mg/L Feb. 14; minimum daily mean, 2 mg/L Nov. 17, 26-28.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 92,300 tons (83,700 metric tons) Feb. 14; minimum daily, 36 tons (33 metric tons) Nov. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 30...	0905	6500	121	7.3	11.0	10.1	--	--	--
NOV 28...	1010	6860	125	7.3	10.5	11.3	--	--	--
DEC 27...	0825	6680	130	7.2	8.0	11.2	--	--	--
JAN 29...	0720	6140	143	7.4	6.0	11.5	--	--	--
FEB 26...	1010	9760	142	7.5	10.0	10.9	--	--	--
MAR 27...	1400	6490	151	7.6	12.0	10.5	--	--	--
APR 24...	1415	13900	151	7.6	12.5	10.3	--	--	--
MAY 30...	0950	8600	128	7.3	12.5	11.0	--	--	--
JUN 27...	0825	11200	132	7.3	12.0	10.4	48	0	11
JUL 25...	0800	13700	131	7.3	12.5	10.2	--	--	--
AUG 22...	0825	8690	127	7.3	14.0	10.0	--	--	--
SEP 26...	0915	5800	132	7.3	14.0	9.8	--	--	--

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	ALKA- LINITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT 30...	--	--	--	--	--	2	--	--	--
NOV 28...	--	--	--	--	--	4	--	--	--
DEC 27...	--	--	--	--	--	2	--	--	--
JAN 29...	--	--	--	--	--	2	--	--	--
FEB 26...	--	--	--	--	--	10	--	--	--
MAR 27...	--	--	--	--	--	30	--	--	--
APR 24...	--	--	--	--	--	119	--	--	--
MAY 30...	--	--	--	--	--	3	--	--	--
JUN 27...	5.0	7.0	.4	48	4.0	3	.06	.00	0
JUL 25...	--	--	--	--	--	5	--	--	--
AUG 22...	--	--	--	--	--	4	--	--	--
SEP 26...	--	--	--	--	--	6	--	--	--

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	12.0	11.5	11.0	10.5	8.5	8.0	8.0	7.5	9.5	8.0
2	---	---	12.0	11.5	10.5	10.0	9.0	8.5	8.0	7.0	9.5	8.5
3	---	---	12.5	11.5	10.0	9.5	9.5	9.0	8.0	7.0	8.5	8.5
4	---	---	13.0	12.0	10.0	9.5	10.0	9.5	9.0	8.0	10.0	8.0
5	13.5	13.0	13.0	12.0	10.0	9.5	10.0	9.5	9.5	8.5	11.0	10.5
6	14.0	13.0	13.0	12.0	9.5	8.5	10.0	9.5	9.5	8.5	12.0	11.0
7	13.5	13.0	13.0	12.0	9.0	8.0	9.5	9.5	10.0	9.0	12.5	11.5
8	13.5	13.0	13.0	12.0	8.5	8.0	9.5	9.5	10.0	9.0	12.5	11.5
9	13.5	12.5	13.0	11.0	9.5	8.5	9.5	9.5	10.0	9.0	12.5	11.5
10	13.5	13.0	11.0	10.0	10.0	9.0	10.0	9.5	9.5	9.0	12.0	11.0
11	14.0	13.0	10.0	9.5	10.0	10.0	10.0	9.5	9.5	9.0	12.0	11.5
12	14.5	13.5	10.0	9.5	10.0	10.0	10.0	9.5	9.0	9.0	12.5	11.5
13	14.0	13.5	11.0	10.0	10.0	9.5	9.5	8.5	9.0	9.0	12.5	11.5
14	14.0	13.0	11.0	10.0	10.0	9.5	9.0	8.0	9.0	8.5	12.5	11.0
15	14.0	13.0	11.0	10.0	9.5	9.0	8.5	8.0	9.0	7.5	11.0	10.5
16	14.0	13.5	11.0	11.0	9.5	8.5	9.0	8.0	8.5	7.0	10.5	10.0
17	13.5	13.0	11.5	10.5	9.0	9.0	9.0	8.0	8.0	8.0	11.0	9.5
18	14.0	13.0	11.5	11.0	9.5	9.0	9.0	8.5	8.0	7.5	11.0	10.5
19	13.5	13.0	11.5	11.0	9.0	8.0	9.0	8.5	8.5	7.0	11.5	9.5
20	13.0	12.5	11.5	11.0	8.5	7.5	9.0	8.5	8.5	7.5	12.0	11.0
21	13.0	12.5	11.5	11.0	8.5	8.0	9.5	8.5	8.5	7.5	---	---
22	13.0	12.5	11.5	11.0	8.5	8.5	9.5	8.5	8.5	7.5	---	---
23	13.0	12.0	11.0	10.5	9.0	8.5	9.0	8.0	8.0	7.0	---	---
24	13.0	12.0	11.0	10.5	9.0	8.5	8.5	8.0	9.0	8.0	---	---
25	13.0	12.0	11.0	10.5	9.0	8.5	8.0	7.5	9.0	9.0	---	---
26	13.0	12.5	10.5	10.0	9.0	8.5	8.0	7.5	10.0	9.0	---	---
27	13.0	12.0	10.5	10.0	9.0	8.5	8.0	7.5	10.0	9.0	---	---
28	13.0	12.0	11.0	10.5	9.0	8.5	8.0	7.5	9.5	9.0	---	---
29	13.0	12.0	11.0	10.5	9.0	8.0	7.5	7.0	---	---	---	---
30	12.0	11.0	11.0	10.5	8.0	7.5	8.0	7.5	---	---	---	---
31	11.5	11.0	---	---	8.5	7.5	8.0	8.0	---	---	---	---
MONTH	14.5	11.0	13.0	9.5	11.0	7.5	10.0	7.0	10.0	7.0	---	---

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1				5830	5	79	6880	4	74			
2				5760	5	78	6830	5	92			
3				5770	5	78	6790	5	92			
4				6520	6	106	6780	5	92			
5				6550	5	88	6800	5	92			
6				6590	4	71	6810	5	92			
7				6580	3	53	6740	6	109			
8				6540	4	71	6760	6	110			
9				6520	5	88	6750	6	109			
10				6510	5	88	6780	7	128			
11				6490	4	70	6770	9	165			
12				6580	3	53	6770	14	256			
13				6610	5	89	6770	16	292			
14				6740	3	55	6800	12	220			
15				6670	4	72	6750	6	109			
16				6620	3	54	6710	6	109			
17				6750	2	36	6800	6	110			
18				6770	3	55	6920	6	112			
19				6780	12	220	6780	6	110			
20				7120	14	269	6730	7	127			
21				7390	6	120	6770	7	128			
22				7180	4	78	6740	6	109			
23				6980	4	75	6750	7	128			
24				6880	5	93	6720	7	127			
25				6820	4	74	6720	7	127			
26				6800	2	37	6760	7	128			
27				6830	2	37	6750	8	146			
28				6850	2	37	6710	9	163			
29				6820	3	55	6680	10	180			
30				6830	3	55	6690	10	181			
31				---	---	---	6670	9	162			
TOTAL				149680	---	2434	209680	---	4179			

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	6670	9	162	5540	5	75	17000	137	7510
2	6890	9	167	5130	5	69	9280	19	476
3	6710	9	163	4880	5	66	7980	18	388
4	6730	9	164	4810	5	65	7790	17	358
5	6380	8	138	4790	5	65	7450	17	342
6	5930	8	128	4580	5	62	6810	18	331
7	5960	7	113	4390	5	59	6700	18	326
8	6630	9	161	4360	5	59	6980	19	358
9	8220	23	510	4290	5	58	6970	22	414
10	7110	27	518	4230	5	57	6740	18	328
11	21500	299	19400	4250	5	57	6490	15	263
12	14100	116	4750	4350	10	117	6290	15	255
13	10800	38	1110	19500	545	42900	6150	14	232
14	15700	125	6350	29400	917	92300	6060	13	213
15	31100	410	40900	9790	154	4070	5950	11	177
16	14400	54	2100	15300	116	4910	6680	16	289
17	10300	16	445	9050	42	1030	7930	22	471
18	8070	14	305	15900	128	7720	8070	32	697
19	7690	13	270	13100	96	3400	10200	62	1710
20	7490	12	243	16500	135	7940	7690	50	1040
21	7370	11	219	26200	261	19100	6810	47	864
22	7300	11	217	15600	136	5730	7180	50	969
23	6700	10	181	16800	112	5630	6760	54	986
24	6300	9	153	11200	75	2270	6260	50	845
25	6340	9	154	8390	52	1180	6020	47	764
26	6280	8	136	8980	60	1450	5890	45	716
27	6150	8	133	7740	40	836	7980	83	1790
28	6120	8	132	11200	69	3890	16100	83	3750
29	6090	7	115	---	---	---	13700	60	2220
30	6060	6	98	---	---	---	13100	58	2050
31	5810	6	94	---	---	---	12000	56	1810
TOTAL	278900	---	79729	290250	---	205165	257010	---	32942
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	11400	38	1170	9750	16	421			
2	11100	26	779	9220	16	398			
3	9610	20	519	8750	17	402			
4	7440	18	362	8650	23	537			
5	7280	16	314	10000	45	1220			
6	7300	14	276	11600	30	940			
7	7320	13	257	11900	16	514			
8	7160	13	251	10300	14	389			
9	7100	12	230	8490	11	252			
10	6420	11	191	8040	11	239			
11	5490	10	148	8840	11	263			
12	5410	8	117	9830	16	425			
13	5270	6	85	9930	16	429			
14	5950	6	96	9730	14	368			
15	6890	7	130	9600	11	285			
16	7230	8	156	9530	9	232			
17	7690	8	166	9450	7	179			
18	7590	7	143	9360	6	152			
19	7150	7	135	9320	5	126			
20	6980	6	113	9340	3	76			
21	7570	5	102	9300	4	100			
22	8430	8	182	9300	6	151			
23	10000	16	432	9220	9	224			
24	12700	22	754	9110	14	344			
25	11100	16	480	9070	21	514			
26	9650	14	365	9090	16	393			
27	9750	15	395	8980	9	218			
28	9300	16	402	8850	9	215			
29	8920	16	385	8730	10	236			
30	8790	16	380	8620	10	233			
31	---	---	---	9080	10	245			
TOTAL	243990	---	9515	290980	---	10720			
PERIOD	1770490	---	344684						

SACRAMENTO RIVER BASIN

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER ...	199680.00	2434.00	281	2720
DECEMBER ...	209680.00	4179.00	303	4480
JANUARY 1979	278900.00	79729.00	1640	81400
FEBRUARY ...	290250.00	205165.00	2400	208000
MARCH	257010.00	32942.00	905	33800
APRIL	243990.00	9515.00	639	10200
MAY	290980.00	10720.00	904	11600
PERIOD.....	1770490.00	344684.00	7072	352200

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN 12...	1600	12800	9.5	52	1400	--	--	--
FEB 21...	1140	26900	8.0	241	17500	26	31	38
MAR 01...	1140	16200	8.0	127	5560	--	--	--

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
JAN 12...	--	--	73	81	93	100	--
FEB 21...	44	52	56	71	86	97	100
MAR 01...	--	--	68	78	88	98	100

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
OCT						
03...	0940	6340	14.0	7	120	3.0
09...	1000	6480	13.5	7	122	3.0
16...	1045	6450	14.0	6	104	2.0
23...	0930	6520	13.0	5	88	2.0
NOV						
01...	1030	5930	12.0	5	80	2.0
03...	0945	5710	12.5	5	77	2.0
04...	1020	6500	13.0	4	70	1.0
06...	0910	6610	13.0	6	107	1.0
07...	0915	6580	12.0	3	53	2.0
07...	1330	6540	12.0	3	53	2.0
07...	1430	6540	13.0	3	53	3.0
08...	1000	6540	12.0	6	106	3.0
10...	0930	6530	11.0	5	88	2.0
12...	0900	6540	10.0	3	53	3.0
12...	1130	6540	10.0	2	35	2.0
12...	1500	6570	10.0	3	53	2.0
13...	0915	6610	10.0	7	125	3.0
13...	1130	6630	10.0	8	143	2.0
14...	0928	6710	10.0	3	54	2.0
15...	1000	6690	10.0	4	72	3.0
17...	1000	6750	10.5	2	36	2.0

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
NOV						
18...	0930	6800	11.0	3	55	2.0
19...	1430	6800	11.0	15	275	7.0
20...	1112	7050	11.0	18	343	8.0
20...	1500	7210	11.0	12	234	2.0
21...	0928	7340	11.0	5	99	3.0
21...	1045	7350	11.0	4	79	3.0
21...	1415	7360	11.0	5	99	4.0
22...	0915	7220	11.0	3	58	4.0
22...	1400	7150	11.0	6	116	3.0
24...	0920	6930	10.5	6	112	2.0
26...	1000	6810	10.0	2	37	2.0
28...	0918	6860	10.5	3	56	2.0
30...	0905	6830	10.5	3	55	2.0
DEC						
01...	0900	6840	10.5	4	74	3.0
01...	1150	6860	10.5	5	93	3.0
01...	1300	6870	11.0	5	93	3.0
02...	0900	6870	10.0	6	111	4.0
05...	0857	6780	9.5	5	92	2.0
07...	0918	6790	8.5	6	110	4.0
09...	0845	6750	8.5	6	109	4.0
11...	0929	6780	10.0	10	183	3.0
13...	1000	6830	9.5	19	350	3.0
15...	0900	6750	9.5	6	109	3.0
18...	1015	7000	9.5	6	113	3.0
20...	0945	6730	8.5	7	127	3.0
22...	0840	6740	8.5	6	109	3.0
27...	1000	6700	9.0	8	145	2.0
29...	0845	6720	9.0	11	200	4.0
JAN						
02...	0845	6990	8.5	8	151	3.0
02...	1015	6970	8.5	9	169	3.0
04...	1010	6870	9.5	9	167	2.0
06...	0930	5940	9.5	9	144	2.0
08...	0850	6140	9.5	4	66	2.0
09...	0918	8670	9.5	27	632	13
09...	1120	8610	9.5	23	535	12
09...	1420	8490	9.5	27	619	13
10...	0845	6790	9.5	19	348	19
10...	1020	6730	9.5	20	363	8.0
10...	1415	6700	9.5	26	470	11
11...	0910	23000	9.5	376	23400	190
11...	1500	27600	9.5	429	32000	450
12...	1320	13400	9.5	95	3440	36
12...	1600	12800	9.5	52	1800	23
12...	1605	25100	9.5	52	3520	24
14...	1150	14000	9.0	68	2570	22
14...	1500	20700	9.0	65	3630	34
15...	0845	40600	8.0	660	72300	160
15...	1200	38600	8.0	688	71700	160
15...	1430	33600	8.0	34	3080	10
16...	0905	14700	8.5	38	1510	22
16...	1045	14300	8.5	53	2050	15
16...	1415	13500	8.5	10	364	6.0
17...	0920	10600	8.5	7	200	7.0
18...	1420	8020	9.0	20	433	5.0
20...	0845	7570	8.5	7	143	4.0
21...	0900	7440	8.5	22	442	10
22...	0830	7390	8.5	6	120	4.0
23...	1000	7080	9.0	10	191	5.0
24...	0945	6310	8.5	6	102	3.0
25...	0845	6400	8.0	6	104	4.0
26...	0930	6260	8.0	8	135	5.0
27...	0935	6160	8.0	8	133	4.0
29...	0830	6140	7.5	16	265	5.0
30...	0850	6100	8.0	62	1020	20
31...	0830	5980	8.0	11	178	5.0
31...	1100	5840	8.0	3	47	3.0
31...	1430	5640	8.0	4	61	3.0
FEB						
01...	0830	5580	8.0	6	90	3.0
02...	0845	5210	7.0	16	225	4.0
02...	0945	5210	8.0	11	155	4.0
02...	1220	5360	7.0	5	72	3.0
02...	1330	5320	7.0	4	57	3.0
03...	1030	4880	8.0	4	53	3.0
04...	0800	4800	8.0	3	39	3.0
05...	1000	4800	8.5	14	181	4.0
07...	1530	4380	10.0	13	154	3.0
09...	1400	4290	9.0	14	162	3.0
10...	1000	4220	9.5	5	57	3.0
11...	1100	4250	9.0	2	23	3.0
11...	1400	4270	9.0	31	357	9.0
13...	1130	19000	9.0	409	21000	120
13...	1330	22300	9.0	149	8970	95
13...	1630	25400	9.0	703	48200	140

SACRAMENTO RIVER BASIN

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
FEB						
15...	1000	9670	9.0	170	4440	55
15...	1400	8920	9.0	138	3320	20
15...	1600	8670	9.0	95	2220	10
16...	1630	16700	8.5	50	2250	10
17...	1500	8450	8.0	36	821	31
18...	1030	8840	7.5	38	907	12
18...	1330	17000	7.5	54	2480	17
19...	1000	13000	8.0	92	3230	28
20...	1030	9270	8.5	102	2550	20
20...	1330	12100	8.5	65	2120	24
21...	0800	22500	8.0	264	16000	100
21...	1140	26900	8.0	241	17500	75
21...	1240	29000	8.5	94	7360	55
21...	1330	30200	8.5	241	19700	70
22...	1000	13000	8.0	124	4350	60
22...	1300	12700	8.0	265	9090	85
23...	1000	17600	8.0	106	5040	55
23...	1300	15200	8.0	82	3370	40
23...	1600	13600	8.0	82	3010	45
24...	1200	11200	9.0	84	2540	10
25...	1900	7940	9.0	51	1090	10
28...	1200	7210	9.0	22	428	8.0
28...	1500	7400	9.0	15	300	21
MAR						
01...	0725	19600	8.0	185	9790	60
01...	1140	16200	8.0	127	5560	50
01...	1300	15100	8.0	100	4080	45
02...	0800	9500	8.5	14	359	4.0
02...	1200	9100	8.5	16	393	11
03...	0800	7990	8.5	19	410	6.0
03...	1100	7870	8.5	22	467	6.0
03...	1400	7870	8.5	14	297	7.0
04...	1500	7800	9.0	10	211	5.0
05...	1530	7410	10.5	31	620	6.0
06...	1500	6970	11.0	30	565	13
07...	1600	6930	12.0	35	655	15
08...	0830	7100	11.5	5	96	3.0
08...	1200	7220	11.5	13	253	7.0
09...	1500	7210	11.5	20	389	5.0
10...	1200	6910	11.0	16	299	6.0
11...	0900	6600	11.5	19	339	5.0
12...	1245	6270	11.5	35	593	25
15...	1000	5970	11.0	7	113	4.0
15...	1600	5920	10.5	11	176	6.0
16...	1000	6410	10.0	8	138	15
16...	1300	7120	10.0	16	308	16
16...	1600	7420	10.0	19	381	5.0
17...	0900	7770	10.0	14	294	8.0
17...	1200	7510	10.0	21	426	9.0
17...	1500	7510	10.0	22	446	8.0
18...	0900	8140	10.5	20	440	7.0
18...	1200	7790	10.5	8	168	11
18...	1500	7600	10.5	44	903	15
19...	0900	10700	10.0	37	1070	14
19...	1200	10400	10.0	44	1240	13
19...	1500	9820	10.0	68	1800	10
21...	1700	6870	10.0	50	927	50
23...	1400	6830	9.0	54	996	50
24...	1500	6230	10.0	21	353	9.0
26...	0900	5890	9.0	59	938	17
26...	1200	5890	9.0	32	509	14
26...	1500	5870	9.0	32	507	13
27...	1030	6080	8.0	73	1200	32
27...	1245	6290	8.0	80	1360	35
27...	1600	7430	8.0	64	1280	33
28...	0900	14900	9.0	73	2940	33
28...	1145	15000	9.0	71	2880	33
28...	1630	15500	9.0	71	2970	32
29...	1000	13600	8.0	79	2900	31
29...	1230	13500	8.0	90	3280	35
29...	1545	13400	8.0	34	1230	17
30...	1400	13400	9.0	74	2680	13
APR						
02...	1045	11100	10.0	36	1080	5.0
02...	1410	11000	11.0	24	713	5.0
02...	1510	11000	11.5	22	653	4.0
03...	1000	9950	10.0	8	215	3.0
04...	1200	7470	11.0	6	121	4.0
05...	1600	7420	11.5	8	160	9.0
06...	0700	7360	11.5	15	298	7.0
06...	1045	7400	11.5	18	360	7.0
06...	1500	7440	11.5	30	603	8.0
07...	1200	7470	11.0	4	81	4.0
08...	1410	7340	11.5	15	297	5.0

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
APR						
09...	1100	7310	11.5	17	336	5.0
10...	1400	6250	10.5	25	422	4.0
11...	1600	5470	11.0	6	89	4.0
12...	1510	5310	11.5	3	43	3.0
13...	0730	5250	12.5	9	128	2.0
14...	1000	5640	12.5	3	46	3.0
15...	1615	7290	12.5	5	98	2.0
16...	0900	7320	11.5	4	79	3.0
16...	1410	7420	11.5	11	220	5.0
17...	1000	7690	10.5	6	125	4.0
17...	1245	7600	10.5	13	267	3.0
17...	1450	7540	10.5	8	163	4.0
18...	1800	7470	10.0	6	121	3.0
19...	1610	7290	10.0	5	98	3.0
21...	1500	7890	11.0	4	85	2.0
22...	0900	8240	11.0	7	156	4.0
22...	1300	8610	11.0	6	139	5.0
22...	1600	8760	11.0	3	71	3.0
23...	1200	10200	10.0	25	688	7.0
23...	1600	10400	10.0	14	393	8.0
24...	1230	13700	10.0	17	629	4.0
25...	0830	11100	10.0	18	539	9.0
25...	1300	11100	10.0	9	270	6.0
25...	1600	11000	10.0	13	386	4.0
26...	0915	9800	11.0	14	370	4.0
26...	1100	9560	11.0	24	619	3.0
26...	1410	9300	11.0	11	276	4.0
27...	1530	10100	11.0	36	982	8.0
28...	1000	9310	11.0	10	251	7.0
29...	1100	8960	11.5	9	218	7.0
30...	1600	8870	11.5	28	671	7.0
MAY						
01...	1000	9600	12.0	17	441	4.0
02...	0900	9280	13.0	19	476	7.0
02...	1030	9240	12.0	15	374	7.0
02...	1215	9190	13.0	17	422	7.0
02...	1545	9140	12.0	16	395	4.0
03...	1800	8740	12.5	11	260	4.0
04...	1005	8650	12.5	32	747	15
05...	1110	9260	11.0	51	1280	20
06...	0730	11900	10.5	25	803	13
06...	1105	11400	10.5	37	1140	15
06...	1700	10900	10.5	25	736	15
07...	1000	12800	11.0	10	346	6.0
07...	1200	12300	11.0	16	531	6.0
07...	1600	11800	11.0	19	605	9.0
08...	1500	9880	11.0	13	347	8.0
09...	1800	8220	11.0	8	178	4.0
10...	1005	8090	12.0	11	240	5.0
11...	1245	9970	12.5	10	269	4.0
12...	1100	9970	12.0	4	108	3.0
13...	1400	9950	12.0	18	484	3.0
14...	1330	9790	12.5	16	423	3.0
15...	0900	9630	12.5	10	260	2.0
16...	1130	9560	12.5	8	206	3.0
17...	1400	9460	12.5	8	204	4.0
18...	1330	9420	12.5	1	25	2.0
19...	1500	9390	13.0	4	101	2.0
20...	1530	9520	13.0	2	51	2.0
21...	1600	9390	13.0	6	152	2.0
22...	1600	9350	13.0	7	177	3.0
23...	1030	9300	12.5	9	226	3.0
24...	0730	9140	12.0	13	321	2.0
25...	1530	9090	12.5	26	638	4.0
26...	1610	9100	12.5	8	197	3.0
27...	1708	9080	12.5	2	49	3.0
28...	1800	8780	12.0	4	95	3.0
29...	1310	8740	11.0	5	118	3.0
30...	1600	8610	11.5	4	93	2.0
31...	1500	9330	11.5	4	101	2.0
JUN						
01...	0845	9180	13.0	12	297	2.0
01...	1130	9100	12.5	7	172	2.0
08...	1500	10800	10.5	21	612	7.0
13...	1430	10900	11.0	23	677	6.0
21...	1130	10900	11.0	15	441	2.0
27...	1730	12700	11.0	13	446	3.0
JUL						
02...	1100	14800	11.5	29	1160	4.0
03...	1530	14700	11.0	53	2100	4.0
11...	0900	14200	11.5	30	1150	3.0
20...	1430	14200	11.5	28	1070	3.0
27...	1300	13600	11.5	64	2350	3.0
31...	1230	13200	11.5	39	1390	3.0
AUG						
02...	1300	13200	12.0	16	570	3.0
03...	1030	13200	13.0	19	677	3.0
07...	0930	12600	12.0	7	238	3.0

SACRAMENTO RIVER BASIN

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
AUG						
16...	1410	8310	13.0	6	135	2.0
24...	1430	8150	13.5	4	88	2.0
31...	1200	7660	13.0	6	124	2.0
SEP						
01...	1530	7610	13.5	5	103	3.0
04...	0900	7230	14.0	5	98	2.0
04...	1200	7130	13.5	5	96	2.0
14...	1600	5600	14.5	6	91	2.0
17...	1400	5190	14.5	7	98	2.0
29...	0730	5310	14.0	4	57	2.0

11378800 RED BANK CREEK NEAR RED BLUFF, CA

LOCATION.--Lat 40°05'25", long 122°24'45", in NE¼SE¼ sec.22, T.26 N., R.5 W., Tehama County, Hydrologic Unit 18020103, on road bridge near left bank 0.1 mi (0.2 km) downstream from unnamed tributary, 1.8 mi (2.9 km) southeast of town of Red Bank, and 11 mi (18 km) southwest of Red Bluff.

DRAINAGE AREA.--89.6 mi² (232.1 km²).

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

REVISED RECORDS.--WDR CA-77-4: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 470 ft (143 m), from topographic map.

REMARKS.--Some small storage ponds and possibly some diversions for irrigation upstream.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--20 years, 47.2 ft³/s (1.337 m³/s), 34,200 acre-ft/yr (42.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s (276 m³/s) Jan. 5, 1965, gage height, 10.06 ft (3.066 m); no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,870 ft³/s (166 m³/s) Mar. 27, gage height, 9.23 ft (2.813 m); no flow for several months.

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				0	4.1	53	64	21	.90			
2				0	3.6	38	53	16	.80			
3				0	3.4	33	45	15	.80			
4				0	3.5	31	40	14	.70			
5				0	3.5	28	36	14	.70			
6				0	3.4	26	33	14	.70			
7				0	3.0	25	31	13	.50			
8				12	3.0	24	29	12	.40			
9				24	3.0	22	26	10	.20			
10				13	2.8	21	24	9.3	.10			
11				103	2.9	17	23	8.8	.10			
12				36	4.2	16	21	8.0	0			
13				19	359	15	20	7.6	0			
14				442	258	14	18	7.0	0			
15				436	230	41	17	6.1	0			
16				61	235	58	18	5.9	0			
17				25	96	46	17	5.4	0			
18				15	251	35	16	4.7	0			
19				10	141	33	15	4.3	0			
20				8.3	652	26	14	3.9	0			
21				7.5	318	22	13	3.6	0			
22				6.3	215	39	14	3.7	0			
23				5.3	128	27	23	3.7	0			
24				5.2	85	22	38	6.5	0			
25				4.8	66	20	20	4.5	0			
26				4.3	58	21	26	3.0	0			
27				4.1	45	1700	56	2.4	0			
28				4.0	49	418	29	2.0	0			
29				3.7	---	186	22	1.6	0			
30				3.7	---	107	20	1.5	0			
31		---		4.3	---	76	---	1.2	---			---
TOTAL	0	0	0	1257.5	3226.4	3240	821	233.7	5.90	0	0	0
MEAN	0	0	0	40.6	115	105	27.4	7.54	.20	0	0	0
MAX	0	0	0	442	652	1700	64	21	.90	0	0	0
MIN	0	0	0	0	2.8	14	13	1.2	0	0	0	0
AC-FT	0	0	0	2490	6400	6430	1630	464	12	0	0	0
CAL YR 1978	TOTAL	41545.00	MEAN 114	MAX 3930	MIN 0	AC-FT 82400						
WTR YR 1979	TOTAL	8784.50	MEAN 24.1	MAX 1700	MIN 0	AC-FT 17420						

11379000 ANTELOPE CREEK NEAR RED BLUFF, CA

LOCATION.--Lat 40°12'14", long 122°07'02", in Rio De Los Berrendos Grant, Tehama County, Hydrologic Unit 18020119, on right bank 1.8 mi (2.9 km) upstream from diversion dam of Los Molinos Mutual Water Co., 6.5 mi (10.5 km) east of Red Bluff, and 9.7 mi (15.6 km) upstream from mouth.

DRAINAGE AREA.--123 mi² (319 km²).

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1315-A: 1949(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 360 ft (110 m), from topographic map. Prior to Sept. 18, 1954, at site 0.6 mi (1.0 km) downstream at different datum. Sept. 18, 1954, to July 9, 1969, at datum 2.00 ft (0.610 m) higher.

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

AVERAGE DISCHARGE.--39 years, 148 ft³/s (4.191 m³/s), 107,200 acre-ft/yr (132 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Jan. 23, 1970, gage height, 17.95 ft (5.471 m) from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement at gage height 15.96 ft (4.865 m), present datum; minimum, 8.2 ft³/s (0.23 m³/s) Oct. 27, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of about 22 ft (6.7 m) from floodmarks, at former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,100 ft³/s (116 m³/s) Feb. 14 (0200 hrs), gage height, 11.56 ft (3.523 m), no other peak above base of 2,200 ft³/s (62.3 m³/s); minimum daily, 29 ft³/s (0.82 m³/s) Sept. 21-24.

REVISIONS.--The maximum discharge for water year 1978 has been revised to 5,490 ft³/s (155 m³/s) Jan. 16, 1978, gage height, 12.69 ft (3.868 m), superseding figure published in the report for 1978.

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	35	41	47	43	42	828	200	171	75	37	32	37
2	34	41	48	42	41	338	169	161	72	37	32	36
3	33	41	45	43	41	259	148	151	70	36	32	35
4	34	41	45	44	42	214	129	152	68	36	33	35
5	36	41	45	44	42	184	119	158	65	36	33	35
6	36	41	45	45	42	170	114	198	60	36	32	35
7	36	41	44	46	41	172	109	181	57	36	32	34
8	36	41	43	150	42	170	102	175	55	35	32	33
9	37	41	44	133	41	162	98	156	52	35	32	33
10	36	41	44	69	42	150	94	140	50	35	32	33
11	36	41	45	156	43	139	95	130	48	35	32	33
12	37	43	45	99	44	133	88	130	46	35	32	33
13	37	46	45	67	1410	127	84	136	45	35	33	32
14	36	45	44	412	2090	124	83	147	44	33	33	31
15	36	44	44	954	463	207	83	155	44	32	33	31
16	36	44	44	225	1260	340	88	162	43	32	33	31
17	37	44	50	102	349	250	106	157	43	33	33	30
18	37	44	60	74	872	217	105	162	44	32	33	30
19	37	45	51	62	594	209	90	171	43	32	32	30
20	37	55	45	56	797	169	84	175	42	32	33	30
21	38	56	45	53	1090	147	81	172	40	32	35	29
22	39	53	45	50	559	135	80	167	40	34	34	29
23	38	48	45	48	389	124	89	152	39	33	33	29
24	38	45	44	47	246	112	135	135	39	32	33	29
25	39	44	45	46	190	106	112	127	38	32	32	32
26	40	44	44	44	198	104	113	122	38	32	32	33
27	39	44	44	43	170	415	186	114	37	31	32	32
28	39	44	44	43	401	459	159	106	37	31	32	31
29	39	44	43	42	---	323	146	94	37	33	36	31
30	40	44	43	42	---	314	140	85	37	32	56	30
31	40	---	42	44	---	232	---	79	---	32	44	---
TOTAL	1148	1327	1407	3368	11581	7033	3429	4521	1448	1044	1048	962
MEAN	37.0	44.2	45.4	109	414	227	114	146	48.3	33.7	33.8	32.1
MAX	40	56	60	954	2090	828	200	198	75	37	56	37
MIN	33	41	42	42	41	104	80	79	37	31	32	29
AC-FT	2280	2630	2790	6680	22970	13950	6800	8970	2870	2070	2080	1910

CAL YR 1978 TOTAL 72689 MEAN 199 MAX 2930 MIN 33 AC-FT 144200
WTR YR 1979 TOTAL 38316 MEAN 105 MAX 2090 MIN 29 AC-FT 76000

11379500 ELDER CREEK NEAR PASKENTA, CA

LOCATION.--Lat 40°01'29", long 122°30'31", in SE¼NW¼ sec.14, T.25 N., R.6 W., Tehama County, Hydrologic Unit 18020103, on left bank 2.5 mi (4.0 km) downstream from South Fork Elder Creek, 8.2 mi (13.2 km) northwest of Flournoy, and 10 mi (19 km) north of Paskenta.

DRAINAGE AREA.--92.4 mi² (239.3 km²).

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1515: 1956. WDR CA-70-2: 1967(P). WDR CA-75-4: 1966-67(P), 1969-71(P), 1973(P), WDR CA-78-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 718.1 ft (218.88 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1965, water-stage recorder at site 300 ft (91 m) downstream at datum 5.13 ft (1.564 m) lower.

REMARKS.--Records good. No regulation or large diversion above station.

AVERAGE DISCHARGE.--31 years, 99.2 ft³/s (2.809 m³/s), 71,870 acre-ft/yr (88.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s (331 m³/s) Feb. 24, 1958, gage height, 13.90 ft (4.237 m) site and datum then in use, from rating curve extended above 3,500 ft³/s (99.1 m³/s) on basis of slope-area measurements at gage heights 10.97 ft (3.344 m) and 13.90 ft (4.237 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 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. 14	1900	1,770 50.1	5.75 1.753	Mar. 21	2145	1,590 45.0	5.50 1.676
Feb. 13	1130	1,280 36.2	5.03 1.533	Mar. 27	1015	*6,080 172	9.51 2.899
Feb. 20	1330	1,240 35.1	4.97 1.515				

Minimum daily, 0.55 ft³/s (0.016 m³/s) Sept. 17.

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	5.6	5.1	9.7	7.0	15	105	152	116	25	7.6	1.7	3.9
2	5.2	5.4	9.5	7.3	15	79	137	104	24	7.5	1.4	4.3
3	5.1	5.7	9.0	7.1	14	68	124	98	22	7.7	1.3	4.1
4	5.0	5.6	8.8	8.5	14	67	116	96	22	8.2	1.3	3.6
5	5.0	5.4	8.6	8.2	14	82	116	112	20	8.6	1.7	3.0
6	5.1	5.2	8.4	8.0	15	140	123	116	18	7.9	1.6	2.6
7	5.2	5.3	8.2	8.9	15	169	112	111	18	7.7	1.4	2.1
8	5.1	5.3	7.5	40	15	156	103	98	17	7.2	1.2	1.7
9	5.0	5.0	8.3	28	15	131	98	88	17	6.8	1.2	1.6
10	4.9	4.6	8.3	87	16	112	91	81	16	6.8	1.1	1.2
11	4.8	5.0	8.5	398	19	109	87	75	15	7.0	.92	.95
12	4.4	6.0	8.6	91	53	105	83	72	14	5.9	.83	.88
13	4.1	7.1	8.7	46	747	95	82	71	14	5.2	1.1	.78
14	4.1	7.1	8.5	389	353	92	80	70	14	4.6	2.2	.71
15	4.2	7.1	8.3	322	233	134	80	69	14	4.3	2.4	.66
16	4.5	7.4	7.9	97	235	161	85	66	14	4.0	2.2	.59
17	4.9	7.6	8.1	54	133	177	80	60	14	3.8	2.0	.55
18	4.7	7.9	8.4	41	232	127	73	55	14	3.4	1.8	.56
19	4.6	9.5	8.3	33	153	113	67	52	13	3.1	1.5	.65
20	4.9	14	7.3	30	425	97	62	49	13	2.9	2.0	.70
21	5.4	17	7.6	28	275	187	60	47	12	3.3	2.6	.67
22	5.3	23	7.7	26	195	222	66	45	11	3.8	2.8	.67
23	4.8	14	7.5	23	139	120	103	47	11	3.9	2.7	.69
24	4.7	11	7.5	22	106	96	97	44	9.8	3.4	2.5	.74
25	4.8	9.8	7.5	20	89	86	73	37	9.4	3.2	2.1	2.8
26	4.8	9.2	7.5	18	89	117	177	35	9.1	2.7	1.8	5.6
27	4.9	8.8	7.5	17	75	2350	235	33	9.0	2.7	1.4	3.5
28	5.0	8.4	7.5	17	87	528	157	31	8.2	2.6	1.3	2.9
29	4.7	8.9	7.0	15	---	284	134	30	7.9	2.5	2.0	2.4
30	4.5	10	6.7	16	---	213	123	28	7.7	2.2	4.5	2.0
31	4.7	---	6.8	17	---	174	---	26	---	1.9	4.8	---
TOTAL	150.0	251.4	249.7	1930.0	3786	6696	3176	2062	433.1	152.4	59.35	57.10
MEAN	4.84	8.38	8.05	62.3	135	216	106	66.5	14.4	4.92	1.91	1.90
MAX	5.6	23	9.7	398	747	2350	235	116	25	8.6	4.8	5.6
MIN	4.1	4.6	6.7	7.0	14	67	60	26	7.7	1.9	.83	.55
AC-FT	298	499	495	3830	7510	13280	6300	4090	859	302	118	113

CAL YR 1978 TOTAL 62554.40 MEAN 171 MAX 3570 MIN 3.5 AC-FT 124100
WTR YR 1979 TOTAL 19003.05 MEAN 52.1 MAX 2350 MIN .55 AC-FT 37690

SACRAMENTO RIVER BASIN

11380500 ELDER CREEK AT GERBER, CA

LOCATION.--Lat 40°03'05", long 122°09'53", in Saucos Grant, Tehama County, Hydrologic Unit 18020103, on right bank 1.0 mi (1.6 km) west of Gerber and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--136 mi² (353 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to September 1969, water years 1970, 1972-77 (annual maximum), water year 1977 (periodic daily flows), October 1977 to May 1979 (storm season only), discontinued.

GAGE.--Water-stage recorder. Datum of gage is 232.14 ft (70.756 m) National Geodetic Vertical Datum of 1929 (from Bureau of Reclamation bench mark). Prior to Oct. 1, 1961, at site about 150 ft upstream at datum 4.32 ft (1.317 m) higher.

REMARKS.--Records good. Diversions above station.

AVERAGE DISCHARGE.--20 years (water years 1950-69), 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Jan. 5, 1965, gage height, 14.90 ft (4.543 m); no flow at times each year.

EXTREMES FOR PERIOD OCTOBER TO MAY.--Peak discharges above base of 1,200 ft³/s (34.0 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. 15	0015	3,600 102	9.63 2.935	Feb. 20	1700	2,870 81.3	9.16 2.792
Feb. 13	1715	1,410 39.9	7.97 2.429	Mar. 27	1415	*9,630 273	12.89 3.929

Minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1978 TO MAY 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	11	150	150	101				
2		0	3.2	0	10	96	133	91				
3		0	2.6	0	9.5	77	124	79				
4		0	.10	1.0	8.9	71	116	76				
5		0	1.3	4.1	8.9	73	112	76				
6		0	0	5.5	8.7	112	117	101				
7		0	0	5.8	8.7	154	112	92				
8		0	0	20	9.1	156	98	81				
9		0	0	52	8.8	138	90	70				
10		0	0	19	9.1	124	83	63				
11		0	0	402	9.2	119	78	58				
12		0	0	151	12	117	73	54				
13		0	0	71	640	110	70	52				
14		0	1.3	342	666	107	68	50				
15		0	4.2	1120	226	109	67	50				
16		0	4.6	116	462	156	70	47				
17		0	4.8	61	185	185	69	45				
18		0	5.1	47	266	134	62	40				
19		0	5.0	38	218	121	56	37				
20		0	4.2	31	800	109	51	35				
21		0	2.3	27	551	104	48	33				
22		8.6	.10	24	278	295	47	33				
23		15	4.2	21	195	135	65	32				
24		9.6	5.0	19	137	113	105	34				
25		7.5	5.1	19	107	104	66	29				
26		6.6	5.2	22	104	102	79	25				
27		4.6	5.2	13	87	3180	298	23				
28		.98	5.2	12	86	829	166	22				
29		0	4.8	12	---	354	127	20				
30		0	4.6	11	---	229	109	19				
31		---	.98	12	---	181	---	19				
TOTAL		52.88	79.08	2678.4	5121.9	8044	2909	1587				
MEAN		1.76	2.55	86.4	183	259	97.0	51.2				
MAX		15	5.2	1120	800	3180	298	101				
MIN		0	0	0	8.7	71	47	19				
AC-FT		105	157	5310	10160	15960	5770	3150				

WATER-QUALITY RECORDS

CHEMICAL ANALYSES: Water years 1959-66.

CHEMICAL ANALYSES: Water years 1959-66.
WATER TEMPERATURES: Water years 1977-79

WATER TEMPERATURES: Water years 1977-79 (discontinued).

SEDIMENT RECORDS.--Water years 1977-79 (discontinued).

WATER TEMPERATURES: February 1977 to May 1979 (storm season only), discontinued.

SEDIMENT RECORDS. --March 1977 to May 1979 (storm season only), discontinued.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,870 mg/L Jan. 14, 1978; minimum daily mean, no flow many days each year.

SEDIMENT DISCHARGE: Maximum daily, 91,600 tons (83,100 metric tons) Jan. 14, 1978; minimum daily, 0 ton (0 metric ton) on many days each year.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 2,130 mg/L Mar. 27; minimum daily mean, no flow on many days during November to January.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 29,600 tons (26,900 metric tons) Mar. 27; minimum daily, 0 ton (0 metric ton) on many days during November to January.

[illegible]

11380500 ELDER CREEK AT GERBER, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				0	0	0	0	0	0
2				0	0	0	3.2	4	.03
3				0	0	0	2.5	2	.01
4				0	0	0	.10	1	
5				0	0	0	1.3	2	.01
6				0	0	0	0	0	0
7				0	0	0	0	0	0
8				0	0	0	0	0	0
9				0	0	0	0	0	0
10				0	0	0	0	0	0
11				0	0	0	0	0	0
12				0	0	0	0	0	0
13				0	0	0	0	0	0
14				0	0	0	1.3	1	0
15				0	0	0	4.2	2	.02
16				0	0	0	4.6	4	.05
17				0	0	0	4.8	5	.06
18				0	0	0	5.1	4	.06
19				0	0	0	5.0	3	.04
20				0	0	0	4.2	2	.02
21				0	0	0	2.3	1	.01
22				8.6	8	.26	.10	1	0
23				15	12	.49	4.2	1	.01
24				9.6	8	.21	5.0	1	.01
25				7.5	5	.10	5.1	2	.03
26				6.6	3	.05	5.2	2	.03
27				4.6	2	.02	5.2	2	.03
28				.98	1	0	5.2	2	.03
29				0	0	0	4.8	2	.03
30				0	0	0	4.6	1	.01
31				---	---	---	.98	0	0
TOTAL				52.88	---	1.13	79.08	---	.49

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	0	0	0	11	1	.03	150	52	21
2	0	0	0	10	1	.03	96	33	8.6
3	0	0	0	9.5	1	.03	77	26	5.4
4	1.0	5	.01	8.9	1	.02	71	22	4.2
5	4.1	7	.08	8.9	1	.02	73	20	3.9
6	5.5	6	.09	8.7	1	.02	112	24	7.3
7	5.8	6	.09	8.7	1	.02	154	40	17
8	20	15	1.1	9.1	1	.02	156	22	9.3
9	52	28	4.0	8.8	1	.02	138	11	4.1
10	19	11	.56	9.1	1	.02	124	10	3.3
11	402	405	697	9.2	1	.02	119	10	3.2
12	151	95	51	12	4	.15	117	10	3.2
13	71	23	4.4	640	571	1760	110	10	3.0
14	342	573	3450	666	443	1020	107	10	2.9
15	1120	1080	6080	226	108	132	109	12	3.5
16	116	77	31	462	258	416	156	38	16
17	61	4	.66	185	81	40	185	29	14
18	47	3	.38	266	127	121	134	18	6.5
19	38	3	.31	218	56	38	121	15	4.9
20	31	3	.25	800	869	5100	109	15	4.4
21	27	2	.15	551	188	325	104	13	3.7
22	24	2	.13	278	62	51	295	170	237
23	21	2	.11	195	42	22	135	26	9.5
24	19	2	.10	137	31	11	113	18	5.5
25	19	2	.10	107	28	8.1	104	16	4.5
26	22	2	.12	104	28	7.9	102	14	3.9
27	13	1	.04	87	28	6.6	3180	2130	29600
28	12	1	.03	86	34	7.9	829	634	1650
29	12	1	.03	---	---	---	354	275	263
30	11	1	.03	---	---	---	229	145	90
31	12	1	.03	---	---	---	181	87	43
TOTAL	2678.40	---	10321.80	5121.9	---	9066.90	8044	---	32055.8

11380500 ELDER CREEK AT GERBER, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	150	50	20	101	7	1.9			
2	133	27	9.7	91	7	1.7			
3	124	15	5.0	79	6	1.3			
4	116	8	2.5	76	6	1.2			
5	112	7	2.1	76	8	1.6			
6	117	7	2.2	101	9	2.5			
7	112	7	2.1	92	5	1.2			
8	98	6	1.6	81	5	1.1			
9	90	6	1.5	70	5	.95			
10	83	6	1.3	63	5	.85			
11	78	5	1.1	58	5	.78			
12	73	5	.99	54	5	.73			
13	70	5	.95	52	5	.70			
14	68	5	.92	50	5	.68			
15	67	5	.90	50	5	.68			
16	70	4	.76	47	5	.63			
17	69	4	.75	45	5	.61			
18	62	4	.67	40	5	.54			
19	56	4	.60	37	4	.40			
20	51	4	.55	35	4	.38			
21	48	3	.39	33	4	.36			
22	47	3	.38	33	4	.36			
23	65	5	.88	32	4	.35			
24	105	11	3.3	34	6	.55			
25	66	6	1.1	29	5	.39			
26	79	8	2.6	25	4	.27			
27	298	72	62	23	4	.25			
28	166	25	11	22	4	.24			
29	127	14	4.8	20	4	.22			
30	109	8	2.4	19	4	.21			
31	---	---	---	19	4	.21			
TOTAL	2909	---	145.04	1587	---	23.84			
PERIOD	20472.26		51615.00						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED.	SED.	SED.	SED.	SED.
						SUSP. FALL DIAM. % FINER THAN .002 MM	SUSP. FALL DIAM. % FINER THAN .004 MM	SUSP. FALL DIAM. % FINER THAN .008 MM	SUSP. FALL DIAM. % FINER THAN .016 MM	SUSP. FALL DIAM. % FINER THAN .016 MM
JAN										
11...	1600	742	14.0	771	1550	44	56	68	81	
12...	1305	95	12.0	39	10	--	--	--	--	
FEB										
13...	1350	850	9.5	1310	3010	--	35	44	54	
16...	1420	396	12.0	179	191	45	52	61	68	
MAR										
27...	0900	3350	12.0	2540	23000	--	38	52	68	
27...	1700	5980	12.0	3590	58000	--	33	47	62	
28...	1430	692	12.0	492	919	37	45	54	63	
DATE		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. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 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
JAN										
11...	90	--	94	--	97	--	99	100	--	
12...	--	--	97	--	100	--	--	--	--	
FEB										
13...	66	--	75	--	85	--	96	100	--	
16...	74	--	76	--	82	--	92	100	--	
MAR										
27...	85	91	--	96	--	100	--	--	--	
27...	79	89	--	94	--	100	--	--	--	
28...	70	--	74	--	81	--	93	99	100	

SACRAMENTO RIVER BASIN

11381500 MILL CREEK NEAR LOS MOLINOS, CA

LOCATION.--Lat 40°03'17", long 122°01'23", in NE¼NW¼ sec.6, T.25 N., R.1 W., Tehama County, Hydrologic Unit 18020103, on right bank 4.5 mi (7.2 km) northeast of Los Molinos, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--131 mi² (339 km²).

PERIOD OF RECORD.--September 1909 to August 1913 (fragmentary), October 1928 to current year.

REVISED RECORDS.--WSP 1315-A: 1929(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 385 ft (117 m), from topographic map. Prior to September 1913, nonrecording gage at site 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good. No storage or large diversion above station.

AVERAGE DISCHARGE.--51 years (water years 1929-79), 300 ft³/s (8.496 m³/s), 217,400 acre-ft/yr (268 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1929-79): Maximum discharge, 36,400 ft³/s (1,030 m³/s) Dec. 11, 1937, gage height, 23.4 ft (7.13 m) from floodmarks, from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of step-backwater computation and slope-area measurement of peak flow; minimum, 49 ft³/s (1.39 m³/s) Dec. 15, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,160 ft³/s (146 m³/s) Feb. 13 (2330 hrs), gage height, 8.91 ft (2.716 m), no other peak above base of 2,400 ft³/s (68.0 m³/s); minimum daily, 85 ft³/s (2.41 m³/s) Sept. 16, 18, 22, 23.

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	109	105	133	104	104	923	335	429	307	159	104	103
2	107	105	122	105	104	412	296	395	310	158	104	99
3	107	104	113	104	102	334	273	416	324	154	104	97
4	107	104	111	106	104	284	267	445	352	152	104	97
5	106	104	115	107	104	267	296	484	370	148	104	95
6	106	102	112	106	104	287	304	504	371	147	104	95
7	106	102	105	109	105	345	292	486	325	143	102	92
8	106	102	104	239	106	376	288	436	283	140	102	90
9	106	103	108	195	106	360	293	395	265	138	102	90
10	106	102	108	139	108	326	277	354	256	138	102	90
11	105	103	109	490	110	317	272	338	253	137	102	88
12	105	105	110	332	116	320	270	354	256	134	99	88
13	104	109	109	198	1520	320	280	389	253	132	99	88
14	104	107	107	534	2140	320	307	434	237	131	104	87
15	104	105	107	955	542	439	326	455	226	126	102	86
16	104	106	106	302	1140	563	373	483	221	120	102	85
17	105	107	122	183	420	413	367	463	215	118	102	86
18	104	106	135	155	733	357	317	507	205	116	102	85
19	104	108	118	137	484	317	274	536	195	116	99	86
20	104	135	109	128	677	276	253	549	192	113	99	86
21	104	127	111	126	891	248	249	558	186	113	120	86
22	104	122	111	123	648	236	254	564	180	116	109	85
23	103	113	109	116	440	224	282	512	177	116	104	85
24	103	110	110	116	291	222	362	469	180	113	104	86
25	103	109	110	113	237	227	310	460	180	111	102	92
26	103	108	109	109	247	236	367	475	178	111	99	94
27	103	107	109	109	215	662	509	482	175	109	99	90
28	103	106	109	109	500	678	443	448	174	109	102	88
29	104	113	106	104	---	501	408	376	169	109	120	86
30	102	120	103	104	---	491	399	331	164	106	201	86
31	102	---	103	106	---	393	---	311	---	106	126	---
TOTAL	3243	3259	3453	5963	12398	11674	9543	13838	7179	3939	3328	2691
MEAN	105	109	111	192	443	377	318	446	239	127	107	89.7
MAX	109	135	135	955	2140	923	509	564	371	159	201	103
MIN	102	102	103	104	102	222	249	311	164	106	99	85
AC-FT	6430	6460	6850	11830	24590	23160	18930	27450	14240	7810	6600	5340
CAL YR 1978 TOTAL	140038		MEAN 384	MAX 3980	MIN 102	AC-FT 277800						
WTR YR 1979 TOTAL	80508		MEAN 221	MAX 2140	MIN 85	AC-FT 159700						

11381595 MILL CREEK AT SHERWOOD BRIDGE, NEAR LOS MOLINOS, CA

LOCATION.--Lat 40°02'44", long 122°05'39", in Rio De Los Molinos Grant, T.25 N., R.2 W., Tehama County,
Hydrologic Unit 18020103, at Sherwood Bridge on Mill Creek, 1.6 mi (2.6 km) north of Los Molinos.

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--Water years 1977-79.

WATER TEMPERATURES: Water years 1977-79 (discontinued).

SEDIMENT RECORDS: Water years 1977-79 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1977 to May 1979 (storm season only), discontinued.

SEDIMENT RECORDS: January 1977 to May 1979 (storm season only), discontinued.

REMARKS.--Streamflow data obtained from once-daily staff-gage readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,040 mg/L Dec. 15, 1977; minimum daily mean, 1 mg/L
Feb. 19, 1977, and many days during December 1978 to February 1979.

SEDIMENT DISCHARGE: Maximum daily, 11,100 tons (10,100 metric tons) Jan. 16, 1978; minimum daily, 0.01 ton
(0.009 metric ton) on many days during February to May 1977.

EXTREMES FOR NOVEMBER TO MAY.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 484 mg/L Feb. 14; minimum daily mean,
1 mg/L many days during December to February.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 3,890 tons (3,530 metric tons) Feb. 14; minimum
daily, 0.08 ton (0.07 metric ton) Nov. 1-3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	11.5	4.0	---	6.0	---	13.0				
2		---	---	---	5.5	7.5	13.0	17.0				
3		---	---	5.0	---	---	---	---				
4		---	8.0	---	---	---	13.0	16.0				
5		---	---	8.0	9.0	12.0	---	---				
6		---	6.5	---	---	10.5	13.0	---				
7		---	---	---	8.5	13.5	---	12.0				
8		---	4.0	9.0	---	---	---	---				
9		12.0	---	---	---	13.5	13.5	11.0				
10		9.5	---	8.5	9.5	---	---	---				
11		---	7.0	---	---	---	---	18.0				
12		---	---	9.5	9.5	13.5	---	---				
13		7.0	10.0	---	8.5	---	16.0	---				
14		5.5	---	7.0	7.5	11.5	---	17.5				
15		---	---	6.0	9.0	---	---	---				
16		8.0	7.0	---	7.0	9.0	12.0	18.0				
17		---	7.0	---	---	---	---	---				
18		10.0	6.0	7.5	---	---	12.0	20.0				
19		---	---	8.0	8.5	12.0	---	---				
20		10.0	4.5	---	8.5	---	15.0	19.0				
21		---	---	---	7.0	11.0	---	18.0				
22		---	6.0	8.5	---	---	---	---				
23		10.5	---	---	8.0	14.0	12.0	18.0				
24		---	---	6.0	---	---	---	---				
25		10.0	---	---	---	---	15.0	21.0				
26		---	---	6.0	11.0	12.0	---	---				
27		9.5	5.0	---	---	10.5	14.5	19.0				
28		---	6.0	---	9.0	10.0	---	---				
29		11.0	---	5.0	---	---	---	17.0				
30		---	4.0	---	---	12.0	15.5	---				
31		---	---	4.5	---	---	---	19.0				
MONTH		---	---	---	---	---	---	---				

11381595 MILL CREEK AT SHERWOOD BRIDGE, NEAR LOS MOLINOS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				10	3	.08	133	5	1.8
2				10	3	.08	122	2	.66
3				10	3	.08	113	2	.61
4				11	3	.09	111	2	.60
5				11	3	.09	115	2	.62
6				11	3	.09	112	3	.91
7				12	3	.10	105	3	.85
8				13	3	.11	104	3	.84
9				15	5	.20	108	3	.87
10				19	9	.46	108	3	.87
11				30	9	.73	109	2	.59
12				48	4	.52	110	3	.89
13				70	2	.38	109	3	.88
14				64	6	1.0	107	3	.87
15				77	8	1.7	107	2	.58
16				106	8	2.3	106	2	.57
17				107	5	1.4	122	4	1.3
18				106	3	.86	135	4	1.5
19				108	2	.58	118	3	.96
20				135	8	2.9	109	3	.88
21				127	4	1.4	111	3	.90
22				122	3	.99	111	3	.90
23				113	3	.92	109	3	.88
24				110	3	.89	110	3	.89
25				109	3	.88	110	2	.59
26				108	2	.58	109	2	.59
27				107	2	.58	109	2	.59
28				106	2	.57	109	2	.59
29				113	3	.92	106	2	.57
30				120	3	.97	103	2	.56
31				---	---	---	103	1	.28
TOTAL				2108	---	22.45	3453	---	24.99

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	104	1	.28	104	2	.56	923	56	210
2	105	1	.28	104	2	.56	412	6	6.7
3	104	1	.28	102	2	.55	334	3	2.7
4	106	1	.29	104	3	.84	284	2	1.5
5	107	1	.29	104	2	.56	267	2	1.4
6	106	1	.29	104	2	.56	287	3	2.3
7	109	2	.59	105	2	.57	345	5	4.7
8	239	24	25	106	2	.57	376	8	8.1
9	195	19	12	106	1	.29	360	5	4.9
10	139	7	2.6	108	1	.29	326	4	3.5
11	490	72	108	110	1	.30	317	4	3.4
12	332	57	51	116	2	.63	320	4	3.5
13	198	32	17	1520	295	2350	320	4	3.5
14	534	277	561	2140	484	3890	320	7	6.0
15	955	294	899	542	85	152	439	16	21
16	302	10	8.2	1140	66	255	563	14	23
17	183	5	2.5	420	9	10	413	5	5.6
18	155	3	1.3	733	28	69	357	4	3.9
19	137	2	.74	484	11	17	317	3	2.6
20	128	2	.69	677	34	96	276	3	2.2
21	126	2	.68	891	20	52	248	2	1.3
22	123	2	.66	648	6	10	236	2	1.3
23	116	2	.63	440	4	4.8	224	2	1.2
24	116	2	.63	291	4	3.1	222	2	1.2
25	113	2	.61	237	4	2.6	227	2	1.2
26	109	2	.59	247	4	2.7	236	2	1.3
27	109	2	.59	215	4	2.3	662	30	76
28	109	2	.59	500	69	282	678	17	31
29	104	2	.56	---	---	---	501	7	9.5
30	104	2	.56	---	---	---	491	8	11
31	106	2	.57	---	---	---	393	3	3.2
TOTAL	5963	---	1698.00	12398	---	7204.78	11674	---	458.7

11381595 MILL CREEK AT SHERWOOD BRIDGE, NEAR LOS MOLINOS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

APRIL				MAY			JUNE		
DAY	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	330	2	1.8	381	12	12			
2	277	2	1.5	308	7	5.8			
3	258	2	1.4	338	9	8.2			
4	244	2	1.3	370	14	14			
5	241	3	2.0	378	12	14			
6	240	5	3.2	390	15	16			
7	230	5	3.1	397	11	12			
8	220	5	3.0	350	6	5.7			
9	268	6	4.3	308	5	4.2			
10	226	5	3.1	305	5	4.1			
11	190	4	2.1	303	4	3.3			
12	190	4	2.1	318	5	4.3			
13	207	6	3.4	330	8	7.1			
14	233	6	3.8	340	11	10			
15	260	8	5.6	360	15	15			
16	290	13	10	386	23	24			
17	256	8	5.5	372	30	30			
18	224	6	3.6	397	37	40			
19	202	5	2.7	412	49	55			
20	187	4	2.0	424	79	90			
21	150	4	1.6	488	86	113			
22	150	6	2.4	500	74	100			
23	159	8	3.4	397	52	56			
24	230	17	11	362	34	33			
25	207	6	3.4	336	30	27			
26	302	14	14	339	31	28			
27	424	27	31	345	30	28			
28	386	12	13	296	23	18			
29	352	8	7.6	256	13	9.0			
30	317	8	6.8	218	9	5.3			
31	---	---	---	190	9	4.6			
TOTAL	7450	---	159.7	10894	---	796.6			
PERIOD	53940.0	---	10365.22						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	
JAN 14...	1100	1140	7.0	574	1770	17	20	25	
FEB 13...	1500	1740	8.5	387	1820	--	--	--	
14...	0900	2690	8.0	567	4120	18	22	29	
MAY 20...	1400	413	19.0	82	91	--	--	--	
DATE	TIME	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 14...	33	48	61	75	85	91	97	100	
FEB 13...	--	--	38	54	73	89	95	100	
14...	38	51	60	75	88	98	100	--	
MAY 20...	--	--	99	100	--	--	--	--	

SACRAMENTO RIVER BASIN

11381620 MILL CREEK AT MOUTH, NEAR LOS MOLINOS, CA

LOCATION.--Lat 40°02'34", long 122°05'57", T.25 N., R.2 W., in Rio de Los Molinos Grant, Tehama County,
Hydrologic Unit 18020103.

DRAINAGE AREA.--131 mi² (399 km²), at gaging station.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1953 to current year.

REMARKS.--Discharge given for Mill Creek near Los Molinos (station 11381500), 5.5 mi (8.8 km) upstream from mouth.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
NOV 24...	1355	110	233	7.8	9.0	1.0	11.5
JAN 18...	1435	155	191	7.4	9.0	1.0	11.6
MAR 22...	0845	236	158	7.6	10.5	3.0	11.3
MAY 29...	1435	376	111	7.6	17.0	4.0	9.8
JUL 19...	1415	116	221	8.2	30.0	1.0	12.9
SEP 28...	1205	88	248	7.3	22.5	1.0	10.2

11382000 THOMES CREEK AT PASKENTA, CA

LOCATION.--Lat 39°53'16", long 122°31'41", in SE¼SW¼ sec.34, T.24 N., R.6 W., Tehama County, Hydrologic Unit 18020103, on left bank 1.2 mi (1.9 km) downstream from Digger Creek, and 1.0 mi (1.6 km) downstream from highway bridge at Paskenta.

DRAINAGE AREA.--203 mi² (526 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to 1943, published as Thomas Creek at Paskenta.

REVISED RECORDS.--WSP 1345: 1923, 1924-28(M), 1938, 1940(M). WDR CA-78-4: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 720 ft (219 m), from topographic map. Prior to June 20, 1942, nonrecording gage and water-stage recorder at several sites about 1.5 mi (2.4 km) upstream at different datums, June 21, 1942, to Sept. 30, 1959, water-stage recorder at site 1.4 mi (2.3 km) upstream at datum 732.85 ft (223.373 m) and Oct. 1, 1959, to Oct. 9, 1974, at datum 731.10 ft (222.839 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No storage or large diversions above station.

AVERAGE DISCHARGE.--59 years, 285 ft³/s (8.071 m³/s), 206,500 acre-ft/yr (255 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,800 ft³/s (1,070 m³/s) Dec. 22, 1964, gage height, 13.3 ft (4.05 m) revised, from floodmarks, present site and datum, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement of peak flow; no flow at times in many years.

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)
Jan. 11	1230	*3,800 108	6.32 1.926
Feb. 13	1000	2,980 84.4	6.00 1.829
Mar. 27	1000	2,980 84.4	5.95 1.814

Minimum daily, 0.52 ft³/s (0.015 m³/s) Sept. 18.

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	12	6.5	24	11	51	384	382	374	98	22	4.5	6.5
2	7.9	6.5	38	11	44	252	351	350	94	21	3.9	6.6
3	6.3	6.5	26	12	36	220	341	366	91	21	3.4	7.0
4	7.0	6.5	20	12	45	331	345	396	91	21	3.2	6.7
5	7.0	6.9	18	13	37	462	422	547	89	21	2.8	5.3
6	7.0	7.0	17	13	41	845	504	607	83	21	2.5	4.1
7	6.9	7.0	17	14	52	1120	406	591	77	21	2.7	3.5
8	7.0	7.0	13	25	50	1080	392	488	71	19	2.4	3.2
9	6.9	7.0	13	35	50	944	380	420	71	18	2.1	3.3
10	7.3	7.0	13	71	66	849	339	379	70	18	1.4	2.4
11	7.5	7.0	13	1910	115	857	309	326	65	19	1.8	1.7
12	7.5	7.3	13	606	176	791	299	321	60	18	1.8	1.6
13	7.4	8.1	14	276	2060	724	319	321	56	17	1.9	1.5
14	7.0	9.2	15	343	1130	700	321	342	54	15	2.3	1.5
15	6.5	9.4	15	291	638	696	321	342	52	14	2.4	1.7
16	6.5	8.1	15	152	484	669	342	316	50	13	2.4	1.8
17	6.5	8.1	14	118	319	568	322	299	48	12	2.3	1.4
18	6.5	8.0	14	104	357	542	273	313	48	10	2.3	.52
19	6.5	10	14	90	277	505	237	322	47	9.6	2.1	.81
20	6.5	18	13	88	414	461	222	300	47	8.5	2.2	.91
21	6.5	41	12	91	319	416	223	245	45	9.1	2.5	.97
22	6.5	31	12	94	265	381	234	224	43	9.3	2.8	1.1
23	6.5	23	12	88	227	335	264	188	40	8.9	2.9	1.1
24	6.5	19	13	87	192	315	282	169	38	8.9	2.9	1.3
25	6.5	16	13	81	182	332	245	151	37	8.7	2.9	3.0
26	6.5	15	13	71	223	360	439	144	34	7.9	3.0	3.8
27	6.5	14	13	63	204	1490	736	138	33	7.6	2.5	4.1
28	6.5	13	13	59	342	776	487	127	30	6.9	2.0	3.7
29	6.5	13	13	45	---	550	414	118	28	6.3	2.1	3.9
30	6.5	18	11	51	---	463	367	111	24	5.9	2.8	3.9
31	6.5	---	11	60	---	402	---	108	---	5.3	4.7	---
TOTAL	215.2	364.1	475	4985	8396	18820	10518	9443	1714	423.9	81.5	88.91
MEAN	6.94	12.1	15.3	161	300	607	351	305	57.1	13.7	2.63	2.96
MAX	12	41	38	1910	2060	1490	736	607	98	22	4.7	7.0
MIN	6.3	6.5	11	11	36	220	222	108	24	5.3	1.4	.52
AC-FT	427	722	942	9890	16650	37330	20860	18730	3400	841	162	176
CAL YR 1978 TOTAL	152586.70			MEAN 418	MAX 4600	MIN 5.0	AC-FT 302700					
WTR YR 1979 TOTAL	55524.61			MEAN 152	MAX 2060	MIN .52	AC-FT 110100					

SACRAMENTO RIVER BASIN

11382000 THOMES CREEK AT PASKENTA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

CHEMICAL ANALYSES: Water years 1959 to current year.

WATER TEMPERATURES: Water years 1962-79 (discontinued).

SEDIMENT RECORDS: Water years 1963-73.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1961 to January 1979 (discontinued).

SEDIMENT RECORDS: October 1962 to September 1973.

INSTRUMENTATION.--Temperature recorder from October 1961 to January 1979.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 36.5°C Aug. 2, 4, 1974; minimum recorded, 0.0°C on several days during most years.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 26.0°C Oct. 3-5; minimum recorded, 0.5°C Dec. 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
19...	0520	6.5	385	8.2	16.5	1.0	10.2
NOV							
24...	0915	19	417	8.0	8.0	1.0	11.9
DEC							
20...	1030	13	391	8.1	3.5	1.0	13.6
JAN							
18...	1010	106	262	7.8	5.5	2.0	12.4
FEB							
23...	0920	230	242	7.9	6.0	9.0	12.4
MAR							
21...	0910	425	159	7.8	8.0	5.0	11.6
APR							
18...	1215	277	166	8.0	13.0	2.0	10.8
MAY							
29...	0925	121	172	8.0	15.5	1.0	10.0
JUN							
19...	1240	48	253	8.3	26.0	1.0	8.4
JUL							
19...	0825	10	307	8.2	27.0	1.0	8.9
AUG							
16...	0935	2.8	340	8.4	25.0	.00	8.9
SEP							
25...	0855	2.8	408	8.1	20.5	2.0	9.2

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	25.5	18.5	16.0	8.5	11.0	8.0	5.0	1.0				
2	25.5	17.5	16.0	9.0	9.0	6.0	5.0	2.0				
3	26.0	17.5	17.0	9.5	9.0	5.5	6.0	3.0				
4	26.0	17.5	15.5	10.5	9.0	5.5	7.5	5.0				
5	26.0	17.5	16.5	10.5	8.5	5.0	9.0	6.0				
6	24.5	17.0	17.0	10.5	6.5	3.0	8.5	5.5				
7	25.0	16.5	16.5	10.5	5.0	2.0	7.0	6.0				
8	24.5	16.0	17.5	10.5	5.5	1.5	7.5	6.5				
9	24.5	16.0	14.5	7.5	6.5	3.5	8.5	7.5				
10	24.5	16.0	9.0	5.0	8.0	4.5	9.0	8.0				
11	25.0	16.0	9.5	4.0	8.0	5.5	9.0	6.5				
12	25.0	17.5	7.5	4.5	9.0	7.0	8.0	6.5				
13	25.0	17.0	10.5	5.5	9.0	5.5	6.5	5.5				
14	24.5	16.5	10.5	4.5	9.0	5.5	6.5	6.0				
15	24.0	17.0	9.5	4.0	8.5	5.0	7.5	6.0				
16	23.0	17.0	10.5	7.5	7.0	3.5	7.0	4.5				
17	23.5	16.0	12.5	6.5	7.0	4.5	6.5	4.5				
18	23.5	16.0	11.5	6.5	8.5	4.5	7.0	5.5				
19	22.0	15.5	9.5	8.0	6.0	3.0	7.0	4.5				
20	21.5	15.0	11.0	8.0	5.5	1.5	7.0	5.0				
21	21.5	15.5	10.5	9.0	6.0	1.5	7.5	5.0				
22	21.0	14.0	10.0	8.0	6.5	2.5	6.5	4.5				
23	21.0	13.0	10.5	6.5	6.5	2.5	6.0	4.0				
24	20.5	13.5	11.0	7.0	7.0	3.0	5.5	4.5				
25	21.0	13.5	10.5	6.5	7.5	3.5	5.5	3.0				
26	21.0	13.0	10.5	6.5	7.0	4.5	5.0	2.5				
27	20.5	13.0	10.5	6.5	7.5	4.5	5.0	2.5				
28	19.5	13.0	11.0	7.5	7.5	3.5	5.0	2.5				
29	16.5	11.5	11.5	8.5	6.0	2.0	4.0	2.0				
30	15.0	9.0	10.5	8.0	5.5	1.0	3.5	3.5				
31	14.0	9.0	---	---	5.5	0.5	5.0	3.5				
MONTH	26.0	9.0	17.5	4.0	11.0	0.5	9.0	1.0				

11382090 THOMES CREEK AT RAWSON ROAD BRIDGE, NEAR RICHFIELD, CA

LOCATION.--Lat 39°58'32", long 122°13'28", in SW¼SE¼ sec.32, T.25 N., R.3 W., Tehama County, Hydrologic Unit 18020103, on right bank 2.6 mi (4.2 km) west of Richfield and 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--284 mi² (736 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to May 1977 (fragmentary) published as water-quality partial-record station, October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 291.55 ft (88.864 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Small diversions for irrigation above station.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79.3 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. 11	1500	3,110 88.1	11.87 3.618	Feb. 20	1630	4,000 113	12.27 3.740
Jan. 14	2330	3,330 94.3	11.97 3.648	Mar. 27	1500	*5,970 169	12.97 3.953
Feb. 13	1530	2,940 83.3	12.14 3.700				

Minimum, no flow many days.

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				0	43	557	433	391	85	.09		
2				0	39	264	383	375	69	.05		
3				0	36	200	359	379	67	0		
4				0	38	256	361	391	45	0		
5				0	39	360	410	416	41	0		
6				0	38	738	484	676	29	0		
7				0	41	1350	456	595	22	0		
8				0	41	1370	414	509	19	0		
9				0	43	1180	394	435	11	0		
10				0	45	1010	363	408	7.2	0		
11				1540	62	1010	342	385	4.8	0		
12				768	90	957	324	393	5.4	0		
13				268	1630	821	345	371	3.3	0		
14				603	1420	759	351	393	2.1	0		
15				1210	788	700	353	442	2.2	0		
16				256	821	729	355	408	1.4	0		
17				145	365	669	344	378	1.1	0		
18				117	393	565	300	373	1.0	0		
19				95	289	458	275	363	.77	0		
20				73	1050	358	251	335	.93	0		
21				76	623	343	252	297	.60	0		
22				76	369	286	248	277	.38	0		
23				73	243	246	316	252	.40	0		
24				73	177	227	349	218	.26	0		
25				69	149	228	291	196	.26	0		
26				62	165	234	314	194	.15	0		
27				49	150	2440	880	178	.16	0		
28				49	219	1010	558	140	.23	0		
29				43	---	716	461	117	.08	0		
30				39	---	569	410	101	.05	0		
31		---		43	---	474	---	84	---	0		---
TOTAL	0	0	0	5727	9406	21084	11376	10470	420.77		0	0
MEAN	0	0	0	185	336	680	379	338	14.0	.14	0	0
MAX	0	0	0	1540	1630	2440	880	676	85	.09	0	0
MIN	0	0	0	0	36	200	248	84	.05	0	0	0
AC-FT	0	0	0	11360	18660	41820	22560	20770	835	.3	0	0
CAL YR 1978 TOTAL	169290.02			MEAN 464	MAX 6160	MIN 0	AC-FT 335800					
WTR YR 1979 TOTAL	58483.91			MEAN 160	MAX 2440	MIN 0	AC-FT 116000					

11382090 THOMES CREEK AT RAWSON ROAD BRIDGE, NEAR RICHFIELD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

WATER TEMPERATURES: Water years 1978 to current year.

SEDIMENT RECORDS: Water years 1977 to current year (water year 1977 periodic readings only).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1977 to current year (storm season only).

SEDIMENT RECORDS: November 1977 to current year (storm season only).

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,620 mg/L Jan. 14, 1978; minimum daily mean, no flow on many days each year.

SEDIMENT DISCHARGE: Maximum daily, 113,000 tons (103,000 metric tons) Jan. 14, 1978; minimum daily, 0 ton (0 metric ton) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 3,040 mg/L Mar. 27; minimum daily mean, no flow on many days during November to January.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 32,100 tons (29,100 metric tons) Mar. 27; minimum daily, 0 ton (0 metric ton) on many days during November to January.

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
(NOT PREVIOUSLY PUBLISHED)

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEBLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1977	3008.00	2794.51	844	3640
DECEMBER ...	25383.00	120139.10	15500	136000
JANUARY 1978	59604.00	469094.00	42900	512000
FEBRUARY ...	34619.00	98741.00	21600	120000
MARCH	36271.00	54367.00	21900	76300
APRIL	21385.00	2420.00	9700	12100
MAY	12943.00	515.20	4050	4560
PERIOD.....	193213.00	748070.81	116494	864600

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	9.0	---	---	13.0	---	---		
2				---	9.0	9.5	---	---	---	28.0		
3				---	10.0	---	11.5	---	---	---		
4				---	11.0	13.5	---	---	23.5	---		
5				---	9.0	---	---	---	---	---		
6				---	13.5	14.0	---	---	---	---		
7				---	14.0	14.5	---	---	---	---		
8				---	---	---	---	---	---	---		
9				---	13.0	14.0	---	---	---	---		
10				---	13.0	---	---	---	---	---		
11				10.0	---	---	---	---	---	---		
12				9.5	10.5	15.5	---	---	---	---		
13				---	8.5	15.0	---	---	---	---		
14				---	9.5	---	---	---	---	---		
15				9.0	---	14.5	---	---	---	---		
16				6.5	8.0	---	---	---	---	---		
17				7.0	7.5	---	---	---	---	---		
18				---	9.0	---	---	---	---	---		
19				7.0	11.0	---	---	---	---	---		
20				---	8.5	---	---	---	---	---		
21				---	11.0	---	---	---	---	---		
22				10.0	10.5	---	---	---	---	---		
23				---	10.5	---	---	---	---	---		
24				---	---	---	---	---	---	---		
25				---	11.5	---	---	---	---	---		
26				---	13.5	---	---	---	---	---		
27				---	13.0	---	---	---	---	---		
28				7.5	10.0	10.5	---	---	---	---		
29				7.5	---	---	---	---	---	---		
30				6.0	---	---	---	---	---	---		
31				8.0	---	---	---	---	---	---		
MONTH				---	10.5	---	---	---	---	---		

11382090 THOMES CREEK AT RAWSON ROAD BRIDGE, NEAR RICHFIELD, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
TOTAL				0	---	0	0	---	0

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	0	0	0	43	1	.12	557	130	244
2	0	0	0	39	1	.11	264	25	18
3	0	0	0	36	1	.10	200	14	7.6
4	0	0	0	38	1	.10	256	19	13
5	0	0	0	39	4	.42	360	50	52
6	0	0	0	38	3	.31	738	191	400
7	0	0	0	41	3	.33	1350	465	1730
8	0	0	0	41	2	.22	1370	376	1480
9	0	0	0	43	2	.23	1180	190	605
10	0	0	0	45	1	.12	1010	93	254
11	1540	1690	10300	62	3	.50	1010	92	251
12	768	298	757	90	5	1.2	957	172	463
13	268	315	228	1630	1340	7300	821	87	193
14	603	502	3160	1420	306	1170	759	40	82
15	1210	629	3340	788	224	627	700	47	89
16	256	28	22	821	212	562	729	50	98
17	145	8	3.1	365	40	39	669	60	108
18	117	5	1.6	393	137	200	565	61	93
19	95	4	1.0	289	30	23	458	39	48
20	73	3	.59	1050	1100	7540	358	34	33
21	76	2	.41	623	222	418	343	30	28
22	76	1	.21	369	35	36	286	24	19
23	73	1	.20	243	12	7.9	246	20	13
24	73	1	.20	177	8	3.8	227	20	12
25	69	1	.19	149	6	2.4	228	19	12
26	62	1	.17	165	7	3.1	234	21	13
27	49	1	.13	150	8	3.2	2440	3040	32100
28	49	1	.13	219	40	44	1010	425	1160
29	43	1	.12	---	---	---	716	117	226
30	39	1	.11	---	---	---	569	68	104
31	43	2	.23	---	---	---	474	36	46
TOTAL	5727.00	---	17815.39	9406	---	17983.16	21084	---	39994.6

11382090 THOMES CREEK AT RAWSON ROAD BRIDGE, NEAR RICHFIELD, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	433	21	25	391	17	18			
2	383	12	12	375	17	17			
3	359	10	9.7	379	19	19			
4	361	11	11	391	18	19			
5	410	13	14	416	30	49			
6	484	14	18	676	32	64			
7	456	12	15	595	22	35			
8	414	11	12	509	13	18			
9	394	10	11	435	12	14			
10	363	10	9.8	408	11	12			
11	342	10	9.2	385	10	10			
12	324	11	9.6	393	10	11			
13	345	11	10	371	10	10			
14	351	12	11	393	12	13			
15	353	13	12	442	17	20			
16	355	12	12	408	14	15			
17	344	11	10	378	11	11			
18	300	10	8.1	373	10	10			
19	275	9	6.7	363	10	9.8			
20	251	9	6.1	335	10	9.0			
21	252	9	6.1	297	10	8.0			
22	248	11	7.4	277	9	6.7			
23	316	18	15	252	8	5.4			
24	349	15	14	218	6	3.5			
25	291	10	7.9	196	6	3.2			
26	314	34	39	194	5	2.6			
27	880	197	529	178	5	2.4			
28	558	25	38	140	5	1.9			
29	461	20	25	117	3	.95			
30	410	17	19	101	2	.55			
31	---	---	---	84	1	.23			
TOTAL	11376	---	932.6	10470	---	419.23			
PERIOD	58063	---	77144.98						

11382090 THOMES CREEK AT RAWSON ROAD BRIDGE, NEAR RICHFIELD, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	0.0	0.0	0	0
DECEMBER ...	0.0	0.0	0	0
JANUARY 1979	5727.00	17815.39	2460	20300
FEBRUARY ...	9406.00	17983.16	4120	22100
MARCH	21084.00	39994.60	10300	50300
APRIL	11376.00	932.60	3340	4270
MAY	10470.00	419.23	2950	3370
PERIOD.....	58063.00	77144.98	23170	100340

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN 12...	1100	717	10.0	302	585	38	47	56
FEB 13...	1145	1950	8.5	1710	9000	--	32	43
16...	1030	922	8.0	336	436	28	35	40
MAR 06...	1215	840	14.0	310	703	36	45	56
28...	1110	970	10.5	260	681	--	--	--

DATE	TIME	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 12...	65	71	75	80	88	95	98	100	
FEB 13...	55	67	76	84	94	99	100	--	
16...	46	51	54	59	71	89	95	100	
MAR 06...	65	72	75	80	89	99	100	--	
28...	--	--	55	65	80	97	100	--	

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE (DEG C)	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
FEB 13...	1215	8.5	5	2000	0	1	2
13...	1216	--	--	--	0	1	5
13...	1217	--	--	--	0	2	16
13...	1218	--	--	--	--	0	2
13...	1219	--	--	--	0	1	7
MAR 28...	1205	10.5	4	950	--	--	--
28...	1206	--	--	--	--	0	1
28...	1207	--	--	--	0	1	5
28...	1208	--	--	--	--	0	5

SACRAMENTO RIVER BASIN

11382090 THOMES CREEK AT RAWSON ROAD BRIDGE NEAR RICHFIELD--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN
	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM	32.0 MM	64.0 MM
FEB							
13...	7	12	18	28	50	100	--
13...	5	12	20	31	44	100	--
13...	36	54	70	79	87	100	--
13...	6	17	46	71	91	100	--
13...	21	30	39	52	79	100	--
MAR							
28...	--	--	--	--	--	0	100
28...	1	2	3	7	13	20	100
28...	18	36	53	68	84	100	--
28...	17	30	45	63	84	100	--

LOCATION.--Lat 40°00'51", long 121°56'50", in NW¼NE¼ sec.23, T.25 N., R.1 W., Tehama County, Hydrologic Unit 18020103, on left bank 0.5 mi (0.8 km) upstream from diversion dam, and 7.9 mi (12.7 km) northeast of Vina.

PERIOD OF RECORD.--October 1911 to December 1915, March 1920 to December 1937, January 1939 to current year.
Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 479.5 ft (146.15 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 9, 1928, nonrecording gage at site 0.8 mi (1.3 km) downstream at different datum. Oct. 9, 1928, to Jan. 19, 1939, water-stage recorder at present site at datum 2.64 ft (0.805 m) higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s (674 m³/s) Dec. 10, 1937, gage height, 19.2 ft (5.85 m) present datum, from floodmarks, from rating curve extended above 9,200 ft³/s (261 m³/s) on basis of velocity-area studies; minimum, 43 ft³/s (1.22 m³/s) Dec. 13, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 5,240 ft³/s (148 m³/s) Feb. 14 (0015 hrs); gage height, 8.92 ft (2.719 m), no other peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 85 ft³/s (2.41 m³/s) on several days during August and September.

DAY	OCT	NOV	DEC	JAN	FER	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	91	120	96	100	915	457	419	176	103	88	101
2	89	91	119	96	98	528	413	393	170	103	87	97
3	88	91	102	96	96	439	379	386	165	103	87	95
4	88	91	99	98	96	383	362	385	158	103	87	94
5	88	91	101	98	96	374	368	447	154	103	87	93
6	88	91	100	98	96	416	386	563	148	101	87	92
7	88	90	93	100	95	472	365	543	143	101	87	91
8	88	90	91	189	97	490	352	520	139	99	87	90
9	88	90	95	197	97	468	353	464	136	98	87	90
10	88	90	97	125	100	432	331	422	133	98	87	89
11	88	91	98	425	103	414	330	395	129	98	87	88
12	88	94	99	353	108	405	323	383	127	99	87	88
13	87	96	99	195	1630	398	324	377	126	97	87	87
14	87	95	96	463	2360	385	340	376	124	96	88	87
15	87	94	96	910	642	482	346	371	122	95	88	87
16	87	94	95	309	1110	589	376	366	122	95	87	86
17	88	95	116	187	497	475	396	347	126	93	87	86
18	88	96	129	158	731	430	371	341	125	91	85	85
19	89	97	110	138	576	396	320	335	122	91	85	85
20	90	118	99	127	722	354	298	329	119	91	87	86
21	90	128	99	124	967	328	292	318	116	93	96	86
22	90	117	100	124	832	306	293	308	113	97	93	85
23	88	105	101	116	611	289	333	290	111	94	90	85
24	88	100	101	113	430	285	442	273	110	92	88	86
25	89	99	101	111	350	290	403	255	108	91	87	91
26	90	98	101	106	355	296	413	244	106	90	87	91
27	90	97	101	103	319	1070	528	236	105	90	87	89
28	90	96	101	104	592	989	475	223	106	90	87	87
29	90	97	98	100	---	712	445	208	104	90	100	86
30	90	102	95	98	---	593	429	196	104	89	180	85
31	89	---	95	101	---	516	---	184	---	88	127	---
TOTAL	2746	2915	3147	5658	13906	14919	11243	10897	3847	2962	2861	2668
MEAN	88.6	97.2	102	183	497	481	375	352	128	95.5	92.3	88.9
MAX	90	128	129	910	2360	1070	528	563	176	103	180	101
MIN	87	90	91	96	95	285	292	184	104	88	85	85
AC-FT	5450	5780	6240	11220	27580	29590	22300	21610	7630	5880	5670	5290
CAL YR 1978	TOTAL	145336	MEAN	398	MAX	5870	MIN	87	AC-FT	288300		
WTR YR 1979	TOTAL	77769	MEAN	213	MAX	2360	MIN	85	AC-FT	154300		

SACRAMENTO RIVER BASIN

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA

LOCATION.--Lat 39°45'06", long 121°59'43", in NE¼NE¼ sec.20, R.1 W., T.22 N., Butte County, Hydrologic Unit 18020103, on left bank upstream end of Gianella Bridge on the Sacramento River, 1.3 mi (2.1 km) northeast of Hamilton City, and 2.4 mi (3.9 km) upstream from Pine Creek.

DRAINAGE AREA.--10,833 mi² (28,057 km²).

PERIOD OF RECORD.--Water years 1951 to current year.

CHEMICAL ANALYSES: Water years 1951 to current year.

WATER TEMPERATURES: Water year 1977.

SEDIMENT RECORDS: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1976 to June 1977.

SEDIMENT RECORDS: January 1977 to current year (storm season record only for water years 1977, 1979).

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

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,480 mg/L Jan. 9, 1978; minimum daily mean, 6 mg/L Jan. 1, 5, Feb. 1, 1979.

SEDIMENT DISCHARGE: Maximum daily, 383,000 tons (347,000 metric tons) Jan. 15, 1978; minimum daily, 102 tons (93 metric tons) Oct. 15, 1977.

EXTREMES FOR WATER YEAR 1978.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,480 mg/L Jan. 9; minimum daily mean, 9 mg/L Dec. 12.

SEDIMENT DISCHARGE: Maximum daily, 383,000 tons (347,000 metric tons) Jan. 15; minimum daily, 102 tons (93 metric tons) Oct. 15.

EXTREMES FOR WATER YEAR 1979.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 1,030 mg/L Jan. 15; minimum daily mean, 6 mg/L Jan. 1, 5, Feb. 1.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 129,000 tons (117,000 metric tons) Jan. 15; minimum daily, 104 tons (94 metric tons) Feb. 1.

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
(NOT PREVIOUSLY PUBLISHED)

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
FEBRUARY 1977	163980.00	4589.00	1010	5600
MARCH	178540.00	7548.00	1010	8560
APRIL	192560.00	10839.00	1740	12600
MAY	222360.00	10967.00	2820	13800
JUNE	218240.00	9192.00	2850	12000
PERIOD	975680.00	43135.00	9430	52560

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	3760	13	132	4580	16	198	4950	16	214
2	3610	13	127	4960	18	241	4830	15	196
3	3380	13	119	5050	22	300	4760	12	154
4	3260	13	114	5100	22	303	4740	11	141
5	3160	13	111	5250	21	298	4720	10	127
6	3100	13	109	5290	19	271	4750	10	128
7	3040	13	107	5290	18	257	4760	11	141
8	3060	13	107	5290	17	243	4710	12	153
9	3000	14	113	5320	16	230	4680	11	139
10	2940	14	111	5360	16	232	4710	11	140
11	2800	14	106	5070	15	205	4820	10	130
12	2790	14	105	5090	16	220	5110	9	124
13	2780	14	105	5090	17	234	5350	10	144
14	2720	14	103	5110	17	235	7050	102	3580
15	2710	14	102	5110	16	221	29400	1360	108000
16	2750	14	104	5050	15	205	17100	832	40800
17	2850	15	115	5030	15	204	25100	865	63900
18	2970	15	120	4980	14	188	19400	506	26500
19	3100	15	126	4910	14	186	10400	160	4490
20	3110	15	126	4920	13	173	7720	100	2080
21	3110	15	126	5490	28	415	6480	60	1050
22	3150	15	128	7600	31	623	7410	68	1360
23	3210	15	130	8080	58	1210	28600	1020	98600
24	3250	15	132	7560	39	796	18700	367	21300
25	3560	16	154	6480	36	630	10600	100	2860
26	4020	16	176	6160	34	565	8160	72	1590
27	4190	16	181	5930	30	480	7730	88	1840
28	4260	16	184	5790	26	406	9850	120	3190
29	4410	16	191	5540	21	314	8770	90	2130
30	4530	16	196	5070	15	205	9000	95	2310
31	4580	16	198	---	---	---	8240	87	1940
TOTAL	103160	---	4058	165550	---	10288	302600	---	389451
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	6980	60	1130	8540	28	646	10300	58	1610
2	6410	46	796	8370	32	723	15000	116	4980
3	8990	51	1240	10200	50	1380	33700	333	30300
4	9680	134	3500	9070	55	1350	57900	476	80100
5	23600	520	33100	14400	60	2330	92500	854	216000
6	28700	784	63000	37500	128	13000	65600	564	99900
7	15900	360	15500	58600	913	162000	49400	312	41600
8	11800	618	19900	68000	1140	219000	63300	490	95500
9	49100	1480	202000	59500	848	140000	96500	967	253000
10	95000	1290	345000	41100	424	47100	69800	518	97600
11	32100	590	51100	33000	394	35100	69900	546	103000
12	22400	300	18100	33500	392	35500	64200	422	73100
13	26100	240	16900	45400	424	52000	55800	283	42600
14	58800	510	81000	35900	193	18700	52700	228	32400
15	113000	1230	383000	32200	158	13700	46900	266	33700
16	97900	1010	278000	29300	145	11500	38400	335	34700
17	107000	954	290000	24400	168	11100	30100	395	32100
18	51000	753	103000	21200	146	8360	22900	343	21200
19	53400	1290	187000	17300	125	5840	19600	255	13500
20	42200	458	52200	16700	116	5230	17600	204	9690
21	27500	300	22300	16300	110	4840	15900	166	7130
22	24300	260	17100	15900	81	3480	15400	127	5280
23	21300	240	13800	13900	69	2590	15100	100	4080
24	19000	220	11300	13400	78	2820	15600	68	2900
25	17200	140	6500	13000	81	2840	14300	57	2200
26	14700	96	3810	11100	86	2580	13700	51	1890
27	11900	80	2570	12000	92	2980	13300	55	1980
28	10900	56	1650	11300	79	2410	13100	59	2090
29	10400	48	1350	---	---	---	13000	74	2600
30	9960	41	1100	---	---	---	12900	85	2960
31	9490	34	871	---	---	---	12800	77	2660
TOTAL	1036710	---	2227817	711080	---	809099	1127200	---	1352350

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	17200	80	3720	16300	81	3560	7520	21	426
2	24300	150	9840	15300	81	3350	7320	21	415
3	17000	112	5140	14900	81	3260	6890	21	391
4	19100	110	5670	14400	82	3190	6750	21	381
5	18400	125	6210	13800	68	2530	6690	22	397
6	23600	176	12700	13700	46	1700	6970	23	433
7	40100	337	38400	13400	35	1270	7290	22	433
8	23700	92	5890	12700	35	1200	7310	22	434
9	22600	81	4940	12000	47	1520	7300	24	473
10	21300	82	4720	11800	60	1910	7610	27	555
11	20500	81	4480	11100	55	1650	7330	28	554
12	19700	82	4360	10800	50	1460	7330	25	495
13	18300	84	4150	10500	47	1370	7400	16	320
14	18700	128	6460	11000	42	1250	7570	13	266
15	18600	144	7230	11100	38	1140	7870	13	276
16	24700	160	10700	10400	34	955	7850	12	254
17	20100	98	5320	9670	30	783	7940	12	257
18	19000	98	5030	9330	27	680	7890	11	234
19	17600	95	4510	9290	29	727	7910	11	235
20	18700	120	6060	9080	29	711	7850	14	297
21	16700	135	6090	8970	23	557	7780	23	483
22	14400	126	4900	8860	25	598	7740	28	585
23	13400	120	4340	8410	28	636	7690	26	540
24	11800	114	3630	8300	29	650	7780	24	504
25	14300	154	5950	8190	30	663	8140	21	462
26	24000	619	40400	8140	29	637	8090	20	437
27	17600	174	8820	7840	28	593	8150	22	484
28	13900	86	3230	7790	26	547	8080	27	589
29	17100	104	4800	7740	22	460	8160	33	727
30	16600	88	3940	7720	21	438	8160	36	793
31	---	---	---	7640	21	433	---	---	---
TOTAL	583000	---	241630	330470	---	40428	228360	---	13130
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	8100	35	765	8680	16	375	6730	12	218
2	8160	34	749	8590	16	371	6780	12	220
3	8210	34	754	8400	14	318	6870	12	223
4	8450	34	776	8280	13	291	6940	12	225
5	8550	34	785	8360	13	293	7010	12	227
6	8380	32	724	8390	13	294	7150	12	232
7	8040	28	608	8370	13	294	6740	12	218
8	7940	28	600	8380	13	294	6830	12	221
9	7960	29	623	8310	13	292	7070	12	229
10	8040	29	630	8310	13	292	7120	12	231
11	7950	29	622	8140	13	286	7480	12	242
12	7840	29	614	8990	15	364	7200	12	233
13	7810	30	633	9640	24	625	6550	12	212
14	8340	32	721	9660	33	861	6410	12	208
15	8880	35	839	9690	35	916	6350	12	206
16	8910	36	866	9710	23	603	6250	12	202
17	8980	35	849	9640	20	521	6140	12	199
18	8900	34	817	9380	27	684	6090	12	197
19	8810	29	690	8410	23	522	6100	12	198
20	8780	26	616	8360	24	542	6120	12	198
21	8800	25	594	8350	16	361	6060	12	196
22	8720	23	542	8470	12	274	6020	12	195
23	8820	23	548	7600	12	246	6080	12	197
24	8670	24	562	7520	15	305	6000	12	194
25	8690	27	634	7530	16	325	6100	12	198
26	8670	30	702	7570	17	347	6120	12	198
27	8610	31	721	7650	19	392	6190	12	201
28	8610	30	697	7790	20	421	6200	12	201
29	8650	25	584	7730	14	292	6200	12	201
30	8730	20	471	7310	12	237	6310	12	204
31	8770	17	403	7120	12	231	---	---	---
TOTAL	262770	---	20739	260330	---	12469	195210	---	6324
YEAR	5306440		5127783						

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	103160.00	4058.00	129	4190
NOVEMBER ...	165550.00	10288.00	457	10700
DECEMBER ...	302600.00	389451.00	2490	392000
JANUARY 1978	1036710.00	2227817.00	23500	2250000
FEBRUARY ...	711080.00	809899.00	12200	821000
MARCH	1127200.00	1352350.00	24900	1380000
APRIL	583000.00	241630.00	6830	248000
MAY	330470.00	40428.00	2160	42600
JUNE	228360.00	13130.00	946	14100
JULY	262770.00	20739.00	1240	22000
AUGUST	260330.00	12469.00	1230	13700
SEPTEMBER ..	195210.00	6324.00	659	6980
TOTAL	5306440.00	5127883.00	76741	5205270

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
DEC								
15...	1650	35900	11.0	1280	124000	26	38	54
JAN								
10...	1330	11100	11.5	1010	30300	24	35	45
18...	1145	48300	10.0	758	98900	18	26	37
FEB								
08...	0915	76500	10.0	1130	233000	23	32	42
10...	1350	40000	9.5	388	41900	14	20	26
MAR								
08...	0820	47000	10.5	275	34900	--	--	--
22...	1645	15400	12.5	115	4780	13	19	23
APR								
27...	1030	16700	14.0	106	4780	0	29	37

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
------	--	--	---	---	---	---	---

DEC							
15...	66	75	80	87	96	100	--
JAN							
10...	55	65	74	85	96	100	--
18...	49	64	80	94	100	--	--
FEB							
08...	53	63	73	81	91	100	--
10...	34	44	60	82	96	100	--
MAR							
08...	--	--	47	67	90	99	100
22...	29	39	52	68	92	100	--
APR							
27...	50	61	82	90	98	100	--

SACRAMENTO RIVER BASIN

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)
OCT										
30...	1315	5760	129	7.5	13.0	3.0	10.9	--	--	--
NOV										
28...	1350	7250	126	7.5	11.0	3.0	11.8	--	--	--
DEC										
27...	1230	7280	131	7.3	8.0	1.0	11.8	--	--	--
JAN										
29...	1055	6380	159	7.5	7.0	3.0	12.1	--	--	--
MAR										
28...	1145	23500	149	7.7	12.5	140	10.2	--	--	54
APR										
25...	1225	10400	153	7.5	13.0	17	10.7	--	--	--
MAY										
30...	1350	6710	134	7.6	16.5	1.0	10.4	2	.9	48
JUN										
27...	1235	8060	129	7.5	16.5	3.0	10.3	--	--	--
JUL										
25...	1150	10500	126	7.4	16.0	3.0	10.0	--	--	--
AUG										
22...	1205	5650	130	7.7	18.0	2.0	10.1	1	1.1	--
SEP										
26...	1330	4990	133	7.5	18.0	1.0	9.9	2	.8	50

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 AD- SORP- TION RATIO	ALKA- LINITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT										
30...	--	--	--	--	--	--	--	--	--	--
NOV										
28...	--	--	--	--	--	--	--	--	--	--
DEC										
27...	--	--	--	--	--	--	--	--	.15	--
JAN										
29...	--	--	--	--	--	--	--	4	--	.22
MAR										
28...	0	12	6.0	8.0	.5	55	3.0	299	--	.12
APR										
25...	--	--	--	--	--	--	--	43	--	.00
MAY										
30...	0	11	5.0	8.0	.5	53	3.0	5	--	.07
JUN										
27...	--	--	--	--	--	--	--	6	--	.03
JUL										
25...	--	--	--	--	--	--	--	7	--	.05
AUG										
22...	--	--	--	--	--	--	--	4	--	.04
SEP										
26...	0	10	6.0	8.0	.5	53	3.0	4	--	.08

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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 DIS- (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 30...	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--
DEC 27...	.01	--	.20	--	.21	.02	.02	--	--
JAN 29...	--	.00	--	.20	.20	.03	.01	--	--
MAR 28...	--	.00	--	.70	.70	.22	.02	0	--
APR 25...	--	.02	--	1.2	1.2	.06	.01	--	--
MAY 30...	--	.00	--	.40	.40	.03	.00	0	1.2
JUN 27...	--	.01	--	.39	.40	.03	.00	--	--
JUL 25...	--	.01	--	.49	.50	.02	.00	--	--
AUG 22...	--	.01	--	.59	.60	.03	.00	--	1.6
SEP 26...	--	.01	--	.49	.50	.03	.01	0	1.6

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				5420	18	263	7540	7	143
2				5410	18	263	7570	7	143
3				5470	18	266	7450	8	161
4				5840	18	284	7440	9	181
5				6420	15	260	7420	10	200
6				6480	10	175	7460	10	201
7				6490	8	140	7410	10	200
8				6420	8	139	7410	10	200
9				6470	8	140	7450	11	221
10				6250	8	135	7450	11	221
11				6440	8	139	7520	10	203
12				6440	8	139	7480	11	222
13				6650	10	180	7480	11	222
14				6750	10	182	7490	9	182
15				7050	12	228	7500	7	142
16				6910	12	224	7470	8	161
17				6810	12	221	7560	9	184
18				6940	12	225	7750	9	188
19				6890	13	242	7720	9	188
20				7220	14	273	7570	9	184
21				7810	14	295	7600	9	185
22				7970	14	301	7560	9	184
23				7820	13	274	7570	8	164
24				7670	12	249	7600	8	164
25				7560	11	225	7540	7	143
26				7490	10	202	7640	10	206
27				7520	8	162	7570	12	245
28				7440	8	161	7640	12	248
29				7520	7	142	7560	12	245
30				7470	7	141	7490	10	202
31				---	---	---	7570	9	184
TOTAL				205040	---	6270	233480	---	5917

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	7530	6	122	6400	6	104	30300	278	25100
2	7560	7	143	6100	10	165	16600	100	4480
3	7540	8	163	5640	12	183	12100	47	1540
4	7540	7	143	5530	13	194	11000	37	1100
5	7490	6	121	5480	13	192	10000	33	891
6	6660	9	162	5420	14	205	9740	32	842
7	6510	12	211	5100	13	179	10300	30	834
8	7230	18	351	5050	14	191	10600	47	1350
9	9760	24	632	4990	13	175	10200	45	1240
10	8300	26	583	4950	12	160	9770	37	976
11	15200	132	6900	4960	16	214	9310	26	654
12	21000	344	19400	5070	20	274	9110	25	615
13	13300	100	3590	12900	72	3710	8850	26	621
14	14800	100	4000	57400	511	83000	8630	27	629
15	46600	1030	129000	21900	273	15000	8690	35	821
16	27500	260	19300	26000	342	24400	10600	41	1170
17	15000	100	4050	18600	190	9540	11900	47	1510
18	11100	60	1800	14900	160	6440	11300	45	1370
19	9610	32	830	25800	300	20900	12800	34	1180
20	9090	20	491	18600	435	21800	10300	22	612
21	8750	15	354	41100	440	48800	9300	22	552
22	8600	20	464	27900	185	13900	9640	27	703
23	8630	23	536	25000	130	8770	9230	95	2370
24	7610	19	390	17000	120	5510	8480	200	4580
25	7400	15	300	13000	90	3160	8120	220	4820
26	7190	13	252	11800	62	1980	7950	228	4890
27	7170	10	194	11800	40	1270	13700	254	9400
28	6960	8	150	10200	34	936	24300	255	16700
29	6950	10	188	---	---	---	18400	155	7700
30	6860	9	167	---	---	---	16400	117	5180
31	6780	7	128	---	---	---	15300	105	4340
TOTAL	342220	---	195115	418590	---	271352	372920	---	108770
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	85	3260	9380	60	1520			
2	13600	60	2200	9200	50	1240			
3	13000	42	1470	8380	40	905			
4	10200	24	661	7980	38	819			
5	9350	24	606	7840	36	762			
6	9600	24	622	10600	34	973			
7	9730	25	657	10700	32	924			
8	9290	26	652	10600	30	859			
9	8930	23	555	8530	28	645			
10	8670	20	468	7770	26	545			
11	7400	19	380	7410	24	480			
12	6600	30	535	8600	22	511			
13	6210	41	687	8940	20	483			
14	6030	46	749	8960	19	460			
15	7060	47	896	8820	18	429			
16	7660	41	848	8810	18	428			
17	7850	34	721	8700	19	446			
18	7710	27	562	8590	19	441			
19	6820	21	387	8580	20	463			
20	6210	27	453	8530	20	461			
21	5660	36	550	8530	21	484			
22	6350	42	720	8150	21	462			
23	7690	48	997	8130	22	483			
24	9990	50	1350	7940	22	472			
25	11000	51	1510	7810	23	485			
26	9930	52	1390	7770	23	483			
27	9760	53	1400	7590	24	492			
28	10000	54	1460	7390	24	479			
29	9290	56	1400	7010	25	473			
30	8840	58	1380	6950	25	469			
31	---	---	---	6860	26	482			
TOTAL	264630	---	29526	261050	---	19058			
PERIOD 2097930		---	636008						

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	205040.00	6270.00	359	6630
DECEMBER ...	233480.00	5917.00	538	6460
JANUARY 1979	342220.00	195115.00	3280	198000
FEBRUARY ...	418590.00	271352.00	6490	278000
MARCH	372920.00	108770.00	3160	112000
APRIL	264630.00	29526.00	1130	30700
MAY	261050.00	19058.00	875	19900
PERIOD	2097930.00	636008.00	15832	651690

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN 16...	1020	25800	7.5	244	17000	31	38	46
FEB 14...	1150	67500	10.0	749	137000	21	27	34
15...	1300	18800	6.0	620	31500	19	24	28
MAR 07...	1244	10100	13.0	28	764	--	--	--
APR 04...	1248	9500	12.5	22	564	--	--	--
MAY 15...	1530	8640	19.0	19	443	--	--	--

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
JAN 16...	55	65	73	86	97	100	--
FEB 14...	42	51	58	72	89	99	100
15...	33	42	56	89	100	--	--
MAR 07...	--	--	74	88	95	100	--
APR 04...	--	--	80	90	94	96	100
MAY 15...	--	--	74	88	95	100	--

SACRAMENTO RIVER BASIN

11384000 BIG CHICO CREEK NEAR CHICO, CA

LOCATION.--Lat 39°46'35", long 121°45'10", in Arroyo Chico Grant, Butte County, Hydrologic Unit 18020119, on right bank 1.8 mi (2.9 km) upstream from golf clubhouse in Bidwell Park, 2.6 mi (4.2 km) upstream from Lindo Channel, and 7 mi (11 km) northeast of Chico.

DRAINAGE AREA, --72.4 mi² (187.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to current year. Prior to October 1952, published as Chico Creek near Chico.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 300 ft (91 m), from topographic map. Prior to Oct. 1, 1955, at site 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Records good. No storage or large diversion above station.

AVERAGE DISCHARGE.--49 years, 144 ft³/s (4.078 m³/s), 104,300 acre-ft/yr (129 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,580 ft³/s (271 m³/s) Jan. 5, 1965, gage height, 15.36 ft (4.682 m); minimum, 10 ft³/s (0.28 m³/s) Dec. 11, 1932, Aug. 15, 1939, Sept. 18, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,600 ft³/s (73.6 m³/s) Feb. 14 (0300 hrs), gage height, 7.43 ft (2.265 m), no other peak above base of 1,600 ft³/s (45.3 m³/s); minimum daily 18 ft³/s (0.51 m³/s) Feb. 6-11.

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	21	23	30	26	22	747	243	147	46	26	20	27
2	21	23	33	27	21	437	212	198	44	22	20	24
3	21	23	28	26	19	318	184	165	43	22	20	24
4	21	23	27	27	19	260	161	144	42	22	20	23
5	22	23	27	27	19	242	144	171	40	21	20	23
6	22	23	27	27	18	272	133	232	38	21	20	22
7	22	23	26	27	18	320	121	246	37	22	19	26
8	22	23	25	74	18	323	109	248	37	24	19	26
9	21	23	25	108	18	290	103	222	36	24	20	22
10	21	23	26	50	18	250	96	192	36	22	20	22
11	21	23	26	257	18	222	95	165	35	21	19	22
12	21	24	26	131	19	202	89	142	34	21	20	21
13	21	27	26	65	623	184	84	124	32	21	21	21
14	21	27	26	180	1490	169	80	113	33	21	21	21
15	21	26	26	534	418	218	77	104	33	21	21	20
16	22	25	26	219	450	300	77	96	33	21	20	20
17	22	25	37	120	323	264	93	89	33	21	20	21
18	22	25	48	83	367	230	100	83	32	20	20	20
19	21	28	36	63	355	210	89	77	33	20	20	20
20	21	37	29	53	423	184	83	72	32	20	20	20
21	22	38	28	49	632	165	78	67	31	21	22	21
22	22	36	28	46	553	147	74	69	31	22	22	21
23	22	31	28	43	470	126	92	63	31	22	22	21
24	22	28	27	40	341	114	246	60	30	20	20	20
25	22	28	27	36	275	107	204	58	30	20	20	22
26	22	27	27	32	270	106	192	55	29	20	20	23
27	22	27	27	28	259	497	235	54	28	20	20	22
28	22	26	27	26	387	740	204	53	26	20	20	21
29	22	26	27	24	---	484	180	52	26	19	33	21
30	23	26	26	22	---	360	162	50	26	20	42	21
31	23	---	25	24	---	290	---	48	---	20	40	---
TOTAL	671	790	877	2494	7863	8778	4040	3659	1017	657	681	658
MEAN	21.6	26.3	28.3	80.5	281	283	135	118	33.9	21.2	22.0	21.9
MAX	23	38	48	534	1490	747	246	248	46	26	42	27
MIN	21	23	25	22	18	106	74	48	26	19	19	20
AC-FT	1330	1570	1740	4950	15600	17410	8010	7260	2020	1300	1350	1310
CAL YR 1978	TOTAL	73576	MEAN 202	3890	MIN 19	AC-FT	145900					
WTR YR 1979	TOTAL	32185	MEAN 88.2	1490	MIN 18	AC-FT	63840					

11384000 BIG CHICO CREEK NEAR CHICO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1953-69, 1975 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
NOV 24...	1215	28	210	7.9	8.0	1.0	12.2
MAR 21...	1410	164	107	7.7	11.0	1.0	11.6
MAY 29...	1235	52	165	8.1	18.5	1.0	9.5
JUL 19...	1205	20	214	8.2	25.0	1.0	8.3
SEP 25...	1225	22	224	8.3	19.5	.00	9.5

SACRAMENTO RIVER BASIN

11384600 LITTLE STONY CREEK ABOVE EAST PARK RESERVOIR, NEAR LODOGA, CA

LOCATION.--Lat 39°17'48", long 122°32'22", in NE¼SW¼ sec.28, T.17 N., R.6 W., Colusa County, Hydrologic Unit 18020115, on left bank 1.1 mi (1.8 km) upstream from county bridge on Lodoga-Stonyford Road, 1.4 mi (2.3 km) downstream from Frenzel Creek, and 2.8 mi (4.5 km) southwest of Lodoga.

DRAINAGE AREA.--45.6 mi² (118.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (396 m), from topographic map.

REMARKS.--Records good. No known storage or diversions above station.

AVERAGE DISCHARGE.--13 years, 56.7 ft³/s (1.606 m³/s), 41,080 acre-ft/yr (50.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Jan. 23, 1970, gage height, 11.39 ft (3.472 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s); no flow at times in 1972, 1976, and 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 524 ft³/s (14.8 m³/s) Mar. 27, gage-height, 5.46 ft (1.664 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily, 0.58 ft³/s (0.016 m³/s) Sept. 17, 18.

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	1.1	1.7	2.5	2.7	8.7	156	75	43	16	6.7	1.0	1.7
2	1.1	1.9	2.5	3.0	8.3	123	69	41	16	6.7	.99	1.6
3	1.0	2.0	2.4	3.1	7.8	110	63	39	15	6.7	.88	1.4
4	1.0	2.1	2.5	4.7	7.8	99	59	37	13	6.7	.82	1.3
5	1.0	2.1	2.7	4.2	8.2	95	57	43	12	6.3	.83	1.3
6	1.0	2.0	2.8	3.5	8.4	104	56	46	12	5.9	.82	1.2
7	1.1	2.0	2.8	4.6	8.4	108	53	50	12	5.9	.82	1.1
8	1.1	1.9	3.1	4.5	8.5	107	50	46	12	5.5	.77	.95
9	1.1	1.7	3.4	21	8.6	99	47	43	12	5.2	.72	.91
10	1.1	1.7	3.3	43	10	90	46	41	12	5.2	.66	.88
11	1.1	1.9	3.5	199	12	85	44	39	12	4.8	.62	.80
12	1.1	2.3	3.5	41	13	81	43	37	12	4.5	.61	.74
13	.99	3.1	3.4	23	233	76	42	36	12	3.9	.67	.76
14	.97	3.1	3.3	139	214	74	41	35	12	3.3	.84	.72
15	1.0	3.0	3.3	154	95	75	40	33	12	3.1	1.0	.66
16	1.1	3.2	3.2	57	173	72	41	32	12	2.8	.91	.59
17	1.1	3.2	3.7	35	99	68	40	31	12	2.6	.85	.58
18	1.1	3.2	4.0	31	166	66	38	29	12	2.4	.78	.58
19	1.1	4.0	3.5	24	125	63	36	28	12	2.4	.73	.64
20	1.2	5.7	2.8	21	188	59	35	27	11	1.9	.79	.69
21	1.3	4.6	3.2	20	228	56	34	27	10	1.9	.93	.74
22	1.4	6.6	3.3	18	164	54	37	26	10	2.4	1.0	.75
23	1.3	5.3	3.3	15	128	50	44	26	9.2	2.4	1.0	.74
24	1.2	4.0	3.3	14	100	48	48	24	8.8	1.9	.95	.80
25	1.3	3.5	3.2	13	87	47	40	23	8.0	1.6	.90	.91
26	1.3	3.4	3.1	11	106	46	67	22	7.6	1.6	.86	1.1
27	1.3	3.3	3.1	10	88	278	62	21	7.6	1.4	.75	1.4
28	1.4	2.5	3.1	10	141	158	50	20	7.1	1.5	.73	1.2
29	1.4	2.5	3.1	8.9	---	115	47	18	6.7	1.5	1.2	1.1
30	1.4	2.5	2.6	9.5	---	96	44	18	6.7	1.3	3.3	1.1
31	1.5	---	2.8	9.3	---	83	---	17	---	1.2	2.3	---
TOTAL	36.16	90.0	96.3	997.5	2444.7	2841	1448	998	332.7	111.2	30.03	28.94
MEAN	1.17	3.00	3.11	32.2	87.3	91.6	48.3	32.2	11.1	3.59	.97	.96
MAX	1.5	6.6	4.0	199	233	278	75	50	16	6.7	3.3	1.7
MIN	.97	1.7	2.4	2.7	7.8	46	34	17	6.7	1.2	.61	.58
AC-FT	72	179	191	1980	4850	5640	2870	1980	660	221	60	57
CAL YR 1978 TOTAL	29404.26			MEAN 80.6	MAX 1970	MIN .83	AC-FT 58320					
WTR YR 1979 TOTAL	9454.53			MEAN 25.9	MAX 278	MIN .58	AC-FT 18750					

11384600 LITTLE STONY CREEK ABOVE EAST PARK RESERVOIR, NEAR LODOGA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1967 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from May 1967 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 33.5°C July 15, 1972; minimum recorded, 0.0°C Dec. 21-23, 1968, Jan. 28 to Feb. 1, 1975.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 21.0°C Oct. 1, 5; minimum recorded, 0.5°C Dec. 20, 21, 29-31, Jan. 1, 2, 29.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

RESERVOIRS IN STONY CREEK BASIN, CA

11385100 EAST PARK RESERVOIR NEAR STONYFORD.--Lat 39°21'24", long 122°30'53", in SW¼NE¼ sec.3, T.17 N., R.6 W., Colusa County, Hydrologic Unit 18020115, near south side of spillway section on East Park Dam on Little Stony Creek, 1.9 mi (3.1 km) southeast of Stonyford. DRAINAGE AREA, 98.2 mi² (254.3 km²). PERIOD OF RECORD, October 1969 to current year. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service).

Reservoir is formed by a concrete arch-type dam. Storage began in 1910. Capacity, 48,211 acre-ft (59.4 hm³) between elevations 1,131.68 ft (344,936 m), invert of sluice pipe and 1,198.18 ft (365,205 m), crest of spillway. Capacity increased to 50,889 acre-ft (62.7 hm³) with the addition of flashboards to an elevation of 1,199.68 ft (365.662 m). Dead storage, 279 acre-ft (344,000 m³). Records of contents furnished by Water and Power Resources Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,500 acre-ft (66.0 hm³) Mar. 30, 1974, elevation, 1,201.10 ft (366.095 m); minimum, 280 acre-ft (345,000 m³) Aug. 8 to Oct. 31, 1972, Apr. 30 to Nov. 1, 1977, elevation, 1,131.68 ft (344,936 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 51,470 acre-ft (63.5 hm³) Mar. 28, elevation, 1,200.00 ft (365.760 m); minimum, 29,090 acre-ft (35.9 hm³) Oct. 26-28, elevation, 1,185.64 ft (361.383 m).

11386100 STONY GORGE RESERVOIR NEAR ELK CREEK.--Lat 39°35'09", long 122°31'54", in NE¼SE¼ sec.16, T.20 N., R.6 W., Glenn County, Hydrologic Unit 18020115, on south end of Stony Gorge Dam on Stony Creek, 1.3 mi (2.1 km) southeast of Elk Creek. DRAINAGE AREA, 301 mi² (780 km²). PERIOD OF RECORD, October 1969 to current year. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service).

Reservoir is formed by slab and buttress-type dam. Storage began in 1928. Capacity, 50,383 acre-ft (62.1 hm³) between elevations, 728.0 ft (221.89 m), top of low intake and 841.0 ft (256.34 m), crest of spillway. No dead storage. Records of contents furnished by Water and Power Resources Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 54,630 acre-ft (67.4 hm³) Mar. 26, 1971, elevation, 844.20 ft (257.312 m); minimum, 3,810 acre-ft (4.70 hm³) Nov. 6, 1971, elevation, 779.20 ft (237.500 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,110 acre-ft (64.3 hm³) Mar. 28, elevation, 842.32 ft (256.739 m); minimum, 11,100 acre-ft (13.7 hm³) Nov. 13, elevation, 797.72 ft (243.145 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
11385100 EAST PARK RESERVOIR				11386100 STONY GORGE RESERVOIR		
Sept. 30.....	1,185.98	29,530	-680	801.74	13,380	-6,040
Oct. 31.....	1,185.68	29,140	-390	801.86	13,450	+70
Nov. 30.....	1,186.70	30,480	+1,340	798.68	11,620	-1,830
Dec. 31.....	1,187.38	31,390	+910	800.00	12,360	+740
CAL YR 1978.....	--	--	+18,100	--	--	-10,050
Jan. 31.....	1,192.96	39,540	+8,150	814.94	22,730	+10,370
Feb. 28.....	1,198.38	48,570	+9,030	838.06	46,650	+23,920
Mar. 31.....	1,199.90	51,290	+2,720	841.60	51,170	+4,520
Apr. 30.....	1,199.84	51,180	-110	837.56	46,030	-5,140
May 31.....	1,199.62	50,780	-400	832.60	40,120	-5,910
June 30.....	1,199.18	49,990	-790	832.46	39,960	-160
July 31.....	1,194.10	41,350	-8,640	830.00	37,200	-2,760
Aug. 31.....	1,189.90	34,930	-6,420	814.78	22,600	-15,600
Sept. 30.....	1,189.42	34,240	-690	807.56	17,140	-5,460
WTR YR 1979.....	--	--	+4,710	--	--	+3,760

11387990 SOUTH DIVERSION CANAL NEAR ORLAND, CA

LOCATION.--Lat 39°48'36", long 122°19'45", in SE4NE4 sec.32, T.23 N., R.4 W., Tehama County, Hydrologic Unit 18020103, on left bank 0.4 mi (0.6 km) downstream from Black Butte Dam, and 8.2 mi (13.2 km) northwest of Orland.

PERIOD OF RECORD.--July 1955 to current year. Prior to October 1961, published as an adjustment to Stony Creek at Black Butte damsite, near Orland.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 372.64 ft (113.581 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 23, 1956, at site 0.5 mi (0.8 km) upstream at different datum. Oct. 23, 1956, to Sept. 30, 1960, at present site and datum. Oct. 1, 1960, to Sept. 30, 1961, at datum 1.00 ft (0.305 m) lower.

REMARKS.--Records good. Canal diverts from Black Butte Lake at right end of Black Butte Dam; water is used for irrigation. A pump with a capacity of 6 ft³/s (0.17 m³/s) diverted water at times above station and was included in the canal record prior to Mar. 1, 1970. Total diverted during the current year was 1,030 acre-ft (1.27 hm³).

AVERAGE DISCHARGE.--24 years, 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 320 ft³/s (9.06 m³/s) May 8, 1969; no flow at times in most years.

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	152	80	1.0	2.6	1.5	.70	.90	5.5	256	174	236	67
2	156	51	.80	2.8	1.5	.60	.80	5.0	254	181	256	43
3	144	25	1.4	1.7	1.5	.70	.80	66	244	208	269	43
4	142	.90	1.8	1.7	1.5	.70	1.0	135	235	213	242	71
5	135	1.2	1.9	1.9	1.6	.90	1.3	162	250	214	231	92
6	149	59	1.7	1.9	1.7	.80	1.5	154	235	223	214	133
7	137	107	1.7	2.4	1.7	1.0	1.9	170	228	229	206	159
8	92	120	1.7	2.6	1.7	.90	2.1	172	210	225	171	172
9	75	75	1.7	2.4	1.4	.40	2.9	151	206	210	192	177
10	74	24	1.5	2.2	1.1	0	47	143	191	188	199	210
11	64	1.5	1.1	2.2	1.2	0	67	150	206	183	212	220
12	107	1.5	1.1	2.1	1.9	0	67	160	216	197	220	241
13	144	4.3	1.0	1.6	2.7	5.0	72	148	237	186	205	240
14	115	0	.80	1.6	1.5	5.0	80	144	245	188	197	226
15	79	0	.80	3.0	1.2	1.6	103	146	244	205	212	191
16	109	.20	.80	1.5	1.4	1.8	167	147	244	198	216	150
17	113	1.4	.80	1.5	1.0	1.4	191	154	226	220	201	123
18	91	1.5	.80	1.4	1.5	1.7	182	192	208	235	194	113
19	110	1.5	.80	1.3	1.5	2.2	174	219	208	229	182	149
20	114	1.5	.80	1.3	3.0	2.0	175	258	202	230	165	163
21	110	1.5	.80	1.3	1.3	3.8	171	248	205	231	151	183
22	81	1.5	.80	1.4	1.0	1.1	124	249	210	230	146	194
23	44	1.5	.80	1.3	1.0	1.1	84	242	216	209	146	168
24	38	1.5	.80	1.3	.20	1.1	63	240	215	162	169	164
25	40	1.5	.80	1.1	.40	1.1	64	212	226	167	184	186
26	65	1.5	2.7	1.1	.30	1.2	42	187	221	194	194	173
27	56	1.5	.80	1.1	.20	2.9	13	172	216	207	215	126
28	7.2	1.5	.80	1.0	.60	1.0	3.9	172	221	209	214	121
29	2.0	1.5	1.6	1.5	---	.30	4.3	170	218	178	175	118
30	59	1.2	1.6	1.5	---	.40	4.6	206	187	207	134	96
31	92	---	2.1	1.5	---	.60	---	235	---	217	110	---
TOTAL	2896.2	571.20	37.60	53.8	37.10	42.00	1912.00	5214.5	6680	6347	6058	4512
MEAN	93.4	19.0	1.21	1.74	1.33	1.35	63.7	168	223	205	195	150
MAX	156	120	2.7	3.0	3.0	5.0	191	258	256	235	269	241
MIN	2.0	0	.80	1.0	.20	0	.80	5.0	187	162	110	43
AC-FT	5740	1130	75	107	74	83	3790	10340	13250	12590	12020	8950

CAL YR 1978 TOTAL 32365.20 MEAN 88.7 MAX 264 MIN 0 AC-FT 64200
WTR YR 1979 TOTAL 34361.40 MEAN 94.1 MAX 269 MIN 0 AC-FT 68160

SACRAMENTO RIVER BASIN

11387995 BLACK BUTTE LAKE NEAR ORLAND, CA

LOCATION.--Lat 39°48'50", long 122°20'12", in SE¼SW¼ sec.29, T.23 N., R.4 W., Tehama County, Hydrologic Unit 18020115, in control tower in right abutment of main dam on Stony Creek, 8 mi (13 km) northwest of Orland.

DRAINAGE AREA.--738 mi² (1,911 km²).

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1971, published as Black Butte Reservoir near Orland.

REVISED RECORDS.--WDR CA-77-4: 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 seven earthfill dams. Storage began Oct. 28, 1963. Usable capacity, 137,036 acre-ft (169 hm³) between elevations 414.6 ft (126.37 m) normal minimum operating level, and 473.5 ft (144.32 m) spillway crest. An additional storage of 6,640 acre-ft (8.19 hm³) is available for release if needed. Capacity table revised Oct. 1, 1978. South Diversion Canal (station 11397990) diverts at right end of dam. Water is released down Stony Creek for irrigation. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records of contents furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 149,700 acre-ft (185 hm³) June 8, 9, 1967, elevation, 471.19 ft (143.619 m); minimum since initial season of operation, 1,006 acre-ft (1.24 hm³) Nov. 6, 1977, elevation, 397.20 ft (121.067 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 108,758 acre-ft (134 hm³) May 10, elevation, 465.03 ft (141.741 m); minimum, 17,239 acre-ft (21.2 hm³) Jan. 7, elevation, 427.09 ft (130.177 m).

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

397	950	415	6,874
398	1,095	420	10,340
399	1,256	430	20,845
400	1,432	440	37,172
403	2,070	450	60,258
406	2,897	460	90,634
409	3,948	470	128,571
412	5,260	480	174,303

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33756	21689	20818	17813	26412	44890	96509	106645	88904	61655	41038	31687
2	33226	21513	20699	17707	26365	46525	97753	107171	88096	60820	40518	31987
3	32648	21446	20621	17601	26334	48060	98719	107510	87193	59886	39981	32271
4	32040	21473	20503	17507	26288	49626	99762	107699	86395	58960	39449	32414
5	31423	21500	20372	17402	26257	51008	100486	107888	85502	58017	38963	32254
6	30849	21392	20281	17297	26226	52535	100993	107925	84483	57085	38500	31987
7	30315	21124	20165	17239	26195	54743	101175	108265	83473	56135	38080	31616
8	29924	20871	20074	17332	26164	57162	101431	108455	82598	55221	37625	31231
9	29586	20621	19959	17320	26164	59435	101685	108606	81664	54292	36840	30797
10	29267	20608	19856	17402	26148	60713	101905	108758	80833	53372	36028	30315
11	28968	20621	19741	19137	26164	61116	102051	108531	79911	52535	35210	29856
12	28539	20581	19640	19908	26350	62279	102124	107774	78996	51586	34366	29334
13	28066	20713	19551	20204	28147	63843	102197	106833	78087	50720	33573	28819
14	27614	20752	19450	22045	30590	65346	102161	105784	77215	49863	32737	28310
15	27199	20831	19337	24811	31898	66984	102088	104741	76319	48991	32076	27775
16	26709	20884	19237	25398	34125	68619	101868	103667	75398	48129	31934	27310
17	26210	20858	19137	25702	35040	70073	101613	102344	74515	47346	31828	26866
18	25763	20858	19038	25979	36201	71278	101248	100993	73597	46798	31722	26474
19	25337	20964	18988	26164	37113	72228	100993	99582	72796	46300	31669	25979
20	24916	20991	19000	26288	40105	72856	100812	98181	71901	45782	31651	25398
21	24499	21084	18976	26381	42198	74302	100594	97289	71043	45268	31616	24766
22	24131	21150	18877	26427	43357	74728	100486	96615	70102	44846	31651	24117
23	23840	21137	18766	26474	43748	75093	101066	95944	69227	44449	31687	23493
24	23594	21231	18656	26537	43335	75521	101540	95099	68273	44163	31669	22937
25	23307	21244	18558	26505	42839	76042	102051	94399	67298	43835	33353	22446
26	22980	21258	18449	26521	42368	76999	102747	93666	66332	43466	33262	21922
27	22712	21150	18352	26505	42454	78693	103852	92972	65346	43098	31353	21446
28	22586	21124	18255	26490	43249	79942	104667	92143	64397	42689	31213	21004
29	22404	21017	18159	26459	---	81868	105337	91455	63401	42326	31196	20555
30	22183	20858	18015	26443	---	83249	106008	90600	62552	41922	31266	20191
31	21922	---	17908	26443	---	95064	---	89750	---	41479	31423	---
MAX	33756	21689	20818	26537	43748	95064	106008	108758	88904	61655	41038	32414
MIN	21922	20581	17908	17239	26148	44890	96509	89750	62552	41479	31196	20191
†	430.80	430.01	427.66	433.89	442.95	461.28	464.30	459.74	450.85	442.12	436.90	429.50
‡	-12333	-1064	-2950	+8535	+16806	+51815	+10944	-16258	-27198	-21073	-10056	-11232
††	1073	407	274	209	192	600	1077	2529	2719	2294	1528	1315

CAL YR 1978 †a-2726

WTR YR 1979 †a-14064

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

a Computed on basis of revised capacity table put into use Oct. 1, 1978.

11388000 STONY CREEK BELOW BLACK BUTTE DAM, NEAR ORLAND, CA

LOCATION.--Lat 39°49'07", long 122°19'26", in NW¼SW¼ sec.28, T.23 N., R.4 W., Tehama County, Hydrologic Unit 18020103, on left bank 200 ft (61 m) downstream from road bridge, 0.6 mi (1.0 km) downstream from Black Butte Dam, 8.1 mi (13.0 km) northwest of Orland.

DRAINAGE AREA.--738 mi² (1,911 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1955 to current year. Prior to October 1962, published as Stony Creek at Black Butte damsite, near Orland.

REVISED RECORDS.--WDR CA-77-4: Drainage area.

GAGE.--Water-stage recorder and grouted rock control. Datum of gage is 366.02 ft (111.563 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 12, 1960, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datum. Dec. 12, 1960, to Nov. 30, 1963, nonrecording gage at bridge 200 ft (61 m) upstream at datum 4.04 ft (1.231 m) higher.

REMARKS.--Records good. Many diversions above station for irrigation. Flow regulated by Black Butte Lake (station 11387995), East Park Reservoir (station 11385100), usable capacity, 50,900 acre-ft (62.8 hm³), and Stony Gorge Reservoir (station 11386100), usable capacity, 50,400 acre-ft (62.1 hm³). Prior to October 1956, figures of daily discharge included water diverted to South Diversion Canal, which diverts 0.6 mi (1.0 km) above station.

AVERAGE DISCHARGE (adjusted for diversions to South Diversion Canal since 1956, Wackerman Ranch since 1979, and for change in contents in and evaporation from Black Butte Lake since 1964).--24 years, 619 ft³/s (17.53 m³/s), 448,500 acre-ft/yr (553 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft³/s (1,030 m³/s) Feb. 24, 1958, gage height, 11.82 ft (3.603 m) site and datum then in use, from rating curve extended above 7,500 ft³/s (212 m³/s) on basis of slope-area measurement of maximum flow; no flow many days in 1956, 1957, 1962. Maximum discharge since construction of Black Butte Dam in 1964, 19,400 ft³/s (549 m³/s) Dec. 25, 1964, gage height, 10.41 ft (3.174 m); no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) Mar. 29, gage height, 5.92 ft (1.804 m); no flow Nov. 15-26.

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	111	85	55	59	50	60	60	604	298	281	261	75
2	131	88	55	59	50	54	117	611	307	273	262	71
3	149	81	54	59	50	52	204	638	306	279	270	81
4	167	63	56	58	50	51	100	658	304	292	279	101
5	166	62	57	56	50	51	228	676	286	283	283	123
6	143	74	57	56	50	51	247	692	289	278	280	127
7	126	89	57	56	50	50	249	692	312	262	275	135
8	113	98	57	57	41	53	249	678	330	261	324	134
9	96	108	58	57	36	53	263	698	340	271	459	133
10	89	87	58	54	36	401	280	696	327	290	467	127
11	86	77	58	53	36	828	282	702	328	274	461	121
12	90	78	58	53	36	426	298	700	315	262	456	126
13	92	45	58	53	37	99	322	691	278	260	464	138
14	106	.10	58	56	37	49	336	686	276	244	478	129
15	130	0	59	57	37	55	338	683	286	247	387	111
16	134	0	58	57	37	52	322	692	280	245	138	95
17	137	0	58	57	38	51	352	714	271	243	129	97
18	134	0	58	57	38	51	365	712	280	265	121	87
19	108	0	32	53	38	50	354	711	300	278	106	100
20	95	0	.10	50	39	50	353	702	305	284	120	123
21	99	0	13	50	39	53	344	464	298	281	120	129
22	100	0	59	50	41	57	337	288	296	253	107	128
23	96	0	59	50	182	53	317	300	298	247	98	137
24	88	0	59	50	491	51	294	315	299	248	111	114
25	96	0	59	50	522	50	509	312	309	252	121	97
26	101	0	57	50	510	50	625	317	310	250	122	100
27	69	24	58	50	257	71	606	302	303	242	111	110
28	62	55	59	50	61	680	604	279	298	263	115	104
29	61	55	59	50	---	1260	604	280	294	274	121	97
30	81	55	59	50	---	457	604	286	288	258	111	92
31	87	---	59	50	---	73	---	291	---	266	90	---
TOTAL	3363	1224.10	1661.10	1667	2939	5442	10163	17070	9011	8206	7247	3342
MEAN	108	40.8	53.6	53.8	105	176	339	551	300	265	234	111
MAX	167	108	59	59	522	1260	625	714	340	292	478	138
MIN	61	0	.10	50	36	49	60	279	271	242	90	71
AC-FT	6670	2430	3290	3310	5830	10790	20160	33860	17870	16280	14370	6630

CAL YR 1978 TOTAL 336932.20 MEAN 923 MAX 13100 MIN 0 AC-FT 668300 MEAN ‡ 1027 AC-FT ‡ 743900
WTR YR 1979 TOTAL 71335.20 MEAN 195 MAX 1260 MIN 0 AC-FT 141500 MEAN ‡ 291 AC-FT ‡ 209800

‡ Adjusted for change in contents and evaporation from Black Butte Reservoir and for diversions to South Diversion Canal and Wackerman Ranch.

11388000 STONY CREEK BELOW BLACK BUTTE DAM, NEAR ORLAND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958 to current year.

CHEMICAL ANALYSES: Water years 1958 to current year. Published as "at damsite" in 1959-64.

WATER TEMPERATURES: Water years 1969 to current year.

SEDIMENT RECORDS: Water years 1958-59, 1961-62.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1969 to current year.

INSTRUMENTATION.--Temperature recorder since June 1969.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 31.5°C Aug. 15, 1977; minimum recorded, 3.5°C Jan. 3, 4, Feb. 2, Dec. 9, 1972, Jan. 10, 1974, Dec. 21, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 26.0°C Aug. 16; minimum recorded, 3.5°C Dec. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)
JAN 18...	1220	56	402	8.1	9.0	40	12.2	--
MAR 21...	1120	51	385	8.2	11.0	--	13.0	160
MAY 11...	1130	700	--	--	16.0	--	--	130
MAY 29...	1125	280	330	--	18.0	14	--	--
JUL 19...	1050	278	358	7.9	25.0	45	8.5	--
JUL 23...	1230	247	353	7.6	--	--	8.4	140
AUG 24...	0610	95	367	8.1	22.0	--	7.6	150
SEP 25...	1120	97	385	8.0	23.0	29	8.7	--

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	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN 18...	--	--	--	--	--	--	--	--	--
MAR 21...	40	37	16	20	21	.7	120	30	29
MAY 11...	20	30	13	17	22	.7	110	20	22
MAY 29...	--	--	--	--	--	--	--	--	--
JUL 19...	--	--	--	--	--	--	--	--	--
JUL 23...	10	34	14	18	21	.7	130	20	21
AUG 24...	10	32	16	19	22	.7	140	16	21
SEP 25...	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
JAN 18...	--	--	--	--	--	--	--	--
MAR 21...	226	.31	.27	--	--	--	--	.00
MAY 11...	182	.25	.06	.04	.26	.30	.03	.00
MAY 29...	--	--	--	--	--	--	--	--
JUL 19...	--	--	--	--	--	--	--	--
JUL 23...	202	.27	.02	.05	.25	.30	.07	.01
AUG 24...	202	.27	.13	.05	.55	.60	.09	.00
SEP 25...	--	--	--	--	--	--	--	--

11388000 STONY CREEK BELOW BLACK BUTTE DAM, NEAR ORLAND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

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

SACRAMENTO RIVER BASIN

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA

LOCATION.--Lat 39°27'28", long 121°59'35", in SE¼NE¼ sec.32, T.19 N., R.1 W., Glenn County, Hydrologic Unit 18020104, on left bank 100 ft (30 m) upstream from highway bridge, 0.5 mi (0.8 km) south of Butte City, and at mile 115.8 (186.3 km) upstream from Sacramento.

DRAINAGE AREA.--12,075 mi² (31,274 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1921 to September 1938 (low-water periods only), October 1938 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WDR CA-77-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.92 ft (0.890 m) below National Geodetic Vertical Datum of 1929. Prior to December 1930, at site 0.5 mi (0.8 km) upstream at same datum.

REMARKS.--Records good. Natural flow affected by storage reservoirs, power developments, diversions for irrigation and return flow from irrigated areas. During floods, overbank flow into Butte basin occurs upstream from left (east) bank levee. The combined overbank flow and tributary runoff then flows south on the east bank floodplain into the Butte Sink and Sutter Bypass. Maximum overbank flood flows at the latitude of Butte City are as follows: CURRENT YEAR (Butte Creek at State Highway 162): Maximum discharge, 5,200 ft³/s (147 m³/s) Feb. 14, gage height, 79.62 ft (24.268 m). PERIOD OF RECORD (water years 1970-79): Maximum discharge, 17,200 ft³/s (487 m³/s) Jan. 24, 1970, gage height, 82.0 ft (24.99 m). CURRENT YEAR (combined overbank flow): Maximum discharge, 5,200 ft³/s (147 m³/s) Feb. 14. PERIOD OF RECORD (water years 1970-79): Maximum discharge, 74,300 ft³/s (2,100 m³/s) Jan. 25, 1970. Records tabulated below do not include overbank flow into the Butte basin. The maximum discharge for the combined overbank flow for water year 1977 has been revised to 700 ft³/s (19.8 m³/s), superseding figure published in the report for 1977.

AVERAGE DISCHARGE.--41 years (water years 1939-79), 13,160 ft³/s (372.7 m³/s), 9,534,000 acre-ft/yr (11.8 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1940-79), 170,000 ft³/s (4,810 m³/s) Feb. 7, 1942, gage height, 96.87 ft (29.526 m); minimum recorded, 1,050 ft³/s (29.7 m³/s) July 15, 25, 26, 1931, gage height, 67.49 ft (20.571 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 58,200 ft³/s (1,650 m³/s) Feb. 14, gage height, 85.47 ft (26.051 m); minimum daily, 4,320 ft³/s (122 m³/s) Sept. 18.

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	6230	5490	7120	6980	7010	25100	14700	8400	6890	9150	9480	5590
2	6170	5520	7150	6980	6700	23600	13900	8910	6760	10200	9390	5610
3	6180	5530	7160	7000	6250	14800	13300	8090	6590	10600	9380	5660
4	6080	5530	7090	6980	6010	12700	11600	7600	6520	10600	9300	5560
5	6040	6180	7040	6920	5810	11700	9570	7350	6930	10800	9340	5430
6	6070	6270	7040	6600	5750	10900	9590	8670	7240	10700	9550	5270
7	6130	6330	7020	6220	5500	11000	9740	9980	7260	10600	9570	5180
8	6120	6270	6980	6460	5210	11400	9440	10600	7430	10900	9260	4930
9	6230	6330	6990	8530	5200	11200	9000	9250	7590	11000	8640	4830
10	6210	6200	7020	8250	5110	10600	8630	7930	7700	10900	8360	4860
11	6210	6240	7050	8700	5100	10300	8020	7420	7700	10700	8320	4860
12	6280	6280	7060	21100	5110	10300	7000	7800	7690	10600	7860	4710
13	6260	6450	7010	14100	5820	9780	6420	8620	7630	10500	7290	4610
14	6150	6450	7030	12100	41400	9260	6210	8750	7630	10300	7030	4660
15	6100	6580	7040	31400	39800	9040	6330	8750	7580	10200	6930	4620
16	6080	6830	6970	39900	24300	10200	7010	8650	7530	10200	6390	4590
17	6060	6590	7030	18800	25900	12200	7180	8600	7550	10200	5840	4520
18	6100	6650	7180	13600	16200	12000	7240	8460	7640	10200	5680	4320
19	6050	6680	7210	11100	26500	12800	6710	8370	7600	10200	5650	4570
20	6030	6780	7080	10100	19000	11500	6080	8320	7570	10200	5620	4630
21	6090	7150	7020	9720	36700	10000	5650	8300	7610	10200	5600	4680
22	6150	7460	7060	9440	36400	9550	5620	7990	7550	10300	5580	4740
23	6190	7470	6990	9280	26600	10000	6350	7850	7650	10400	5600	4830
24	6200	7330	7020	8750	21700	8920	8000	7750	7700	10300	5620	4870
25	6130	7190	6980	8270	16200	8420	10300	7620	7610	10300	5450	4930
26	6050	7180	7010	8090	13500	8120	9570	7560	7590	10000	5250	5040
27	6080	7100	7010	7880	13800	8480	9060	7420	7590	10000	5130	5110
28	6080	7090	7020	7640	11700	23400	9770	7240	8240	9990	4970	5130
29	6010	7140	6950	7490	---	20500	9070	7000	9020	10100	5140	5140
30	5970	7150	6930	7390	---	17700	8530	6820	9080	10100	5240	5130
31	5860	---	6900	7290	---	16200	---	6660	---	9830	5600	---
TOTAL	189590	197440	218160	343060	444280	391670	259590	252730	226670	320270	218060	148610
MEAN	6116	6581	7037	11070	15870	12630	8653	8153	7556	10330	7034	4954
MAX	6280	7470	7210	39900	41400	25100	14700	10600	9080	11000	9570	5660
MIN	5860	5490	6900	6220	5100	8120	5620	6660	6520	9150	4970	4320
AC-FT	376100	391600	432700	680500	881200	776900	514900	501300	449600	635300	432500	294800
CAL YR 1978 TOTAL	5631700			MEAN 15430	MAX 116000	MIN 5490	AC-FT 11170000					
WTR YR 1979 TOTAL	3210130			MEAN 8795	MAX 41400	MIN 4320	AC-FT 6367000					

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-67, 1969 to current year.

CHEMICAL ANALYSES: Water years 1955-66.

WATER TEMPERATURES: Water years 1955-58, 1960-67, 1969 to current year.

SEDIMENT RECORDS: Water years 1978 to current year (storm season only).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1955 to June 1963.

WATER TEMPERATURES: May 1955 to September 1958, October 1959 to September 1967, July 1969 to current year.

SEDIMENT RECORDS: November 1977 to current year (storm season only).

INSTRUMENTATION.--Temperature recorder May 1955 to September 1958, October 1959 to September 1967, and since July 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 24.5°C Sept. 6-8, 1977; minimum recorded, 0.0°C Jan. 2-5, 1960.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,630 mg/L Jan. 10, 1978; minimum daily, 8 mg/L on several days in 1978 and 1979.

SEDIMENT DISCHARGE: Maximum daily, 490,000 tons (445,000 metric tons) Jan. 16, 1978; minimum daily, 97 tons (88 metric tons) Dec. 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 21.5°C Sept. 15, 16; minimum recorded, 5.5°C Jan. 1.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 872 mg/L Feb. 14; minimum daily mean, 8 mg/L on several days during November, January, and February.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 108,000 tons (98,000 metric tons) Feb. 14; minimum daily, 119 tons (108 metric tons) Nov. 1-4.

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
(NOT PREVIOUSLY PUBLISHED)

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1977	159980.00	16344.00	365	16700
DECEMBER ...	285610.00	404380.00	3430	408000
JANUARY 1978	1151250.00	2449524.00	30900	2480000
FEBRUARY ...	824850.00	1033320.00	21400	1050000
MARCH	1196400.00	1370440.00	33000	1400000
APRIL	599400.00	252090.00	12400	265000
MAY	346170.00	37812.00	3260	41100
JUNE	219190.00	17707.00	871	18600
JULY	246420.00	15668.00	1150	16800
PERIOD.....	5029270.00	5597285.00	106776	5696200

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	17.0	12.0	12.0	11.0	10.5	6.5	5.5	---	---	10.5	10.5
2	17.0	17.0	12.0	12.0	10.5	10.0	6.0	6.0	---	---	10.5	9.0
3	17.0	17.0	12.0	12.0	10.0	9.0	6.0	6.0	---	---	10.0	9.0
4	18.5	17.0	12.5	12.0	9.5	9.0	8.0	6.0	---	---	10.0	10.0
5	18.5	18.5	12.5	12.5	9.5	8.5	8.5	8.0	9.0	7.5	11.5	10.0
6	18.5	18.0	12.5	12.5	8.0	7.5	9.0	8.5	10.0	7.5	13.0	11.5
7	18.0	18.0	12.5	12.5	7.5	6.5	9.0	9.0	10.0	7.0	14.0	13.0
8	18.0	17.5	13.5	12.5	7.0	6.0	9.0	9.0	11.0	10.0	14.5	13.0
9	17.5	17.5	13.0	11.5	7.0	6.5	9.5	9.0	11.0	10.5	14.5	13.5
10	17.5	17.0	11.5	9.5	7.5	6.5	9.0	9.0	11.0	10.5	14.5	13.0
11	17.0	17.0	9.5	8.5	8.0	7.5	10.5	9.0	11.0	11.0	14.5	13.5
12	17.0	17.0	9.0	8.0	8.5	8.0	10.5	10.0	11.0	10.5	14.5	13.5
13	17.0	17.0	8.5	8.0	9.5	8.5	10.0	10.0	10.5	10.0	14.5	13.5
14	17.0	17.0	9.0	8.0	9.5	8.5	10.0	10.0	10.5	9.0	14.0	13.0
15	17.0	17.0	9.5	8.5	9.5	9.5	10.0	10.0	9.0	8.5	13.0	13.0
16	17.0	17.0	10.0	9.5	9.5	8.5	10.0	7.0	9.0	8.5	13.0	12.0
17	17.0	17.0	10.5	9.5	8.5	8.0	8.0	7.5	8.5	8.0	12.0	11.0
18	17.0	17.0	10.5	10.0	8.0	8.0	8.5	8.0	8.0	8.0	12.0	10.5
19	17.0	17.0	10.5	10.0	8.0	7.5	8.5	8.0	8.0	8.0	12.0	12.0
20	17.0	16.5	11.0	10.5	7.5	7.0	8.5	8.5	8.0	8.0	13.0	11.0
21	16.5	16.0	11.0	11.0	7.5	6.5	9.0	8.5	8.0	8.0	12.5	12.5
22	16.0	15.5	11.0	10.5	7.0	6.5	9.0	9.0	8.5	8.0	12.5	12.0
23	15.5	15.0	11.0	10.0	7.0	7.0	9.0	8.5	9.0	8.5	13.0	12.0
24	15.0	15.0	10.5	10.0	7.0	7.0	8.5	8.5	9.0	8.5	14.0	12.0
25	15.0	15.0	10.5	10.0	7.5	7.0	8.5	7.5	10.0	9.0	14.0	13.0
26	15.0	15.0	10.0	10.0	7.5	7.0	7.0	7.0	11.0	9.5	14.0	14.0
27	15.0	14.5	10.0	9.5	7.0	7.0	7.5	7.0	11.5	10.5	14.0	14.0
28	14.5	14.5	10.5	9.5	8.0	7.0	7.5	7.0	11.0	10.5	14.0	11.5
29	14.5	13.5	11.0	10.0	7.5	7.0	---	---	---	---	12.0	11.0
30	13.5	12.5	11.0	10.5	7.5	7.0	---	---	---	---	12.5	11.5
31	12.0	12.0	---	---	6.5	6.0	---	---	---	---	13.0	12.0
MONTH	18.5	12.0	13.5	8.0	11.0	6.0	10.5	5.5	11.5	7.0	14.5	9.0

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				5490	8	119	7120	13	250
2				5520	8	119	7150	13	251
3				5530	8	119	7160	14	271
4				5530	8	119	7090	14	268
5				6180	10	167	7040	14	266
6				6270	11	186	7040	10	190
7				6330	10	171	7020	10	190
8				6270	10	169	6980	10	188
9				6330	10	171	6990	9	170
10				6200	10	167	7020	10	190
11				6240	10	168	7050	13	247
12				6280	10	170	7060	11	210
13				6450	10	174	7010	9	170
14				6450	10	174	7030	10	190
15				6580	10	178	7040	10	190
16				6830	10	184	6970	10	188
17				6590	10	178	7030	10	190
18				6650	10	180	7180	12	233
19				6680	11	198	7210	14	273
20				6780	11	201	7080	14	268
21				7150	12	232	7020	13	246
22				7460	13	262	7060	13	248
23				7470	13	262	6990	14	264
24				7330	12	237	7020	15	284
25				7190	12	233	6980	13	245
26				7180	12	233	7010	13	246
27				7100	12	230	7010	12	227
28				7090	12	230	7020	11	208
29				7140	12	231	6950	10	188
30				7150	13	251	6930	11	206
31				---	---	---	6900	10	186
TOTAL				197440	---	5713	218160	---	6941

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	6980	11	207	7010	8	151	25100	415	35400	
2	6980	12	226	6700	8	145	23600	310	19800	
3	7000	12	227	6250	8	135	14800	132	5270	
4	6980	13	245	6010	9	146	12700	88	3020	
5	6920	13	243	5810	8	125	11700	69	2180	
6	6600	10	178	5750	8	124	10900	62	1820	
7	6220	8	134	5500	10	148	11000	60	1780	
8	6460	10	174	5210	10	141	11400	60	1850	
9	8530	45	1080	5200	12	168	11200	60	1810	
10	8250	45	1010	5110	13	179	10600	59	1690	
11	8700	72	1990	5100	12	165	10300	58	1610	
12	21100	527	30900	5110	14	193	10300	54	1500	
13	14100	155	5900	5820	33	670	9780	50	1320	
14	12100	99	3230	41400	872	108000	9260	48	1200	
15	31400	611	60400	39800	481	60500	9040	42	1030	
16	39900	702	79900	24300	363	26500	10200	34	936	
17	18800	240	12900	25900	398	29700	12200	36	1190	
18	13600	84	3080	16200	172	7520	12000	35	1130	
19	11100	50	1500	26500	380	28400	12800	36	1240	
20	10100	40	1090	19000	171	9030	11500	34	1060	
21	9720	30	787	36700	728	75900	10000	30	810	
22	9440	28	714	36400	511	51100	9550	27	696	
23	9280	32	802	26600	427	30700	10000	26	702	
24	8750	26	614	21700	275	16100	8920	24	578	
25	8270	20	447	16200	166	7260	8420	22	500	
26	8090	16	349	13500	104	3790	8120	20	438	
27	7880	16	340	13800	110	4100	8480	30	687	
28	7640	15	309	11700	66	2080	23400	176	11400	
29	7490	14	283	---	---	---	20500	522	28900	
30	7390	12	239	---	---	---	17700	340	16200	
31	7290	9	177	---	---	---	16200	230	10100	
TOTAL	343060	---	209675	444280	---	463170	391670	---	157847	
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	14700	178	7060	8400	20	454				
2	13900	136	5100	8910	28	674				
3	13300	98	3520	8090	16	349				
4	11600	68	2130	7600	14	287				
5	9570	30	775	7350	13	258				
6	9590	27	699	8670	23	538				
7	9740	25	657	9980	39	1050				
8	9440	23	586	10600	50	1430				
9	9000	21	510	9250	27	674				
10	8630	20	466	7930	16	343				
11	8020	19	411	7420	12	240				
12	7000	19	359	7800	14	295				
13	6420	18	312	8620	21	489				
14	6210	18	302	8750	22	520				
15	6330	19	325	8750	22	520				
16	7010	20	379	8650	21	490				
17	7180	21	407	8600	21	488				
18	7240	23	450	8460	20	457				
19	6710	21	380	8370	19	429				
20	6080	17	279	8320	19	427				
21	5650	14	214	8300	19	426				
22	5620	11	167	7990	16	345				
23	6350	10	171	7850	15	318				
24	8000	170	3670	7750	14	293				
25	10300	42	1200	7620	14	288				
26	9570	32	827	7560	13	265				
27	9060	28	685	7420	13	260				
28	9770	36	950	7240	11	215				
29	9070	28	686	7090	10	189				
30	8530	20	461	6820	9	166				
31	---	---	---	6660	10	180				
TOTAL	259590	---	34138	252730	---	13357				
PERIOD 2106930	---	---	890841							

SACRAMENTO RIVER BASIN

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	197440.00	5713.00	239	5950
DECEMBER ...	218160.00	6941.00	294	7240
JANUARY 1979	343060.00	209675.00	1230	211000
FEBRUARY ...	444280.00	463170.00	2480	466000
MARCH	391670.00	157847.00	1350	159000
APRIL	259590.00	34138.00	533	34700
MAY	252730.00	13357.00	438	13800
PERIOD	2106930.00	890841.00	6564	897690

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
JAN 16...	1430	37500	7.5	611	61900	20	26
FEB 15...	0850	45900	10.0	498	61700	28	35
MAR 08...	1125	11400	13.0	56	1720	--	--
APR 05...	1210	9360	13.5	30	758	--	--
MAY 16...	1325	8650	19.0	21	490	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	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
JAN 16...	34	43	53	63	80	94	100
FEB 15...	43	53	62	70	79	92	100
MAR 08...	--	--	--	81	90	96	100
APR 05...	--	--	--	75	84	95	100
MAY 16...	--	--	--	77	89	97	100

11389470 COLUSA WEIR SPILL TO BUTTE BASIN NEAR COLUSA, CA

LOCATION.--Lat 39°14'11", long 121°59'33", in NW¼SE¼ sec.17, T.16 N., R.1 W., Colusa County, Hydrologic Unit 18020104, on left bank downstream end of Colusa weir 1.7 mi (2.7 km) northeast of Colusa Post Office.

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS.--December 1972 to current year (flood periods only).

REMARKS.--Colusa weir diverts flood flows from the Sacramento River into Butte Basin to reduce downstream flooding. Because of the weir, all sediment measured is total-sediment discharge. Sediment table omitted for periods of no flow Oct. 1 to Dec. 31, 1977, July 1 to Dec. 31, 1978, and Apr. 1 to Sept. 30, 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,020 mg/L Jan. 17, 1974.

TOTAL-SEDIMENT DISCHARGE: Maximum daily, 414,000 tons (376,000 metric tons) Jan. 17, 1974.

EXTREMES FOR WATER YEAR 1978.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,380 mg/L Jan. 15.

TOTAL-SEDIMENT DISCHARGE: Maximum daily, 173,000 tons (157,000 metric tons) Jan. 16.

EXTREMES FOR WATER YEAR 1979.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 465 mg/L Feb. 15.

TOTAL-SEDIMENT DISCHARGE: Maximum daily, 13,600 tons (12,300 metric tons) Feb. 15.

TOTAL-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	4060	990	10900
5	0	0	0	0	0	0	25600	597	37700
6	0	0	0	0	0	0	39000	365	38400
7	0	0	0	9960	1250	34200	32400	350	30600
8	0	0	0	26700	1150	82900	20400	500	27500
9	0	0	0	33500	985	89100	29100	880	69100
10	17700	1170	64200	28800	780	60700	40200	880	95500
11	31100	834	71000	14000	560	21200	33900	651	59200
12	5460	384	7860	5930	559	8290	31600	425	36300
13	0	0	0	11500	910	28300	27400	220	16300
14	5470	766	15600	13300	900	32300	21200	180	10300
15	31300	1380	119000	6680	440	7940	16400	159	7040
16	51200	1250	173000	3840	260	2700	9990	146	3940
17	53100	1050	151000	961	210	545	3630	146	1430
18	52100	860	121000	0	0	0	218	134	79
19	33200	669	58700	0	0	0	0	0	0
20	29400	810	64300	0	0	0	0	0	0
21	16500	723	33800	0	0	0	0	0	0
22	3440	450	4180	0	0	0	0	0	0
23	161	340	148	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	---	---	---	0	0	0
30	0	0	0	---	---	---	0	0	0
31	0	0	0	---	---	---	0	0	0
TOTAL	330131	---	883788	155171	---	368175	335098	---	444289

SACRAMENTO RIVER BASIN

11389470 COLUSA WEIR SPILL TO BUTTE BASIN NEAR COLUSA, CA--Continued

TOTAL-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	0	0	0						
2	0	0	0						
3	0	0	0						
4	0	0	0						
5	0	0	0						
6	0	0	0						
7	1540	402	2280						
8	1850	310	2190						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	---	---	---						
TOTAL	3390	---	4470	0	---	0	0	---	0
YEAR	823790	---	1700722						

PARTICLE-SIZE DISTRIBUTION OF TOTAL SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
JAN									
11...	1535	32100	10.0	750	65000	33	44	53	60
18...	0900	54400	11.0	504	74000	58	76	89	99
18...	1635	49500	11.5	782	105000	35	45	56	64
FEB									
07...	1245	12300	12.0	1310	43500	24	27	39	51
08...	1415	28800	10.5	1130	87900	26	36	46	57
13...	1050	11100	11.0	896	26900	23	31	40	52
15...	1305	11600	9.0	344	10800	--	47	60	73
MAR									
06...	0725	39300	11.0	368	39000	52	67	82	93
07...	1320	31600	12.0	348	29700	--	--	--	--
SED. SED. SED. SED. SED. SED. SED. SED. SED. SED.									
SUSP. SUSP. SUSP. SUSP. SUSP. SUSP. SUSP. SUSP. SUSP. SUSP.									
FALL FALL FALL FALL FALL FALL FALL FALL FALL FALL									
DIAM. DIAM. DIAM. DIAM. DIAM. DIAM. DIAM. DIAM. DIAM. DIAM.									
% FINER % FINER % FINER % FINER % FINER % FINER % FINER % FINER % FINER % FINER									
THAN THAN THAN THAN THAN THAN THAN THAN THAN THAN									
DATE	.031 MM	.062 MM	.062 MM	.125 MM	.125 MM	.250 MM	.250 MM	.500 MM	.500 MM
JAN									
11...	67	72	--	82	--	98	--	100	--
18...	100	--	--	--	--	--	--	--	--
18...	68	72	--	78	--	97	--	100	--
FEB									
07...	66	--	82	--	94	--	100	--	--
08...	65	73	--	85	--	98	--	100	--
13...	63	--	72	--	84	--	98	--	100
15...	84	--	91	--	98	--	100	--	--
MAR									
06...	98	--	99	--	100	--	--	--	--
07...	--	53	--	60	--	97	--	100	--

11389470 COLUSA WEIR SPILL TO BUTTE BASIN NEAR COLUSA, CA--Continued
 TOTAL-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	0	0	0	0	0	0			
2	0	0	0	0	0	0			
3	0	0	0	0	0	0			
4	0	0	0	0	0	0			
5	0	0	0	0	0	0			
6	0	0	0	0	0	0			
7	0	0	0	0	0	0			
8	0	0	0	0	0	0			
9	0	0	0	0	0	0			
10	0	0	0	0	0	0			
11	0	0	0	0	0	0			
12	0	0	0	0	0	0			
13	0	0	0	0	0	0			
14	0	0	0	1360	160	2390			
15	5.8	4	4.3	9870	465	13600			
16	5560	341	5160	0	0	0			
17	44	47	55	0	0	0			
18	0	0	0	0	0	0			
19	0	0	0	0	0	0			
20	0	0	0	0	0	0			
21	0	0	0	747	104	694			
22	0	0	0	4420	296	3560			
23	0	0	0	68	23	33			
24	0	0	0	0	0	0			
25	0	0	0	0	0	0			
26	0	0	0	0	0	0			
27	0	0	0	0	0	0			
28	0	0	0	0	0	0			
29	0	0	0	---	---	---			
30	0	0	0	---	---	---			
31	0	0	0	---	---	---			
TOTAL	5609.8	---	5219.3	16465	---	20277	0	---	0
YEAR	22074.8	---	25496.3						

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, CA

LOCATION.--Lat 39°12'51", long 121°59'57", at north end of Jimeno Grant, Colusa County, Hydrologic Unit 18020104, on right bank just downstream from highway bridge at Colusa, and at mile 89.4 (143.8 km) upstream from Sacramento.

DRAINAGE AREA.--12,090 mi² (31,313 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1921 to October 1939 (low-water periods only), June 1940 to current year.

REVISED RECORDS.--WSP 1345: 1952. WDR CA-77-4; Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.95 ft (0.899 m) below National Geodetic Vertical Datum of 1929. Prior to December 1930, water-stage recorder in center fender pier 50 ft (15 m) upstream from bridge at same datum.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, power development, bypassing for flood control, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--39 years (water years 1941-79), 11,420 ft³/s (323.4 m³/s), 8,274,000 acre-ft/yr (10.2 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1941-79), 49,000 ft³/s (1,390 m³/s) Feb. 8, 1942, gage height, 69.20 ft (21.092 m); minimum discharge recorded, 820 ft³/s (23.2 m³/s) July 25, 26, 1931, gage height, 34.79 ft (10.604 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,100 ft³/s (1050 m³/s) Feb. 15, gage height 63.00 ft (19.202 m); minimum daily, 4,200 ft³/s (119 m³/s) Sept. 18.

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	6600	5660	7390	7270	7050	17000	15500	8370	6530	8700	9050	5400
2	6490	5610	7410	7250	6700	27700	14400	8890	6690	9050	8680	5400
3	6470	5560	7440	7300	6300	19400	13800	8460	6420	10200	8760	5480
4	6400	5560	7360	7290	5970	14300	12800	7780	6300	10200	8720	5500
5	6340	5990	7310	7290	5900	12500	10500	7370	6370	10300	8700	5320
6	6380	6340	7280	7160	5850	11100	9960	7590	6890	10500	8850	5150
7	6400	6410	7290	6610	5730	10800	9980	9730	6960	10400	8900	4990
8	6380	6400	7230	6680	5450	11100	9910	10100	7060	10600	8770	4870
9	6480	6400	7210	7850	5360	11200	9490	9820	7140	10700	8390	4680
10	6520	6340	7240	9220	5270	10800	9090	8200	7270	10700	7890	4660
11	6490	6230	7290	8490	5240	10300	8720	7540	7290	10500	7840	4740
12	6580	6350	7350	16400	5230	10200	7630	7370	7270	10300	7650	4670
13	6540	6390	7320	17300	5460	9920	6890	8240	7230	10200	7130	4460
14	6450	6480	7360	13700	19600	9410	6460	8550	7230	9950	6620	4470
15	6300	6570	7330	20100	35400	9100	6270	8570	7170	9840	6490	4450
16	6280	6850	7320	34900	26000	9370	6930	8500	7110	9820	6140	4450
17	6160	6730	7340	25500	28200	11400	7140	8500	7120	9730	5470	4460
18	6180	6680	7440	17500	20800	11900	7200	8410	7200	9600	5190	4200
19	6200	6800	7540	13200	21700	11900	6900	8320	7190	9570	5070	4300
20	6170	6790	7430	11400	23800	12100	6160	8290	7170	9580	5050	4510
21	6200	7140	7350	10500	26300	10500	5650	8220	7150	9680	5010	4520
22	6260	7570	7380	9840	34100	9610	5310	8090	7170	9700	5010	4610
23	6280	7760	7340	9450	29200	9940	5860	7810	7000	9640	5050	4710
24	6340	7650	7340	9020	25900	9260	7090	7750	7000	9600	5150	4750
25	6310	7510	7330	8180	20100	8670	9290	7610	7030	9590	5020	4840
26	6220	7450	7290	7900	16300	8320	9660	7490	6970	9510	4930	4970
27	6190	7410	7390	7690	15200	8180	9130	7410	7180	9370	4730	5080
28	6230	7430	7310	7570	14000	16400	9390	7210	7420	9300	4620	5130
29	6180	7360	7300	7350	---	21100	9310	6950	7990	9270	4590	5180
30	6120	7420	7260	7270	---	19000	8740	6720	8600	9320	4820	5210
31	6090	---	7190	7190	---	17000	---	6580	---	9190	5090	---
TOTAL	196230	200840	227360	344370	432110	389480	265160	250440	213120	304610	203380	145160
MEAN	6330	6695	7334	11110	15430	12560	8839	8079	7104	9826	6561	4839
MAX	6600	7760	7540	34900	35400	27700	15500	10100	8600	10700	9050	5500
MIN	6090	5560	7190	6610	5230	8180	5310	6580	6300	8700	4590	4200
AC-FT	389200	398400	451000	683100	857100	772500	525900	496700	422700	604200	403400	287900
CAL YR 1978	TOTAL	4776400	MEAN	13090	MAX	44400	MIN	5560	AC-FT	9474000		
WTR YR 1979	TOTAL	3172260	MEAN	8691	MAX	35400	MIN	4200	AC-FT	6292000		

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-66, 1972 to current year.

CHEMICAL ANALYSES: Water years 1959-66, 1972.

WATER TEMPERATURES: Water years 1977 to current year.

SEDIMENT RECORDS: Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to current year (storm season only).

SEDIMENT RECORDS: December 1972 to September 1976, (flood periods only), January 1977 to current year (storm season only).

REMARKS.--Prior to September 1976 total sediment discharge tabulated only on days of spill over Colusa Wier.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS (water years 1973, 1975-79): Maximum daily mean, 1,040 mg/L Mar. 8, 1975, minimum daily mean recorded, 10 mg/L Mar. 5, May 29-31, 1977, Nov. 27, 1978.

SEDIMENT DISCHARGE (water years 1973, 1975-79): Maximum daily, 103,000 tons (93,400 metric tons) Feb. 14, 1975, minimum daily recorded 138 tons (125 metric tons) Mar. 5, 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 832 mg/L Feb. 14; minimum daily mean, 10 mg/L Nov. 27.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 48,700 tons (44,200 metric tons) Feb. 14; minimum daily, 198 tons (180 metric tons) Feb. 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	7.0	---	11.0	12.0	16.5	---			
2		---	12.0	---	9.0	12.0	13.0	---	---			
3		---	---	6.0	---	13.0	14.0	18.0	---			
4		---	13.0	---	8.0	13.0	14.0	---	---			
5		---	---	10.0	---	12.0	15.0	17.0	---			
6		13.0	---	---	9.5	16.0	14.5	---	21.5			
7		---	---	9.0	---	17.5	14.5	14.5	---			
8		---	7.0	11.0	---	14.0	15.0	---	---			
9		---	---	10.0	---	15.0	15.0	13.5	---			
10		---	6.0	---	12.0	14.0	15.0	---	---			
11		---	---	11.0	---	15.0	15.0	---	---			
12		---	8.0	---	12.0	16.0	16.0	---	19.0			
13		---	---	11.0	---	16.0	16.0	19.0	---			
14		---	9.0	---	12.0	16.0	15.5	---	---			
15		---	10.0	8.0	9.5	15.0	17.0	19.0	---			
16		---	8.0	---	10.0	16.0	---	16.0	---			
17		---	---	7.5	10.0	16.5	15.5	21.0	---			
18		11.0	8.0	---	10.0	17.0	---	---	---			
19		---	---	7.0	9.0	16.0	15.0	20.0	---			
20		13.0	7.0	---	8.0	14.0	---	---	---			
21		---	---	9.5	10.0	13.0	---	20.0	---			
22		12.0	6.0	---	8.0	13.0	---	---	---			
23		---	---	9.0	9.0	14.0	15.0	20.0	---			
24		13.0	7.0	---	10.0	13.0	---	---	---			
25		---	---	8.0	10.0	15.0	14.0	22.0	---			
26		10.0	9.0	---	10.0	14.0	---	---	---			
27		---	---	7.0	14.0	14.0	15.0	20.0	---			
28		11.0	8.0	---	13.0	14.0	---	---	---			
29		---	---	6.0	---	12.0	16.0	18.5	---			
30		13.0	7.0	---	---	14.0	---	---	---			
31		---	---	6.5	---	13.0	---	17.0	---			
MONTH	---	---	---	---	---	14.5	---	---	---			

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				5660	41	627	7390	44	878
2				5610	40	606	7410	43	860
3				5560	40	600	7440	49	984
4				5560	41	615	7360	58	1150
5				5990	45	728	7310	59	1160
6				6340	47	805	7280	57	1120
7				6410	52	900	7290	55	1080
8				6400	58	1000	7230	54	1050
9				6400	64	1110	7210	55	1070
10				6340	65	1110	7240	58	1130
11				6230	67	1130	7290	56	1100
12				6350	69	1180	7350	53	1050
13				6390	71	1220	7320	53	1050
14				6480	72	1260	7360	52	1030
15				6570	72	1280	7330	52	1030
16				6850	70	1290	7320	54	1070
17				6730	66	1200	7340	53	1050
18				6680	61	1100	7440	51	1020
19				6800	56	1030	7540	47	957
20				6790	52	953	7430	43	863
21				7140	46	887	7350	43	853
22				7570	37	756	7380	44	877
23				7760	29	608	7340	47	931
24				7650	22	454	7340	47	931
25				7510	18	365	7330	42	831
26				7450	13	261	7290	40	787
27				7410	10	200	7390	39	778
28				7430	12	241	7310	37	730
29				7360	24	478	7300	27	538
30				7420	41	821	7260	16	314
31				---	---	---	7190	16	311
TOTAL				200840	---	24815	227360	---	28583

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	7270	18	353	7050	25	476	17000	88	4040
2	7250	19	372	6700	24	434	27700	82	6130
3	7300	18	355	6300	22	374	19400	58	3040
4	7290	19	374	5970	20	322	14300	46	1780
5	7290	23	453	5900	20	319	12500	42	1420
6	7160	27	522	5850	40	632	11100	64	1920
7	6610	30	535	5730	34	526	10800	34	991
8	6680	25	451	5450	30	441	11100	56	1680
9	7850	64	1430	5360	26	376	11200	68	2060
10	9220	90	2240	5270	22	313	10800	56	1630
11	8490	86	1970	5240	18	255	10300	60	1670
12	16400	173	7660	5230	14	198	10200	60	1650
13	17300	277	12900	5460	67	1010	9920	58	1550
14	13700	190	7030	19600	832	48700	9410	48	1220
15	20100	171	9450	35400	511	48200	9100	51	1250
16	34900	341	31300	26000	388	27200	9370	63	1590
17	25500	322	23500	28200	200	15200	11400	62	1910
18	17500	160	7560	20800	130	7300	11900	63	2020
19	13200	100	3560	21700	110	12300	11900	72	2310
20	11400	72	2220	23800	222	14300	12100	140	4570
21	10500	44	1250	26300	354	25100	10500	150	4250
22	9840	32	850	34100	290	26700	9610	146	3790
23	9450	38	970	29200	100	7880	9940	194	5210
24	9020	38	925	25900	76	5310	9260	226	5650
25	8180	38	839	20100	60	3260	8670	202	4730
26	7900	34	725	16300	61	2680	8320	162	3640
27	7690	26	540	15200	61	2500	8180	168	3710
28	7570	26	531	14000	76	2870	16400	197	8940
29	7350	26	516	---	---	---	21100	640	36100
30	7270	26	510	---	---	---	19000	410	21000
31	7190	26	505	---	---	---	17000	263	12100
TOTAL	344370	---	122396	432110	---	255176	389480	---	153551

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	15500	240	10000	8370	121	2730			
2	14400	218	8480	8890	133	3190			
3	13800	238	8870	8460	125	2860			
4	12800	240	8290	7780	111	2330			
5	10500	172	4880	7370	101	2010			
6	9960	156	4200	7590	102	2090			
7	9980	136	3660	9730	135	3550			
8	9910	114	3050	10100	148	4040			
9	9490	112	2870	9820	138	3660			
10	9090	146	3580	8200	114	2520			
11	8720	141	3320	7540	88	1790			
12	7630	169	3480	7370	78	1550			
13	6890	159	2960	8240	75	1670			
14	6460	174	3030	8550	70	1620			
15	6270	141	2390	8570	62	1430			
16	6930	143	2680	8500	62	1420			
17	7140	166	3200	8500	68	1560			
18	7200	162	3150	8410	70	1590			
19	6900	135	2520	8320	70	1570			
20	6160	133	2210	8290	67	1500			
21	5650	144	2200	8220	56	1240			
22	5310	142	2040	8090	56	1220			
23	5860	149	2360	7810	58	1220			
24	7090	191	3690	7750	62	1300			
25	9290	280	7000	7610	67	1380			
26	9660	197	5140	7490	74	1500			
27	9130	165	4070	7410	79	1580			
28	9390	149	3780	7210	80	1560			
29	9310	136	3420	6950	76	1430			
30	8740	125	2950	6720	72	1310			
31	---	---	---	6580	59	1050			
TOTAL	265160	---	123470	250440	---	59470			
PERIOD	2109760	---	767461						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	200840.00	24815.00	4710	29500
DECEMBER ...	227360.00	28583.00	5620	34200
JANUARY 1979	344370.00	122396.00	12300	135000
FEBRUARY ...	432110.00	255176.00	19800	275000
MARCH	389480.00	153551.00	14100	168000
APRIL	265160.00	123470.00	7650	131000
MAY	250440.00	59470.00	6610	66100
PERIOD	2109760.00	767461.00	70790	838800

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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 09...	1155	12500	9.0	64	2160	--	--	--
17...	1200	26100	7.5	315	22200	30	37	47
FEB 15...	1100	11400	9.0	467	14400	44	52	63
15...	1405	37100	9.0	459	46000	33	42	51
MAR 06...	1240	11100	11.5	74	2220	--	--	--
APR 06...	1210	10000	14.5	297	8020	--	--	--

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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
JAN 09...	--	--	31	48	79	99	100
17...	58	69	76	86	95	100	--
FEB 15...	72	80	86	95	99	100	--
15...	61	69	75	85	96	100	--
MAR 06...	--	--	56	87	99	100	--
APR 06...	--	--	28	40	62	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	NUMBER OF SAMPLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
NOV 06...	1400	6330	13.5	5	0	7	83
06...	1401	--	--	--	0	2	55
06...	1402	--	--	--	--	0	6
06...	1403	--	--	--	0	1	5
06...	1404	--	--	--	1	5	18
DEC 04...	1345	7350	10.0	5	0	1	40
04...	1346	--	--	--	0	1	38
04...	1347	--	--	--	--	0	10
04...	1348	--	--	--	--	0	3
04...	1349	--	--	--	5	27	70
07...	1400	7290	9.0	5	2	16	55
07...	1401	--	--	--	0	3	52
07...	1402	--	--	--	1	2	10
07...	1403	--	--	--	0	3	10
07...	1404	--	--	--	0	3	9
JAN 09...	1200	7450	9.0	5	0	1	39
09...	1201	--	--	--	0	1	28
09...	1202	--	--	--	--	0	6
09...	1203	--	--	--	--	0	2
09...	1204	--	--	--	3	6	24
17...	0951	27200	7.5	5	--	0	2
17...	0952	--	--	--	0	2	18
17...	0953	--	--	--	--	0	10
17...	0954	--	--	--	--	0	4
17...	0955	--	--	--	3	6	12
FEB 06...	1300	5840	9.5	5	0	1	18
06...	1301	--	--	--	0	4	40
06...	1302	--	--	--	--	0	13
06...	1303	--	--	--	--	0	2
06...	1304	--	--	--	6	11	22
15...	1400	35600	9.0	4	--	0	6
15...	1401	--	--	--	--	0	19
15...	1402	--	--	--	--	0	3
15...	1403	--	--	--	--	0	1
MAR 06...	1230	11100	11.5	5	0	1	12
06...	1231	--	--	--	0	2	21

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
NOV							
06...	100	--	--	--	--	--	--
06...	96	100	--	--	--	--	--
06...	91	99	100	--	--	--	--
06...	28	35	41	54	86	100	--
06...	37	38	39	49	70	87	100
DEC							
04...	97	100	--	--	--	--	--
04...	93	98	99	100	--	--	--
04...	95	98	98	99	100	--	--
04...	31	40	45	54	75	100	--
04...	99	100	--	--	--	--	--
07...	57	57	58	60	73	100	--
07...	100	--	--	--	--	--	--
07...	66	74	75	78	81	100	--
07...	14	15	16	21	31	100	--
07...	12	13	17	30	66	100	--
JAN							
09...	99	100	--	--	--	--	--
09...	95	98	99	100	--	--	--
09...	96	99	100	--	--	--	--
09...	24	25	27	36	56	92	100
09...	91	100	--	--	--	--	--
17...	34	88	90	90	91	93	100
17...	60	66	68	72	81	100	--
17...	86	93	94	95	97	100	--
17...	32	34	39	50	73	100	--
17...	78	81	84	91	100	--	--
FEB							
06...	90	99	100	--	--	--	--
06...	56	66	79	92	100	--	--
06...	96	99	99	100	--	--	--
06...	65	83	88	93	98	100	--
06...	83	94	100	--	--	--	--
15...	42	52	57	66	81	100	--
15...	97	99	99	100	--	--	--
15...	50	77	83	88	93	100	--
15...	14	28	39	57	83	100	--
MAR							
06...	72	86	93	97	100	--	--
06...	83	92	93	96	99	100	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	NUMBER OF SAM- PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
MAR							
06...	1232	--	--	--	--	0	2
06...	1233	--	--	--	--	0	2
06...	1234	--	--	--	0	12	25
APR							
06...	1145	9990	14.5	5	0	3	52
06...	1146	--	--	--	0	1	35
06...	1147	--	--	--	--	0	9
06...	1148	--	--	--	1	2	4
06...	1149	--	--	--	8	17	33
MAY							
17...	1000	8500	17.5	5	0	1	10
17...	1001	--	--	--	--	0	2
17...	1002	--	--	--	--	0	7
17...	1003	--	--	--	0	1	70
17...	1004	--	--	--	0	1	58
JUN							
12...	1140	4260	19.0	4	--	0	4
12...	1141	--	--	--	0	2	73
12...	1142	--	--	--	--	0	6
12...	1143	--	--	--	4	46	95

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM	32.0 MM
MAR							
06...	64	93	96	97	100	--	--
06...	20	37	45	56	69	81	100
06...	75	100	--	--	--	--	--
APR							
06...	88	91	93	96	100	--	--
06...	91	95	96	98	100	--	--
06...	80	97	98	99	100	--	--
06...	23	78	90	100	--	--	--
06...	75	83	92	92	100	--	--
MAY							
17...	23	30	35	47	72	100	--
17...	32	73	89	96	99	100	--
17...	51	88	96	99	100	--	--
17...	98	99	100	--	--	--	--
17...	94	98	99	100	--	--	--
JUN							
12...	67	89	93	96	99	100	--
12...	100	--	--	--	--	--	--
12...	17	21	26	41	61	76	100
12...	100	--	--	--	--	--	--

11389950 LITTLE BUTTE CREEK AT MAGALIA, CA

LOCATION.--Lat 39°48'38", long 121°35'00", in NW¼NE¼ sec.36, T.23 N., R.3 E., Butte County, Hydrologic Unit 18020120, on left bank 1,000 ft (305 m) downstream from Magalia Dam, and 0.4 mi (0.6 km) northwest of Magalia.

DRAINAGE AREA.--11.4 mi² (29.5 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,160 ft (658 m), from topographic map.

REMARKS.--Records good. Flow regulated by Paradise Reservoir, usable capacity, 11,500 acre-ft (14.180 hm³), and Magalia Reservoir, usable capacity, 2,640 acre-ft (3.26 hm³). Diversion occurs above Magalia Reservoir through a pipeline into Pacific Gas and Electric Co.'s Toadtown Canal when Paradise and Magalia Reservoirs are spilling. Diversion is made from Magalia Reservoir for the municipal supply of Paradise.

AVERAGE DISCHARGE (unadjusted).--11 years, 15.0 ft³/s (0.425 m³/s), 10,870 acre-ft/yr (13.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,180 ft³/s (33.4 m³/s) Jan. 24, 1970, gage height, 6.47 ft (1.972 m); minimum daily, 0.01 ft³/s (<0.001 m³/s) Sept. 25, 1974, and many days in 1976-77.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 186 ft³/s (5.27 m³/s) Mar. 1, gage height, 4.11 ft (1.253 m); minimum daily, 0.13 ft³/s (0.004 m³/s) Nov. 30.

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	.33	.20	.18	.23	.27	162	22	23	.65	.36	43	.30
2	.33	.19	.15	.18	.31	85	20	21	.63	.34	72	.29
3	.31	.18	.17	.18	.30	61	18	19	.63	.36	73	.29
4	.30	.18	.18	.18	.29	49	16	17	.65	.33	72	.28
5	.30	.18	.15	.17	.25	42	15	31	.60	.38	72	.27
6	.28	.18	.15	.14	.24	35	22	50	.56	.37	73	.26
7	.28	.19	.15	.26	.24	32	27	48	.56	.38	67	.26
8	.28	.18	.15	1.8	.24	30	20	39	.53	.40	56	.26
9	.30	.18	.15	.75	.24	27	17	31	.52	.43	20	.26
10	.28	.18	.15	1.3	.24	24	14	25	.51	.44	1.1	.26
11	.28	.20	.15	3.5	.22	22	16	21	.50	.48	26	.24
12	.28	.22	.16	.74	.26	21	15	18	.47	.51	44	.23
13	.27	.24	.15	.50	7.6	20	12	15	.47	.53	54	.23
14	.26	.19	.16	1.9	3.7	19	10	12	.47	.51	7.0	.22
15	.26	.18	.16	3.6	1.2	31	9.3	9.3	.47	.51	.29	.22
16	.27	.18	.16	.96	2.3	51	12	8.4	.47	.52	.28	.22
17	.28	.18	1.2	.66	1.1	41	39	6.4	.47	.82	.28	.22
18	.26	.16	.49	.52	1.8	31	42	3.8	.46	1.6	.44	.22
19	.23	.30	.32	.44	13	25	27	2.2	.44	1.7	.56	.22
20	.20	.55	.24	.40	57	22	20	1.8	.44	1.8	.46	.20
21	.20	.40	.22	.38	121	20	16	2.2	.44	1.8	.43	.19
22	.20	.30	.22	.33	114	19	15	2.4	.44	3.3	.38	.19
23	.19	.19	.22	.33	95	17	30	2.3	.44	6.4	.37	.19
24	.19	.17	.23	.32	68	15	72	1.8	.44	6.9	.35	.19
25	.19	.15	.24	.30	52	13	50	1.1	.44	7.2	.35	.19
26	.19	.15	.24	.27	49	15	43	.73	.44	7.4	.35	.20
27	.19	.15	.26	.26	43	60	47	.69	.44	4.5	.34	.19
28	.19	.15	.26	.26	60	73	36	.68	.40	.54	.29	.18
29	.20	.15	.24	.26	---	48	29	.65	.37	.51	.35	.18
30	.19	.13	.25	.26	---	33	25	.65	.36	.51	.33	.18
31	.20	---	.26	.29	---	26	---	.65	---	6.0	.30	---
TOTAL	7.71	6.18	7.41	21.67	692.80	1169	756.3	415.75	14.71	57.83	686.25	6.83
MEAN	.25	.21	.24	.70	24.7	37.7	25.2	13.4	.49	1.87	22.1	.23
MAX	.33	.55	1.2	3.6	121	162	72	50	.65	7.4	73	.30
MIN	.19	.13	.15	.14	.22	13	9.3	.65	.36	.33	.28	.18
AC-FT	15	12	15	43	1370	2320	1500	825	29	115	1360	14
‡	525	241	155	173	141	164	245	584	967	1090	912	653

CAL YR 1978 TOTAL 5739.13 MEAN 15.7 MAX 356 MIN .13 AC-FT 11380
WTR YR 1979 TOTAL 3842.44 MEAN 10.5 MAX 162 MIN .13 AC-FT 7620

‡ Diversion, in acre-feet, from Magalia Reservoir, furnished by Paradise Irrigation District.

11390000 BUTTE CREEK NEAR CHICO, CA

LOCATION.--Lat 39°43'34", long 121°42'28", in NW¼NW¼ sec.36, T.22 N., R.2 E., Butte County, Hydrologic Unit 18020105, on right bank 0.7 mi (1.1 km) downstream from Little Butte Creek, and 7.5 mi (12.1 km) east of Chico.

DRAINAGE AREA.--147 mi² (381 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1445: 1953(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 320 ft (98 m), from topographic map. Prior to Aug. 13, 1944, water-stage recorder at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Records good. Flow slightly regulated by storage in Magalia Reservoir, capacity, 3,540 acre-ft (4.36 hm³) and since 1957 by Paradise Reservoir, capacity, 6,430 acre-ft (7.93 hm³). Diversions above station for irrigation and domestic use of about 7,000 acre-ft (8.63 hm³) annually. Butte Creek receives water above station from West Branch Feather River by way of Toadtown Canal.

AVERAGE DISCHARGE (unadjusted).--49 years, 403 ft³/s (11.41 m³/s), 292,000 acre-ft/yr (360 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s (600 m³/s) Dec. 22, 1964, gage height, 14.12 ft (3.304 m), from rating curve extended above 8,900 ft³/s (252 m³/s) on basis of slope-area measurement at gage height 13.35 ft (4.069 m); minimum, 10 ft³/s (0.28 m³/s) Nov. 29, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,710 ft³/s (133 m³/s) Feb. 14 (0300 hrs), gage height 6.01 ft (1.832 m), no other peak above base of 2,700 ft³/s (76.5 m³/s); minimum daily, 67 ft³/s (1.90 m³/s) Oct. 16.

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	156	88	126	108	133	1250	587	593	351	164	154	152
2	155	91	144	111	139	697	546	581	341	160	211	144
3	153	93	115	111	132	572	543	580	332	157	210	141
4	147	94	125	111	132	496	514	580	326	164	215	138
5	146	117	113	111	132	466	524	716	318	157	214	136
6	152	139	111	114	132	502	550	753	307	154	212	134
7	153	139	101	116	130	573	544	757	298	157	209	139
8	146	137	106	250	132	588	514	693	285	151	201	131
9	145	137	119	355	130	580	510	640	276	154	173	128
10	145	136	114	238	148	563	485	604	271	160	128	126
11	141	138	108	858	150	556	481	588	263	165	151	125
12	145	137	111	515	158	551	464	588	257	161	172	125
13	141	146	104	313	1010	534	460	583	249	158	185	123
14	142	149	92	509	2530	537	476	586	240	157	153	113
15	117	115	99	1120	791	677	481	586	247	157	129	116
16	67	108	104	501	768	782	517	589	248	161	124	115
17	94	106	167	304	601	635	587	580	243	161	123	114
18	92	104	195	249	689	586	570	584	237	161	122	110
19	90	119	142	212	658	558	513	587	230	160	119	95
20	91	207	122	195	881	511	482	581	230	151	123	97
21	89	183	124	188	1210	487	467	573	227	148	142	94
22	93	172	119	177	992	470	456	569	209	157	131	85
23	79	138	116	174	789	446	507	539	188	148	127	80
24	90	119	116	167	607	434	696	508	188	144	124	77
25	88	116	116	164	529	440	620	482	167	136	122	74
26	88	112	114	145	507	453	608	474	177	122	120	75
27	87	111	114	151	463	1140	752	460	164	136	119	72
28	86	108	111	142	727	1070	665	441	160	139	118	71
29	87	110	104	133	---	804	619	409	160	142	175	70
30	87	111	104	136	---	679	603	383	167	136	240	69
31	88	---	111	145	---	616	---	365	---	145	199	---
TOTAL	3580	3780	3667	8123	15400	19253	16341	17552	7356	4723	4945	3269
MEAN	115	126	118	262	550	621	545	566	245	152	160	109
MAX	156	207	195	1120	2530	1250	752	757	351	165	240	152
MIN	67	88	92	108	130	434	456	365	160	122	118	69
AC-FT	7100	7500	7270	16110	30550	38190	32410	34810	14590	9370	9810	6480
‡	3030	2940	2260	3440	4080	6870	6960	7250	6100	4980	4370	2220

CAL YR 1978 TOTAL 196641 MEAN 539 MAX 6050 MIN 66 AC-FT 390000
WTR YR 1979 TOTAL 107989 MEAN 296 MAX 2530 MIN 67 AC-FT 214200

‡ Diversion, in acre-feet, to Toadtown Canal from West Branch Feather River, furnished by Pacific Gas and Electric Co.

11390000 BUTTE CREEK NEAR CHICO, 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 1962-79 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1961 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from November 1961 to January 1979.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 26.0°C July 21, 22, 1966 and on several days in 1977; minimum recorded, 0.5°C Dec. 8, 31, 1978, Jan. 1, 1979.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 17.0°C Oct. 1, 2; minimum recorded, 0.5°C Dec. 8, 31, Jan. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
NOV 24...	1250	119	120	7.4	7.0	2.0	12.6
JAN 18...	1335	242	114	7.4	7.0	2.0	12.5
MAR 21...	1310	487	85	7.7	10.0	2.0	11.9
MAY 29...	1320	422	69	7.6	15.5	1.0	10.0
JUL 19...	1240	157	100	8.0	22.5	1.0	9.2
SEP 25...	1255	72	126	8.1	18.0	1.0	10.0

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

SACRAMENTO RIVER BASIN

11390425 SUTTER BYPASS AT LONG BRIDGE, NEAR MERIDIAN, CA

LOCATION.--Lat 39°08'46", long 121°50'31", in Jimeno Land Grant, T.15 N., R.1 E., Sutter County, Hydrologic Unit 18020106, on right bank abutment of Long Bridge 0.2 mi (0.3 km) north of State Highway 20, and 3.9 mi (6.3 km) east of Meridian.

PERIOD OF RECORD.--

WATER TEMPERATURES: Water year 1979.

SEDIMENT RECORDS: Water year 1979.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1978 to September 1979 (storm season only).

SEDIMENT RECORDS: November 1978 to September 1979 (storm season only).

COOPERATION.--Streamflow data furnished by California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 360 mg/L Jan. 17; minimum daily mean, 9 mg/L Jan. 14.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 6,890 tons (6,250 metric tons) Jan. 17; minimum daily, 19 tons (17 metric tons) Feb. 13.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	13.0						
2					---	11.0						
3					---	12.0						
4					---	12.0						
5					---	13.0						
6					---	13.0						
7					---	14.0						
8					---	16.0						
9					---	18.0						
10					---	---						
11					---	14.0						
12					---	16.0						
13					---	14.0						
14					---	18.0						
15					---	16.0						
16					11.0	---						
17					11.0	---						
18					10.0	---						
19					10.0	---						
20					11.0	---						
21					10.0	---						
22					11.0	---						
23					11.0	---						
24					11.0	---						
25					11.0	---						
26					13.0	---						
27					12.0	---						
28					13.0	---						
29					---	---						
30					---	---						
31					---	---						
MONTH					---	---						

11390425 SUTTER BYPASS AT LONG BRIDGE, NEAR MERIDIAN, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	156	---	---	295	---	---	2040	61	336
2	156	---	---	297	---	---	2790	60	452
3	156	---	---	487	---	---	3080	48	399
4	156	---	---	503	---	---	2750	46	342
5	156	---	---	353	---	---	2230	46	277
6	152	---	---	160	---	---	1760	42	200
7	141	---	---	140	---	---	1420	40	153
8	153	---	---	125	---	---	1210	33	108
9	199	---	---	114	---	---	1070	31	90
10	400	---	---	107	---	---	974	29	76
11	479	---	---	106	---	---	879	27	64
12	1170	---	---	104	---	---	803	26	56
13	1910	10	52	109	---	---	729	25	49
14	1490	9	36	459	15	19	653	26	46
15	1970	10	53	3440	64	809	590	26	41
16	3410	52	479	5190	132	1850	571	---	---
17	7090	360	6890	4460	85	1020	755	---	---
18	5730	195	3020	4180	72	813	878	---	---
19	3530	54	515	3780	52	531	857	---	---
20	2290	16	99	4040	47	513	891	---	---
21	1530	---	---	4680	60	758	709	---	---
22	1100	---	---	7660	98	2150	564	---	---
23	956	---	---	9710	94	2460	534	---	---
24	844	---	---	8170	67	1480	474	---	---
25	709	---	---	6390	62	1070	389	---	---
26	584	---	---	4300	58	673	345	---	---
27	518	---	---	3050	53	436	325	---	---
28	475	---	---	2220	55	330	642	---	---
29	408	---	---	---	---	---	1280	---	---
30	359	---	---	---	---	---	1420	---	---
31	332	---	---	---	---	---	1350	---	---
TOTAL	38709	---	---	74629	---	---	34962	---	---

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
FEB 16...	1455	5120	11.0	120	1660	73	89	95
		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
DATE		.016 MM	.031 MM	.062 MM	.125 MM	.250 MM	.500 MM	2.00 MM
FEB 16...	97	97	97	98	99	99	99	100

SACRAMENTO RIVER BASIN

11390480 TISDALE WEIR NEAR GRIMES, CA

LOCATION.--Lat 39°01'36", long 121°49'16", in NE¼NE¼ sec.35, T.14 N., R.1 E., Sutter County, Hydrologic Unit 18020104, on left bank upstream end of Tisdale weir, on the left bank of the Sacramento River.

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: Water years 1978 to current year.

REMARKS.--Sediment table omitted for periods of no flow Oct. 1 to Dec. 31, 1977, July 1 to Dec. 31, 1978, and Apr. 1 to Sept. 30, 1979.

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

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 984 mg/L Jan. 6, 1978.

SEDIMENT DISCHARGE: Maximum daily, 35,200 tons (31,900 metric tons) Jan. 16, 1978.

EXTREMES FOR WATER YEAR 1978.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 984 mg/L Jan. 6.

SEDIMENT DISCHARGE: Maximum daily, 35,200 tons (31,900 metric tons) Jan. 16.

EXTREMES FOR WATER YEAR 1979.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 605 mg/L Feb. 22.

SEDIMENT DISCHARGE: Maximum daily, 11,500 tons (10,400 metric tons) Feb. 22.

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

JANUARY				FEBRUARY				MARCH	
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	87	53	115
4	0	0	0	0	0	0	4460	723	9070
5	0	0	0	0	0	0	8660	851	22700
6	211	984	463	1.0	868	2.3	13600	510	18700
7	2360	710	4520	5100	878	12100	14100	350	13300
8	0	0	0	9460	898	22900	11700	326	10300
9	0	0	0	12600	845	28700	12900	550	19200
10	6370	492	8460	12900	700	24400	14800	686	27400
11	11400	815	27300	10000	524	14100	15700	442	18700
12	9300	538	13500	7550	356	7260	14400	430	16700
13	5140	354	4910	7810	330	6960	13700	350	12900
14	6210	392	6570	9230	396	9870	11800	274	8730
15	12000	630	20400	7630	282	5810	10600	318	9100
16	14800	880	35200	6550	240	4240	9060	274	6700
17	16900	715	32600	5540	197	2950	6970	262	4930
18	16400	605	26800	4230	178	2030	5110	250	3450
19	15400	590	24500	2210	166	991	2580	204	1420
20	13000	692	24300	154	162	67	375	160	162
21	12400	560	18700	0	0	0	0	0	0
22	8050	500	10900	0	0	0	0	0	0
23	4460	422	5080	0	0	0	0	0	0
24	2800	304	2300	0	0	0	0	0	0
25	333	203	183	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	---	---	---	0	0	0
30	0	0	0	---	---	---	0	0	0
31	0	0	0	---	---	---	0	0	0
TOTAL	157534.0	---	266686.0	100965.0	---	142380.3	170602.0	---	203577.0

11390480 TISDALE WEIR NEAR GRIMES, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	0	0	0						
2	0	0	0						
3	0	0	0						
4	0	0	0						
5	0	0	0						
6	0	0	0						
7	1610	550	2390						
8	5020	562	7280						
9	2500	298	2010						
10	671	152	275						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	---	---	---						
TOTAL	9801.00	---	11955.00	0	---	0	0	---	0
YEAR	438902.0		624598.3						

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	1980	259	1380
3	0	0	0	0	0	0	188	52	26
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	17	9	.41	0	0	0
15	0	0	0	7090	595	11400	0	0	0
16	5690	246	3780	2260	327	2000	0	0	0
17	3080	305	2540	2620	324	2290	0	0	0
18	0	0	0	372	90	90	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	450	94	114	0	0	0
21	0	0	0	872	157	370	0	0	0
22	0	0	0	7020	605	11500	0	0	0
23	0	0	0	5290	250	3570	0	0	0
24	0	0	0	3280	131	1160	0	0	0
25	0	0	0	100	22	5.9	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	---	---	---	0	0	0
30	0	0	0	---	---	---	0	0	0
31	0	0	0	---	---	---	0	0	0
TOTAL	8770.00	---	6320	29371.00	---	32500.31	2168.00	---	1406
YEAR	40309.00		40226.31						

SACRAMENTO RIVER BASIN

11390480 TISDALE WEIR NEAR GRIMES, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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
JAN 17...	1145	3170	7.5	330	2820	38	49
FEB 15...	1430	9490	8.5	674	17300	0	33

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	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
JAN 17...	57	70	82	88	96	99	100
FEB 15...	43	56	67	76	89	97	100

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA

LOCATION.--Lat 39°00'36", long 121°49'25", in NW¼NE¼ sec.2, T.13 N., R.1 E., Colusa County, Hydrologic Unit 18020104, on right bank 1,200 ft (366 m) downstream from Wilkins Slough, 5.8 mi (9.3 km) southeast of Grimes, and at mile 62.9 (101.2 km) upstream from Sacramento.

DRAINAGE AREA.--12,926 mi² (33,478 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1931 to September 1938 (low-water periods only), October 1938 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1965, published as "below Wilkins Slough."

GAGE.--Water-stage recorder. Datum of gage is 3.00 ft (0.914 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Natural flow of stream affected by storage reservoirs, power development, bypassing for flood control, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--41 years (water years 1939-79), 10,080 ft³/s (285.5 m³/s), 7,303,000 acre-ft/yr (9.00 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1939-79), 29,400 ft³/s (833 m³/s) Jan. 19, 1974, gage height, 50.08 ft (15.264 m); maximum gage height, 52.75 ft (16.078 m) Mar. 1, 1940; minimum discharge, 100 ft³/s (2.83 m³/s) Aug. 1, 1931, gage height, 14.20 ft (4.328 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,500 ft³/s (722 m³/s) Feb. 15, gage height, 47.15 ft (14.371 m); minimum daily, 4,080 ft³/s (116 m³/s) Aug. 29.

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	6700	5890	7500	7280	7730	14700	16200	7570	5240	7000	8040	5120
2	6660	5660	7480	7300	7360	23100	15000	7520	5250	7360	7720	5320
3	6590	5630	7490	7310	6700	21100	14300	7530	5050	8250	7610	5460
4	6560	5650	7450	7310	6280	16600	13700	6740	4710	8600	7610	5580
5	6470	5800	7380	7320	6210	14400	12000	6100	4590	8670	7630	5530
6	6460	6360	7340	7270	6340	13200	10600	5890	4970	8770	7720	5430
7	6480	6510	7330	6890	6210	12500	10400	7550	5100	8730	7860	5250
8	6500	6550	7320	6720	5940	12500	10400	8270	5170	8770	7880	5140
9	6500	6470	7280	7160	5750	12500	10000	8520	5240	9030	7620	5010
10	6560	6470	7290	9050	5670	12300	9540	7260	5380	9080	7080	4920
11	6510	6350	7320	9060	5610	11800	9060	6180	5460	9040	6830	4940
12	6520	6380	7370	12400	5590	11600	8190	5670	5420	8800	6800	4980
13	6570	6430	7380	17300	5720	11400	7270	6120	5380	8650	6460	4890
14	6540	6540	7380	14700	11600	10900	6480	6760	5340	8520	6030	4790
15	6390	6590	7380	15700	24900	10400	6130	7000	5300	8410	5750	4800
16	6320	6740	7370	24500	23500	10400	6440	7090	5210	8390	5600	4800
17	6210	6850	7360	23900	23700	11600	6740	7070	5120	8330	5020	4760
18	6180	6720	7440	19100	21500	12800	6710	6960	5120	8170	4450	4540
19	6210	6770	7540	14800	19100	12800	6460	6870	5140	8140	4200	4410
20	6190	6800	7550	12500	22500	13300	5670	6770	5160	8110	4230	4550
21	6180	7030	7470	11400	21800	12000	4880	6740	5140	8190	4250	4650
22	6240	7510	7460	10800	25200	11000	4360	6660	5150	8320	4350	4750
23	6280	7850	7450	10400	24700	10800	4640	6400	5080	8330	4480	4770
24	6340	7900	7410	10100	24000	10600	5530	6370	5400	8310	4570	4800
25	6360	7780	7420	9360	21600	9810	7320	6420	5440	8310	4500	4750
26	6280	7640	7390	8860	18500	9330	8880	6310	5480	8260	4530	4940
27	6220	7580	7420	8570	16600	9130	8570	6280	5460	8080	4310	5040
28	6240	7550	7370	8380	15400	12400	8430	6100	5520	8060	4160	5110
29	6210	7510	7370	8160	---	19800	8680	5870	6260	8120	4080	5090
30	6130	7510	7320	8010	---	19300	8120	5700	6900	8140	4380	5090
31	6100	---	7280	7870	---	17600	---	5520	---	8080	4660	---
TOTAL	197700	203020	229310	339480	395710	411670	260700	207810	159180	259020	180410	149210
MEAN	6377	6767	7397	10950	14130	13280	8690	6704	5306	8355	5820	4974
MAX	6700	7900	7550	24500	25200	23100	16200	8520	6900	9080	8040	5580
MIN	6100	5630	7280	6720	5590	9130	4360	5520	4590	7000	4080	4410
AC-FT	392100	402700	454800	673400	784900	816500	517100	412200	315700	513800	357800	296000
CAL YR 1978 TOTAL	4218060			MEAN 11560	MAX 28500	MIN 5510	AC-FT 8367000					
WTR YR 1979 TOTAL	2993220			MEAN 8201	MAX 25200	MIN 4080	AC-FT 5937000					

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1966 to current year.

INSTRUMENTATION.--Temperature recorder since October 1966.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.5°C Sept. 6-8, 1977; minimum recorded, 4.0°C Dec. 26, 1968.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.0°C Sept. 14; minimum recorded, 6.0°C Jan. 1-3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SACRAMENTO RIVER BASIN

11390650 SACRAMENTO RIVER ABOVE COLUSA TROUGH, AT KNIGHTS LANDING, CA

LOCATION.--Lat 38°48'18", long 121°43'22", in NW¼ sec.14, T.11 N., R.2 E., Yolo County, Hydrologic Unit 18020104, on right bank, 0.2 mi (0.3 km) upstream from Colusa Drain, 0.4 mi (0.6 km) upstream from State Highway 24 bridge at Knights Landing, and 0.6 mi (1.0 km) upstream from gaging station.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: July 1960 to current year.

REMARKS.--Records of discharge given for Sacramento River at Knights Landing (station 11391000).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	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)
OCT 31...	1205	6550	144	7.6	13.0	9.0	10.3	--	--	--	--	--
NOV 29...	1125	7980	140	7.6	11.0	6.0	11.2	--	--	--	--	--
DEC 28...	1115	7590	160	7.5	7.5	3.0	11.5	--	--	--	--	--
JAN 30...	1000	8570	228	8.1	7.0	10	11.5	81	0	16	10	16
FEB 28...	0900	15300	160	7.4	11.0	19	9.8	--	--	--	--	--
MAR 29...	1040	19600	162	7.7	13.5	60	10.1	--	--	--	--	--
APR 26...	1050	9310	173	7.7	15.5	24	10.0	--	--	--	--	--
MAY 31...	1200	6300	182	7.6	19.5	9.0	8.9	--	--	--	--	--
JUN 28...	1200	5900	166	7.6	22.0	5.0	8.7	--	--	--	--	--
JUL 26...	1120	8940	136	7.5	21.5	7.0	8.8	--	--	--	--	--
AUG 23...	1045	6160	202	7.7	21.0	8.0	8.4	72	0	14	9.0	13
SEP 27...	1200	6050	180	7.5	20.0	6.0	8.3	--	--	--	--	--

DATE	SODIUM AD- SORP- TION RATIO	ALKA- LITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT 31...	--	--	--	44	.14	--	--	--	.20	.05	.02	--
NOV 29...	--	--	--	21	.18	--	--	--	.30	.04	.02	--
DEC 28...	--	--	--	13	.24	--	--	--	.20	.02	.01	--
JAN 30...	.8	82	10	34	--	.27	--	--	.30	.08	.03	100
FEB 28...	--	--	--	45	--	.43	--	--	.30	.06	.02	--
MAR 29...	--	--	--	182	--	.22	--	--	.50	.14	.02	--
APR 26...	--	--	--	90	--	.00	--	--	.30	.09	.01	--
MAY 31...	--	--	--	44	--	.10	--	--	.30	.07	.02	--
JUN 28...	--	--	--	35	--	.05	.02	.38	.40	.06	.01	--
JUL 26...	--	--	--	24	--	.06	--	--	.30	.04	.01	--
AUG 23...	.7	80	6.0	27	--	.03	.01	.39	.40	.06	.02	0
SEP 27...	--	--	--	32	--	.11	--	--	.30	.06	.02	--

11390660 WALKER CREEK AT ARTOIS, CA

LOCATION.--Lat 39°37'32", long 122°11'45", in SW¼SW¼ sec.34, T.21 N., R.3 W., Glenn County, Hydrologic Unit 18020104, on left bank 500 ft (152 m) upstream from county road bridge, and 0.3 mi (0.5 km) north of Artois.

DRAINAGE AREA.--60.4 mi² (156.4 km²).

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 156.4 ft (47.67 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Several small storage ponds above station for irrigation.

AVERAGE DISCHARGE.--14 years, 20.8 ft³/s (0.589 m³/s), 15,070 acre-ft/yr (18.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,660 ft³/s (160 m³/s) Feb. 7, 1973, gage height, 11.69 ft (3.563 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of contracted-opening measurement at gage height 11.69 ft (3.563 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (16.9 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. 15	0700	1,730 49.0	8.23 2.508	Feb. 20	2000	*2,470 70.0	9.36 2.853
Feb. 14	0500	776 22.0	6.30 1.920	Mar. 27	2000	938 26.6	6.67 2.033

Minimum, no flow for several months.

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	1.3	.06		0	.55	218	8.6	3.2	.06	4.8	1.3	12
2	5.8	.01		0	.39	63	5.9	2.4	.06	6.7	.83	7.1
3	5.0	0		0	.24	33	4.4	2.4	.12	4.3	.47	5.6
4	3.1	0		0	.20	31	3.9	2.3	.53	3.7	2.1	2.9
5	1.5	0		0	.14	25	3.3	1.3	.94	3.1	3.7	1.5
6	.29	0		0	.11	18	2.4	2.8	.44	3.8	2.5	.96
7	.68	0		0	.09	11	1.7	3.1	.15	3.7	3.6	.78
8	.91	0		0	.09	8.9	1.3	2.5	.08	8.1	3.0	.50
9	4.8	0		0	.11	5.8	.96	3.4	0	6.9	7.2	.91
10	8.1	0		0	.20	3.3	.78	1.5	0	3.0	9.4	1.4
11	5.7	0		0	.13	2.2	.72	.76	0	3.1	8.8	1.4
12	2.4	0		0	.12	1.3	.91	.60	0	2.5	7.1	2.0
13	1.0	0		3.4	.22	.86	.98	1.6	1.5	1.4	5.2	2.0
14	.58	0		17	.471	.78	.81	6.8	.99	.98	6.0	4.0
15	.64	0		896	.98	.62	.66	3.0	1.0	.55	5.3	5.1
16	3.5	0		181	254	.63	.61	5.6	1.4	.24	13	9.5
17	1.9	0		64	83	12	2.1	7.3	.87	.16	18	6.5
18	.85	0		40	120	17	2.2	3.6	2.3	.31	7.6	6.1
19	.44	0		30	111	13	.88	1.3	3.4	1.1	4.8	6.8
20	2.0	0		22	598	10	1.9	.77	2.4	2.3	3.7	4.6
21	7.8	0		17	410	2.8	7.8	1.8	1.5	2.4	2.0	4.4
22	6.5	0		14	100	1.3	11	1.1	2.4	3.7	4.0	3.5
23	5.7	0		10	61	2.5	9.5	3.6	1.1	4.3	6.9	3.5
24	4.6	0		6.8	42	.95	17	3.6	.46	5.1	5.6	2.7
25	2.6	0		4.5	39	.31	19	1.6	.13	1.5	4.9	5.2
26	1.5	0		2.8	71	.14	12	.84	.35	.73	5.0	11
27	1.3	0		1.9	50	180	8.5	.74	1.4	.54	3.1	11
28	.95	0		1.3	42	147	6.9	1.1	3.4	.28	3.0	7.7
29	.49	0		.86	---	43	4.9	1.0	5.7	6.6	11	5.7
30	.22	0		.69	---	23	4.0	.36	6.5	3.8	38	2.8
31	.13	---		.63	---	14	---	.13	---	3.2	23	---
TOTAL	82.28	.07	0	1313.88	2574.37	890.39	145.61	72.10	39.18	92.89	220.10	139.15
MEAN	2.65	.002	0	42.4	91.9	28.7	4.85	2.33	1.31	3.00	7.10	4.64
MAX	8.1	.06	0	896	598	218	19	7.3	6.5	8.1	38	12
MIN	.13	0	0	0	.09	.14	.61	.13	0	.16	.47	.50
AC-FT	163	.1	0	2610	5110	1770	289	143	78	184	437	276
CAL YR 1978	TOTAL	16159.40	MEAN	44.3	MAX	1960	MIN	0	AC-FT	32050		
WTR YR 1979	TOTAL	5570.02	MEAN	15.3	MAX	896	MIN	0	AC-FT	11050		

11390672 STONE CORRAL CREEK NEAR SITES, CA

LOCATION.--Lat 39°17'18", long 122°18'00", in NW¼NW¼ sec.34, T.17 N., R.4 W., Colusa County, Hydrologic Unit 18020104, on left bank at road bridge, 2.4 mi (3.9 km) southeast of Sites.

DRAINAGE AREA.--38.2 mi² (98.9 km²).

PERIOD OF RECORD.--March 1958 to September 1964, October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (55 m), from topographic map.

REMARKS.--No known diversion or regulation above station.

COOPERATION.--Records furnished by Water and Power Resources Service and reviewed by Geological Survey.

AVERAGE DISCHARGE.--20 years (water years 1959-64, 1966-79), 6.27 ft³/s, (0.178 m³/s), 4,540 acre-ft/yr (5.60 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s (154 m³/s) Feb. 6, 1973, gage height, 16.45 ft (5.014 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-conveyance study at gage height 13.0 ft (3.96 m) and a slope-area measurement at 16.45 ft (5.014 m); no flow for several months in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 13.0 ft (3.96 m) from floodmarks, discharge, 1,940 ft³/s (54.9 m³/s) from slope-conveyance study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) Mar. 27, gage height, 13.97 ft (4.258 m); no flow for several months.

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				0	0	2.5	3.0	.30	.06			
2				0	0	1.8	1.9	.33	.05			
3				0	0	1.3	1.2	.30	.06			
4				0	0	1.2	.78	.24	.07			
5				0	0	1.2	.50	.43	.05			
6				0	0	1.2	5.8	.40	.02			
7				0	0	1.3	4.4	.33	0			
8				0	0	1.1	1.2	.33	0			
9				0	0	1.0	.54	.33	0			
10				0	0	.91	.24	.30	.02			
11				0	0	.83	.14	.27	.02			
12				0	0	.79	.09	.27	.03			
13				0	9.4	.75	.08	.27	.03			
14				0	78	.68	.08	.27	.02			
15				91	4.6	.64	.08	.27	.02			
16				5.7	74	.61	.09	.24	.02			
17				1.2	8.4	.58	.09	.22	.02			
18				3.7	14	.58	.12	.18	.02			
19				1.3	8.6	.54	.12	.14	.03			
20				.68	241	.51	.12	.12	.03			
21				.51	59	.48	.16	.11	.03			
22				.29	35	.51	.20	.09	.02			
23				.08	14	.54	.24	.08	.02			
24				0	5.9	.51	.27	.06	0			
25				0	4.0	.48	.30	.06	0			
26				0	5.4	.45	.33	.06	0			
27				0	3.2	380	.36	.07	0			
28				0	2.5	28	.40	.06	0			
29				0	---	13	.36	.06	0			
30				0	---	8.2	.30	.06	0			
31		---		0	---	4.9	---	.06	---			---
TOTAL	0	0	0	104.46	567.0	457.09	23.49	6.31	.64	0	0	0
MEAN	0	0	0	3.37	20.3	14.7	.78	.20	.021	0	0	0
MAX	0	0	0	91	241	380	5.8	.43	.07	0	0	0
MIN	0	0	0	0	0	.45	.08	.06	0	0	0	0
AC-FT	0	0	0	207	1120	907	47	13	1.3	0	0	0
CAL YR 1978	TOTAL	7157.30	MEAN	19.6	MAX	1300	MIN	0	AC-FT	14200		
WTR YR 1979	TOTAL	1158.99	MEAN	3.18	MAX	380	MIN	0	AC-FT	2300		

11390700 COLUSA TROUGH NEAR COLUSA, CA

LOCATION.--Lat 39°11'43", long 122°03'34", in SE¼NE¼ sec.34, T.15 N., R.2 W., Colusa County, Hydrologic Unit 18020104, at gaging station 3 mi (5 km) west of Colusa, on State Highway 20, and 6 mi (10 km) northeast of Williams.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1953 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT										
30...	1425	563	8.0	14.0	27	10.3	--	--	--	--
NOV										
28...	1510	605	7.8	10.0	28	11.1	--	--	--	--
DEC										
27...	1335	925	8.0	6.0	13	12.3	--	--	--	--
JAN										
29...	1300	992	8.1	6.0	45	11.6	--	--	--	--
FEB										
27...	1230	788	8.1	13.0	55	9.9	--	--	--	--
MAR										
28...	1345	394	8.0	14.0	--	9.3	100	7	22	12
APR										
25...	1330	379	8.2	18.5	31	10.1	--	--	--	--
MAY										
30...	1542	872	8.2	22.0	15	8.6	200	12	33	29
JUN										
27...	1405	592	7.5	26.5	13	7.2	--	--	--	--
JUL										
25...	1340	526	7.4	27.5	9.0	6.4	--	--	--	--
AUG										
22...	1325	459	7.7	21.5	5.0	7.6	--	--	--	--
SEP										
26...	1520	566	7.8	20.5	50	8.5	--	--	--	--

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	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, NITRATE DIS- SOLVED (MG/L AS N)	BORON, DIS- SOLVED (UG/L AS B)
OCT										
30...	--	--	--	--	--	--	--	65	--	--
NOV										
28...	--	--	--	--	--	--	--	56	--	--
DEC										
27...	--	--	--	--	--	--	--	23	--	--
JAN										
29...	--	--	--	--	--	--	--	81	--	--
FEB										
27...	--	--	--	--	--	--	--	111	--	--
MAR										
28...	40	45	1.7	98	55	25	246	1430	.45	100
APR										
25...	--	--	--	--	--	--	--	82	--	--
MAY										
30...	120	--	3.7	190	--	57	--	42	--	400
JUN										
27...	--	--	--	--	--	--	--	50	--	--
JUL										
25...	--	--	--	--	--	--	--	40	--	--
AUG										
22...	--	--	--	--	--	--	--	48	--	--
SEP										
26...	--	--	--	--	--	--	--	127	--	--

SACRAMENTO RIVER BASIN

11391000 SACRAMENTO RIVER AT KNIGHTS LANDING, CA

LOCATION.--Lat 38°48'11", long 121°42'55", in NW¼NE¼ sec.14, T.11 N., R.2 E., Sutter County, Hydrologic Unit 18020104, on left bank 1,000 ft (305 m) downstream from State Highway 24 bridge at Knights Landing, 13.1 mi (21.1 km) upstream from Feather River, and at mile 34.0 (54.7 km) upstream from Sacramento.

DRAINAGE AREA.--14,535 mi² (37,646 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1921 to October 1939 (low-water periods only), June 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

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

GAGE.--Water-stage recorder. Datum of gage is 2.93 ft (0.893 m) below National Geodetic Vertical Datum of 1929. April 1921 to Dec. 9, 1930, in fender pier of railroad bridge at same datum. Water-stage recorder for station at Verona was used as auxiliary gage for this station January 1941 to June 1945. Since Aug. 16, 1945, auxiliary water-stage recorder 6.0 mi (9.7 km) downstream from base gage.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, power developments, bypassing for flood control, diversions for irrigation, and considerable return flow from irrigated areas.

AVERAGE DISCHARGE.--39 years (water years 1941-79), 10,780 ft³/s (305.3 m³/s), 7,810,000 acre-ft/yr (9.63 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1940-79), 30,800 ft³/s (872 m³/s) Jan. 26, 1970, gage height, 40.86 ft (12.454 m); maximum gage height, 41.83 ft (12.750 m) Feb. 8, 1942, backwater from Feather River and Sutter Bypass; minimum discharge recorded, 250 ft³/s (7.08 m³/s) July 23, 1931, gage height, 7.80 ft (2.377 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 26,900 ft³/s (762 m³/s) Jan. 17; minimum daily, 4,840 ft³/s (137.1 m³/s) Apr. 22.

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	7250	6440	7770	7530	8160	12800	16900	8190	6060	7330	8870	7230
2	7250	6140	7670	7530	8020	21200	15700	7840	5840	7490	8630	7560
3	7200	6100	7620	7520	7350	22000	14900	8130	5760	8190	8520	7550
4	7170	6080	7680	7570	6890	16400	14500	7230	5400	8930	8330	7690
5	7040	6130	7640	7540	6650	13700	13100	6380	5160	9100	8500	7580
6	7020	6550	7510	7480	6590	12400	11300	6270	5110	9290	8530	7470
7	7100	6840	7540	7290	6380	11900	10900	7580	5450	9270	8560	7330
8	7130	6900	7520	7150	6200	11900	11200	8890	5550	9390	8580	7150
9	7020	6950	7510	7340	6070	12100	10700	9210	5490	9610	8480	7120
10	7090	6870	7440	8990	5940	11800	10200	8240	5590	9720	8050	6920
11	6960	6780	7480	9670	5810	11600	9700	6810	5740	9530	7600	6750
12	6900	6750	7520	10300	5750	11300	9220	6300	5690	9340	7770	6830
13	6960	6840	7520	17100	5760	11200	8020	6840	5610	9240	7480	6890
14	6990	6980	7530	16000	8740	11000	7190	7540	5570	8970	7300	6750
15	6900	7040	7540	15400	24300	10500	6760	8230	5480	8910	6960	6640
16	6710	7170	7520	25900	25100	10200	6670	8500	5420	8620	6910	6580
17	6620	7430	7540	26900	24100	10800	7050	8520	5410	8580	6690	6390
18	6620	7190	7660	21400	23100	12300	7170	8650	5570	8480	6070	6260
19	6590	7090	7850	16600	18100	12200	6890	8500	5870	8400	6040	6060
20	6540	7170	7890	14000	22500	12600	6110	8160	5890	8370	5850	6100
21	6590	7280	7690	12800	21100	12000	5280	7980	5860	8300	5930	6090
22	6650	7680	7630	12100	25200	10900	4840	7840	5750	8720	6080	6150
23	6680	8120	7690	11600	23900	10600	4880	7630	5610	8730	6160	5970
24	6730	8400	7590	11300	23100	10700	5840	7540	5810	8740	6240	5940
25	6750	8280	7630	10400	20700	10100	7910	7540	6020	8830	6180	5860
26	6660	8170	7610	9630	16400	9530	9460	7460	5770	8890	6350	5850
27	6570	8060	7590	9300	13500	9200	9410	7480	5840	8720	6150	6000
28	6540	8020	7580	8890	14900	10600	9540	7090	5860	8670	6170	6070
29	6580	7940	7560	8620	---	19400	9900	6690	6400	9010	6180	5990
30	6540	7910	7500	8540	---	20700	8710	6620	7030	9060	6380	5850
31	6550	---	7480	8310	---	18600	---	6210	---	8910	6750	---
TOTAL	211900	215300	235500	360700	390310	402230	279950	236090	171610	273340	222290	198620
MEAN	6835	7177	7597	11640	13940	12980	9332	7616	5720	8817	7171	6621
MAX	7250	8400	7890	26900	25200	22000	16900	9210	7030	9720	8870	7690
MIN	6540	6080	7440	7150	5750	9200	4840	6210	5110	7330	5850	5850
AC-FT	420300	427000	467100	715400	774200	797800	555300	468300	340400	542200	440900	394000
CAL YR 1978 TOTAL	4435150			12150		29700		4640		8797000		
WTR YR 1979 TOTAL	3197840			8761		26900		4840		6343000		

11391000 SACRAMENTO RIVER AT KNIGHTS LANDING, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-60, 1978 to current year.

CHEMICAL ANALYSES: Water years 1951-60.

WATER TEMPERATURES: Water years 1951-60, 1978 to current year.

SEDIMENT RECORDS: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1951 to May 1957, December 1958 to May 1960, November 1977 to current year (storm season only).

SEDIMENT RECORDS: November 1977 to current year (storm season only).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 990 mg/L Jan. 13, 1978; minimum daily mean, 20 mg/L

Dec. 31, 1978.

SEDIMENT DISCHARGE: Maximum daily, 66,800 tons (60,600 metric tons) Jan. 13, 1978; minimum daily, 262 tons (238 metric tons) Dec. 10, 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 924 mg/L Feb. 15; minimum daily mean, 20 mg/L Dec. 31.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 60,600 tons (55,000 metric tons) Feb. 15; minimum daily, 404 tons (367 metric tons) Dec. 31.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	7.0	7.0	11.0	14.0	---	---			
2		---	10.0	---	7.0	12.0	14.0	16.0	---			
3		---	10.0	6.0	8.0	11.0	15.0	15.0	---			
4		---	---	---	8.0	11.0	11.0	17.0	---			
5		---	---	8.0	9.0	11.0	14.0	16.0	---			
6		16.0	9.0	---	9.0	12.0	14.0	---	24.0			
7		---	7.0	7.0	9.0	12.0	---	15.0	---			
8		16.0	---	10.0	9.0	13.0	14.0	15.0	---			
9		13.0	---	10.0	10.0	14.0	15.0	15.0	---			
10		16.0	10.0	10.0	10.0	18.0	15.0	15.0	---			
11		---	---	9.5	10.0	18.0	15.0	16.0	---			
12		9.0	8.0	11.0	11.0	---	15.0	16.0	---			
13		---	---	---	10.0	15.0	15.0	17.0	---			
14		17.0	9.0	12.0	11.0	16.0	---	17.0	---			
15		---	---	11.0	11.0	15.0	---	15.0	---			
16		16.0	9.0	12.0	9.0	16.0	---	16.0	---			
17		---	---	7.5	9.0	15.0	---	18.0	---			
18		10.0	9.0	10.0	9.0	15.0	---	18.0	---			
19		---	---	8.0	9.0	17.0	16.5	18.0	---			
20		11.0	10.0	9.0	---	---	18.0	---	---			
21		11.0	---	9.0	9.0	14.0	19.0	23.0	---			
22		11.0	7.0	---	9.0	18.0	18.0	18.0	---			
23		10.5	---	9.0	11.0	14.0	---	18.0	---			
24		10.0	7.0	10.0	10.0	16.0	16.0	---	---			
25		---	---	10.0	---	16.0	18.5	19.0	---			
26		11.0	7.0	9.0	10.0	16.0	16.0	19.0	---			
27		10.0	---	7.0	13.0	15.0	16.0	18.0	---			
28		---	7.0	7.0	12.0	16.0	---	19.0	---			
29		---	---	6.0	---	12.0	16.0	18.5	---			
30		10.0	8.0	7.0	---	16.0	15.0	20.0	---			
31		---	---	7.0	---	12.0	---	19.0	---			
MONTH		---	---	9.0	9.5	14.5	---	17.5	---			

SACRAMENTO RIVER BASIN

11391000 SACRAMENTO RIVER AT KNIGHTS LANDING, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				6440	39	678	7770	44	923
2				6140	41	680	7670	41	849
3				6180	41	675	7620	42	864
4				6080	43	706	7680	43	892
5				6130	50	828	7640	40	825
6				6550	50	884	7510	39	791
7				6840	36	665	7540	41	835
8				6900	46	857	7520	39	792
9				6950	55	1030	7510	36	730
10				6870	51	946	7440	34	683
11				6780	48	879	7480	34	687
12				6750	44	802	7520	34	690
13				6840	46	850	7520	35	711
14				6980	46	867	7530	36	732
15				7040	43	817	7540	34	692
16				7170	41	794	7520	33	670
17				7430	47	943	7540	38	774
18				7190	51	990	7660	46	951
19				7090	44	842	7850	60	1270
20				7170	38	736	7890	66	1410
21				7280	41	806	7690	36	747
22				7680	50	1040	7630	29	597
23				8120	52	1140	7690	36	747
24				8400	50	1130	7590	36	738
25				8280	48	1070	7630	34	700
26				8170	47	1040	7610	31	637
27				8060	43	936	7590	28	574
28				8020	41	888	7580	25	512
29				7940	42	900	7560	25	510
30				7910	47	1000	7500	22	445
31				---	---	---	7480	20	404
TOTAL				215300	---	26419	235500	---	23382

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	7530	22	447	8160	41	903	12800	106	3660
2	7530	30	610	8020	39	845	21200	258	15500
3	7520	32	650	7350	35	695	22000	261	15900
4	7570	27	552	6890	34	633	16400	111	4920
5	7540	24	489	6650	37	664	13700	85	3140
6	7480	28	565	6590	37	658	12400	58	1940
7	7290	38	748	6380	39	672	11900	54	1740
8	7150	40	772	6200	34	569	11900	77	2470
9	7340	42	832	6070	32	524	12100	82	2680
10	8990	75	1820	5940	33	529	11800	88	2800
11	9670	133	3470	5810	36	565	11600	80	2510
12	10300	479	13900	5750	35	543	11300	82	2500
13	17100	542	25000	5760	36	560	11200	110	3330
14	16000	331	14300	8740	334	10400	11000	94	2790
15	15400	266	11600	24300	924	60600	10500	79	2240
16	25900	828	58500	25100	550	37700	10200	75	2070
17	26900	612	44600	24100	367	23900	10800	100	2920
18	21400	322	18600	23100	333	20800	12300	106	3520
19	16600	182	8160	18100	182	8890	12200	90	2960
20	14000	130	4910	22500	237	14400	12600	84	2860
21	12800	106	3660	21100	241	13700	12000	86	2790
22	12100	100	3270	25200	545	37000	10900	77	2270
23	11600	99	3100	23900	390	25400	10600	70	2000
24	11300	89	2720	23100	180	11200	10700	70	2020
25	10400	69	1940	20700	126	7040	10100	100	2730
26	9630	59	1530	16400	102	4520	9530	124	3190
27	9300	61	1530	13500	78	2840	9200	90	2240
28	8890	57	1370	14900	78	3140	10600	85	2430
29	8620	52	1210	---	---	---	19400	719	39300
30	8540	58	1340	---	---	---	20700	467	26300
31	8310	47	1050	---	---	---	18600	253	12700
TOTAL	360700	---	233245	390310	---	289890	402230	---	180420

11391000 SACRAMENTO RIVER AT KNIGHTS LANDING, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	16900	204	9310	8190	72	1590			
2	15700	179	7590	7840	87	1840			
3	14900	69	2780	8130	92	2020			
4	14500	68	2660	7230	93	1820			
5	13100	99	3500	6380	79	1360			
6	11300	140	4270	6270	69	1170			
7	10900	117	3440	7580	80	1670			
8	11200	101	3050	8890	116	2780			
9	10700	98	2830	9210	104	2590			
10	10200	93	2560	8240	103	2290			
11	9700	94	2460	6810	93	1710			
12	9220	100	2490	6300	68	1160			
13	8020	109	2360	6840	70	1290			
14	7190	94	1820	7540	73	1490			
15	6760	87	1590	8230	79	1760			
16	6670	117	2110	8500	97	2230			
17	7050	73	1390	8520	107	2460			
18	7170	75	1450	8650	119	2780			
19	6890	72	1340	8500	123	2820			
20	6110	63	1040	8160	112	2470			
21	5280	86	1230	7980	93	2000			
22	4840	61	797	7840	75	1590			
23	4880	58	764	7630	59	1220			
24	5840	95	1500	7540	66	1340			
25	7910	94	2010	7540	66	1340			
26	9460	202	5150	7460	50	1010			
27	9410	109	2780	7480	53	1070			
28	9540	83	2140	7090	64	1230			
29	9900	101	2700	6690	70	1260			
30	8710	78	1830	6620	68	1220			
31	---	---	---	6210	66	1110			
TOTAL	279950	---	80941	236090	---	53690			
PERIOD	2120080	---	887987						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1978	215300.00	26419.00	5460	31900
DECEMBER ...	235500.00	23382.00	6210	29600
JANUARY 1979	360700.00	233245.00	15100	248000
FEBRUARY ...	390310.00	289890.00	20100	310000
MARCH	402230.00	180420.00	17000	197000
APRIL	279950.00	80941.00	9380	90300
MAY	236090.00	53690.00	6290	60000
PERIOD	2120080.00	887987.00	79540	966800

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN								
11...	1100	9770	9.5	95	2510	--	--	--
17...	1315	26600	7.5	605	43500	23	30	40
FEB								
16...	1015	25700	9.0	522	36200	29	37	46
MAR								
15...	1320	10600	15.0	93	2660	28	35	42
22...	1015	10900	18.0	84	2470	--	--	--

SACRAMENTO RIVER BASIN

11391000 SACRAMENTO RIVER AT KNIGHTS LANDING, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.016 MM	.031 MM	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM
JAN							
11...	--	--	70	90	99	100	--
17...	50	59	67	81	97	100	--
FEB							
16...	55	63	70	82	95	99	100
MAR							
15...	50	62	71	89	97	100	--
22...	--	--	69	88	97	100	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
DATE	TIME							
NOV								
09...	0855	5	6920	13.0	1	16	65	70
09...	0856	--	--	--	0	1	26	98
09...	0857	--	--	--	0	2	7	23
09...	0858	--	--	--	0	2	7	14
09...	0859	--	--	--	0	1	5	11
JAN								
11...	1230	5	9770	9.5	1	12	80	84
11...	1231	--	--	--	0	4	56	90
11...	1232	--	--	--	0	3	13	27
11...	1233	--	--	--	0	2	9	13
11...	1234	--	--	--	0	3	10	14
17...	1315	5	26600	7.5	0	3	58	100
17...	1316	--	--	--	0	10	91	99
17...	1317	--	--	--	0	3	78	100
17...	1318	--	--	--	0	1	23	99
17...	1319	--	--	--	0	1	4	7
FEB								
09...	1000	5	6120	10.0	0	3	15	22
09...	1001	--	--	--	--	0	51	100
09...	1002	--	--	--	0	2	7	12
09...	1003	--	--	--	--	0	30	99
09...	1004	--	--	--	--	0	1	67
16...	1041	5	25500	9.0	1	12	75	100
16...	1043	--	--	--	--	2	51	99
16...	1047	--	--	--	0	2	27	97
16...	1052	--	--	--	--	0	4	34
16...	1055	--	--	--	0	20	40	80
MAR								
22...	1000	4	10900	18.0	0	6	64	100
22...	1001	--	--	--	--	0	34	100
22...	1002	--	--	--	--	0	6	96
22...	1003	--	--	--	0	1	3	72
APR								
25...	1505	5	7940	18.5	0	4	56	100
25...	1506	--	--	--	0	1	33	100
25...	1507	--	--	--	--	0	6	90
25...	1508	--	--	--	--	0	1	19
25...	1509	--	--	--	0	3	10	16

11391000 SACRAMENTO RIVER AT KNIGHTS LANDING, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
NOV							
09...	70	70	72	77	93	100	--
09...	100	--	--	--	--	--	--
09...	24	25	30	42	86	100	--
09...	15	16	21	33	88	100	--
09...	13	15	21	37	79	100	--
JAN							
11...	84	85	87	97	100	--	--
11...	90	90	90	92	100	--	--
11...	28	30	31	41	63	100	--
11...	15	16	24	39	75	100	--
11...	16	18	27	50	87	100	--
17...	--	--	--	--	--	--	--
17...	99	99	100	--	--	--	--
17...	--	--	--	--	--	--	--
17...	100	--	--	--	--	--	--
17...	7	9	13	25	67	100	--
FEB							
09...	22	23	25	40	56	100	--
09...	--	--	--	--	--	--	--
09...	14	17	26	45	78	100	--
09...	100	--	--	--	--	--	--
09...	96	99	100	--	--	--	--
16...	--	--	--	--	--	--	--
16...	100	--	--	--	--	--	--
16...	98	99	99	99	100	--	--
16...	56	64	72	79	84	87	100
16...	100	--	--	--	--	--	--
MAR							
22...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
22...	100	--	--	--	--	--	--
22...	100	--	--	--	--	--	--
APR							
25...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
25...	99	100	--	--	--	--	--
25...	20	20	22	27	50	100	--
25...	18	19	29	54	95	100	--

RESERVOIRS IN FEATHER RIVER BASIN, CA

11391370 FRENCHMAN LAKE.--Lat 39°53'36", long 120°11'17", in NW¼NE¼ sec.33, T.24 N., R.16 E., Plumas County, Hydrologic Unit 18020123, on left bank 200 ft (61 m) upstream from Frenchman Dam on Little Last Chance Creek, 5.4 mi (8.7 km) upstream from the confluence with Middle Fork Feather River, and 7.1 mi (11.4 km) north of Chilcoat. DRAINAGE AREA, 81.1 mi² (210.0 km²). PERIOD OF RECORD, October 1966 to current year in reports of Geological Survey. November 1961 to September 1966 published in reports of California Department of Water Resources. GAGE, water-stage recorder in visitor center structure upstream from Frenchman Dam. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by rockfill dam completed in 1961. Capacity, 53,626 acre-ft (66.1 hm³), between elevations 5,517 ft (1,681.6 m), invert of intake and 5,588 ft (1,703.2 m), crest of spillway. Dead storage, 1,851 acre-ft (2.28 hm³). Records, including extremes, represent total contents at 2400 hours. Records of contents furnished by California Department of Water Resources.

EXTREMES FOR PERIOD 1966 TO CURRENT YEAR.--Maximum contents, 59,093 acre-ft (72.9 hm³) May 22, 1967, elevation, 5,590.28 ft (1,703.917 m); minimum, 7,715 acre-ft (9.51 hm³) Sept. 29, 30, 1977, elevation, 5,538.87 ft (1,688.248 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 23,148 acre-ft (28.5 hm³) May 13, 14, elevation, 5,561.86 ft (1,695.255 m); minimum, 13,275 acre-ft (16.4 hm³) Sept. 30, elevation, 5,549.26 ft (1,691.414 m).

11391490 LAKE DAVIS.--Lat 39°53'03", long 120°28'31", in NW¼SW¼ sec.1, T.23 N., R.13 E., Plumas County, Hydrologic Unit 18020123, in control house on left abutment of Grizzly Valley Dam on Big Grizzly Creek, 5.3 mi (8.5 km) north of Portola. DRAINAGE AREA, 44.0 mi² (114.0 km²). PERIOD OF RECORD, November 1966 to current year. GAGE, water-stage recorder in control house on Grizzly Valley Dam. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earth- and rockfill dam completed in 1967. Capacity, 84,040 acre-ft (104 hm³) between elevations, 5,700 ft (1,737.4 m), top of low-level intake and 5,775 ft (1,760.2 m), crest of spillway. Dead storage, 108 acre-ft (133,000 m³). Records, including extremes, represent total contents at 2400 hours. Records of contents furnished by California Department of Water Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 92,818 acre-ft (114 hm³) May 13, 14, 1969, elevation, 5,777.05 ft (1,760.845 m); minimum since reservoir first filled, 33,267 acre-ft (41.0 hm³) Nov. 19, 20, 1977, elevation, 5,759.00 ft (1,755.343 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 67,186 acre-ft (82.8 hm³) May 18, elevation, 5,770.47 ft (1,758.839 m); minimum, 47,602 acre-ft (58.7 hm³) Sept. 30, elevation, 5,764.43 ft (1,756.998 m).

11401120 ANTELOPE LAKE.--Lat 40°10'48", long 120°36'25", in SE¼SE¼ sec.22, T.27 N., R.12 E., Plumas County, Hydrologic Unit 18020122, on right bank at spillway of Antelope Dam on Indian Creek, 1.3 mi (2.1 km) south of Boulder Creek Guard Station, 12.3 mi (19.8 km) northeast of Genesee, and 14.3 mi (23.0 km) northeast of Taylorsville. DRAINAGE AREA, 68.6 mi² (177.7 km²). PERIOD OF RECORD, October 1966 to current year in reports of Geological Survey, November 1963 to September 1966 published in reports of California Department of Water Resources. GAGE, water-stage recorder in control house at top of Antelope Dam. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by a rockfill dam. Storage began November 1963. Capacity, 22,566 acre-ft (27.8 hm³) between elevations 4,950 ft (1,508.8 m), lip of intake tower and 5,002 ft (1,524.6 m), crest of spillway. Records, including extremes, represent contents at 2400 hours. Records of contents furnished by California Department of Water Resources.

EXTREMES FOR PERIOD 1966 TO CURRENT YEAR.--Maximum contents, 25,010 acre-ft (30.8 hm³) Jan. 23, 1970, elevation, 5,004.55 ft (1,525.387 m); minimum since reservoir first filled, 372 acre-ft (0.46 hm³) Oct. 12, 13, 1976, elevation, 4,951.10 ft (1,509.095 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 22,760 acre-ft (28.1 hm³) May 24-27, elevation, 5,002.21 ft (1,524.674 m); minimum, 14,913 acre-ft (18.4 hm³) Jan. 10, elevation, 4,992.78 ft (1,521.799 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)
	11391370	FRENCHMAN LAKE		11391490	LAKE DAVIS		11401120	ANTELOPE LAKE	
Sept. 30.....	5557.51	19346	--	5767.48	57007	--	4997.40	18511	--
Oct. 31.....	5557.12	19025	-321	5767.11	55813	-1194	4995.74	17164	-1347
Nov. 30.....	5557.12	19025	0	5767.12	55845	+32	4994.43	16145	-1019
Dec. 31.....	5557.20	19091	+66	5767.14	55910	+65	4993.06	15118	-1027
CAL YR 1978....	--	--	+10913	--	--	+20431	--	--	+11191
Jan. 31.....	5557.74	19536	+445	5767.60	57394	+1484	4992.91	15008	-110
Feb. 28.....	5558.49	20166	+630	5768.14	59169	+1775	4993.27	15273	+265
Mar. 31.....	5560.25	21693	+1527	5768.69	61010	+1841	4995.21	16748	+1475
Apr. 30.....	5561.27	22608	+915	5769.94	65312	+4302	4998.72	19627	+2879
May 31.....	5558.94	20550	-2058	5770.28	66511	+1199	5002.15	22704	+3077
June 30.....	5555.10	17416	-3134	5769.53	63883	-2628	5001.44	22048	-656
July 31.....	5551.77	14962	-2454	5768.05	58871	-5012	5000.26	20983	-1065
Aug. 31.....	5550.22	13903	-1059	5765.21	49915	-8956	4999.07	19929	-1054
Sept. 30.....	5549.26	13275	-628	5764.43	47602	-2313	4997.98	18997	-932
WTR YR 1979....	--	--	-6071	--	--	-9405	--	--	+486

a Estimated.

11391400 LITTLE LAST CHANCE CREEK BELOW FRENCHMAN DAM, NEAR CHILCOOT, CA

LOCATION.--Lat 39°53'36", long 120°11'17", in SW¼NE¼ sec.33, T.24 N., R.16 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, in valve house at toe of Frenchman Dam, 7.1 mi (11.4 km) northwest of Chilcoot.

DRAINAGE AREA.--81.1 mi² (210.0 km²).

PERIOD OF RECORD.--October 1958 to current year. Prior to October 1969, published as Little Last Chance Creek near Chilcoot.

GAGE.--Water-stage recorder and steel-lipped Cipolletti weir. Datum of gage is 5,480.00 ft (1,670.304 m) National Geodetic Vertical Datum of 1929. October 1958 to September 1967, at site 1.9 mi (3.1 km) downstream at different datum.

REMARKS.--Flow regulated by Frenchman Reservoir beginning Nov. 7, 1961, usable capacity, 53,626 acre-ft (66.1 hm³). Records since October 1967 are combined flow of release from Frenchman Dam and flow over spillway.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE (unadjusted).--21 years, 26.8 ft³/s (0.759 m³/s), 19,420 acre-ft/yr (23.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 784 ft³/s (22.2 m³/s) Feb. 8, 1960, gage height, 5.56 ft (1.695 m), previous site and datum, from rating curve extended above 310 ft³/s (8.78 m³/s); no flow Oct. 23, 1959, July 24-27, 29, Aug. 4, 1961. Maximum discharge since construction of Frenchman Dam in 1961, 544 ft³/s (15.4 m³/s) May 23, 1967; no flow at times in 1973, 1976-77.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 138 ft³/s (3.91 m³/s) May 25, 26, gage height, 3.64 ft (1.109 m); minimum daily, 0.70 ft³/s (0.020 m³/s) Sept. 27.

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	3.8	2.0	2.2	2.0	2.2	2.2	7.0	2.2	88	59	21	14
2	3.8	2.0	2.2	2.0	2.2	2.2	7.0	2.3	88	31	21	14
3	3.8	2.0	2.2	2.0	2.2	2.2	7.0	2.3	88	31	32	14
4	3.8	2.0	2.2	2.0	2.2	2.3	7.0	2.3	76	31	36	14
5	3.8	1.9	2.2	2.0	2.2	2.3	7.0	2.3	72	34	36	14
6	3.8	1.9	2.2	2.0	2.2	2.3	7.0	2.3	75	42	36	14
7	3.8	1.9	2.2	2.0	2.2	3.4	7.0	2.3	76	46	36	14
8	3.8	1.9	2.2	2.0	2.2	4.2	7.0	2.3	85	46	20	14
9	3.8	1.9	2.2	2.0	2.2	4.2	5.3	2.3	92	68	12	14
10	3.8	1.9	2.2	2.0	2.2	4.2	3.6	2.3	71	71	12	8.7
11	3.3	1.9	2.2	2.0	2.2	4.2	3.6	2.3	56	71	5.3	2.0
12	2.7	1.9	2.2	2.0	2.2	4.2	3.6	2.3	64	43	2.2	2.0
13	2.7	1.9	2.2	2.0	2.2	4.2	3.6	2.3	67	37	2.2	2.0
14	2.7	1.9	2.2	2.0	2.2	4.2	3.6	2.2	60	38	2.2	2.0
15	2.7	1.9	2.2	2.0	2.2	4.2	3.6	28	49	38	2.2	1.9
16	2.7	1.9	2.2	2.0	2.2	4.2	3.6	42	43	29	2.2	1.9
17	2.7	2.0	2.2	2.0	2.2	4.2	3.6	35	28	22	9.3	4.3
18	2.2	2.0	2.2	2.0	2.2	4.2	2.7	46	20	21	4.4	5.0
19	2.0	2.0	2.2	2.0	2.2	4.2	2.0	60	14	21	4.4	5.0
20	2.0	2.0	2.2	2.0	2.2	4.2	2.0	60	11	21	2.9	5.0
21	2.0	2.0	2.2	2.0	2.2	5.4	2.0	82	11	21	2.0	5.0
22	2.0	2.2	2.2	2.0	2.2	7.0	2.0	92	8.1	21	2.0	2.3
23	2.0	2.2	2.2	2.0	2.2	7.0	2.0	92	4.6	21	2.0	1.0
24	2.0	2.2	2.2	2.0	2.2	7.0	2.0	127	4.6	21	2.0	.90
25	2.0	2.2	2.2	2.0	2.2	7.0	2.0	138	6.0	21	2.0	.90
26	2.0	2.2	2.2	2.0	2.2	7.0	2.0	138	7.5	21	2.0	.80
27	2.0	2.2	2.2	2.0	2.2	7.0	2.0	117	20	21	2.0	.70
28	2.0	2.2	2.2	2.0	2.2	7.0	2.0	95	26	21	1.8	.90
29	2.0	2.2	2.2	2.0	---	7.0	2.0	89	26	21	5.2	1.1
30	2.0	2.2	2.2	2.0	---	7.0	2.0	88	54	21	14	.90
31	2.0	---	2.2	2.0	---	7.0	---	88	---	21	14	---
TOTAL	85.7	60.6	68.2	62.0	61.6	146.9	116.8	1468.8	1390.8	1031	348.3	180.30
MEAN	2.76	2.02	2.20	2.00	2.20	4.74	3.89	47.4	46.4	33.3	11.2	6.01
MAX	3.8	2.2	2.2	2.0	2.2	7.0	7.0	138	92	71	36	14
MIN	2.0	1.9	2.2	2.0	2.2	2.2	2.0	2.2	4.6	21	1.8	.70
AC-FT	170	120	135	123	122	291	232	2910	2760	2040	691	358
CAL YR 1978	TOTAL	6228.40	MEAN	17.1	MAX	129	MIN	1.9	AC-FT	12350		
WTR YR 1979	TOTAL	5021.00	MEAN	13.8	MAX	138	MIN	.70	AC-FT	9960		

SACRAMENTO RIVER BASIN

11391460 BERRY CREEK NEAR SATTLEY, CA

LOCATION.--Lat 39°36'04", long 120°25'23", in SW¼NE¼ sec.9, T.20 N., R.14 E., Sierra County, Hydrologic Unit 18020123, on right bank 1.0 mi (1.6 km) south of Sattley, and 3.2 mi (5.1 km) northwest of Sierraville.

DRAINAGE AREA.--7.54 mi² (19.53 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,000 ft (1,520 m), from topographic map.

REMARKS.--Records good except those for the winter months, which are fair. Some minor diversions at times upstream. Data for period 1954-67 at same site published by California Department of Water Resources as Miller Creek near Sattley.

AVERAGE DISCHARGE.--6 years, 10.9 ft³/s (0.309 m³/s), 7,900 acre-ft/yr (9.74 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125 ft³/s (3.54 m³/s) Nov. 12, 1973, gage height, 3.80 ft (1.158 m); minimum daily, 1.4 ft³/s (0.040 m³/s) Nov. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50 ft³/s (1.42 m³/s) Jan. 11, gage height, 2.72 ft (0.829 m); no peak above base of 80 ft³/s (2.27 m³/s); maximum gage height, 2.96 ft (0.902 m) Dec. 8, backwater from ice; minimum daily discharge, 3.4 ft³/s (0.096 m³/s) on several days during September.

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	8.2	7.6	7.7	5.0	5.4	4.9	6.3	15	23	10	5.7	4.6
2	8.1	8.2	7.1	4.9	5.3	5.0	6.3	17	23	9.7	5.6	4.3
3	8.1	8.0	7.1	4.9	5.2	5.0	6.4	19	22	9.6	5.5	4.3
4	8.0	7.8	7.0	4.9	5.1	5.2	6.9	21	22	9.6	5.5	4.3
5	8.0	7.7	7.4	4.9	4.9	5.2	8.1	22	22	9.3	5.5	4.6
6	7.9	7.5	7.0	4.9	4.9	5.5	9.4	19	21	8.9	5.4	3.7
7	7.9	7.5	6.8	4.9	4.9	6.0	8.5	15	20	8.4	5.6	3.7
8	7.9	7.4	6.7	4.9	4.9	6.2	9.1	14	19	8.3	5.6	3.7
9	7.9	7.5	6.6	4.9	4.9	6.4	9.3	13	19	8.1	5.5	3.7
10	7.9	7.0	6.6	5.6	4.9	6.4	8.3	14	18	8.0	5.5	3.7
11	7.9	7.2	6.6	28	4.9	6.7	8.2	16	18	8.0	5.5	3.7
12	7.9	7.3	6.6	11	4.7	6.9	9.3	17	17	7.9	5.4	3.7
13	7.9	7.3	6.3	7.2	5.2	7.2	11	20	16	7.7	5.3	3.7
14	7.9	7.3	6.3	6.7	7.9	7.7	12	22	15	7.6	5.2	3.7
15	7.8	7.3	6.3	6.5	5.7	8.1	13	24	15	7.6	5.2	3.4
16	7.8	7.3	6.2	6.1	5.3	7.4	12	25	15	7.4	5.1	3.4
17	7.7	7.2	6.3	5.9	5.0	6.9	11	27	16	7.2	5.1	3.4
18	7.5	7.1	6.4	5.8	5.2	6.6	9.7	28	15	7.2	5.1	3.4
19	7.5	7.1	6.3	5.7	5.2	6.4	9.3	29	14	7.2	5.0	3.4
20	7.5	7.4	6.0	5.6	5.1	6.3	9.8	30	14	7.2	5.0	3.4
21	7.5	7.2	6.0	5.5	5.1	6.3	11	33	13	7.9	4.7	3.4
22	7.5	7.2	6.0	5.5	5.0	6.3	11	33	13	7.5	4.7	3.4
23	7.5	7.1	6.0	5.4	5.0	6.3	9.6	32	13	6.9	4.3	3.4
24	7.5	6.9	6.0	5.4	4.9	6.4	9.2	31	12	6.6	4.3	3.4
25	7.5	6.9	6.0	5.4	4.9	7.0	9.5	31	11	6.6	4.3	3.4
26	7.5	6.9	6.0	5.4	4.9	7.2	13	33	11	6.6	4.3	3.4
27	7.5	6.9	6.0	5.4	4.9	7.2	17	32	11	6.6	4.0	3.4
28	7.5	6.9	6.0	5.4	4.9	6.9	15	30	10	6.3	4.7	3.4
29	7.5	7.1	5.9	5.4	---	6.6	15	27	10	6.3	5.8	3.4
30	7.5	7.3	5.7	5.4	---	6.5	16	25	10	6.3	5.3	3.4
31	7.5	---	5.3	5.4	---	6.3	---	24	---	5.7	5.0	---
TOTAL	239.8	219.1	198.2	197.9	144.2	199.0	310.2	738	478	238.2	158.7	109.8
MEAN	7.74	7.30	6.39	6.38	5.15	6.42	10.3	23.8	15.9	7.68	5.12	3.66
MAX	8.2	8.2	7.7	28	7.9	8.1	17	33	23	10	5.8	4.6
MIN	7.5	6.9	5.3	4.9	4.7	4.9	6.3	13	10	5.7	4.0	3.4
AC-FT	476	435	393	393	286	395	615	1460	948	472	315	218
CAL YR 1978	TOTAL	4614.2	MEAN	12.6	MAX	55	MIN	2.7	AC-FT	9150		
WTR YR 1979	TOTAL	3231.1	MEAN	8.85	MAX	33	MIN	3.4	AC-FT	6410		

11391500 BIG GRIZZLY CREEK AT GRIZZLY VALLEY DAM, NEAR PORTOLA, CA

LOCATION.--Lat 39°53'00", long 120°28'29", in NW¼SW¼ sec.1, T.23 N., R.13 E., Plumas County, Hydrologic Unit 18020123, at Grizzly Valley Dam on Big Grizzly Creek, 5.3 mi (8.5 km) north of Portola.

DRAINAGE AREA.--44.0 mi² (114.0 km²).

PERIOD OF RECORD.--October 1925 to September 1932, October 1950 to September 1953, June 1954 to September 1967, October 1968 to current year. Prior to October 1952, published as Grizzly Creek near Portola, October 1952 to September 1953, June 1954 to September 1967, published as Big Grizzly Creek near Portola.

REVISED RECORDS.--WSP 1315-A: 1930(M). WSP 1931: Drainage area at former site.

GAGE.--Water-stage recorder and Cipolletti weir. Altitude of gage is 5,700 ft (1,740 m), from topographic map. Supplementary water-stage recorder in control house on Grizzly Valley Dam and concrete spillway. Prior to October 1968 at site 1.4 mi (2.3 km) downstream at different datum.

REMARKS.--Flow regulated by Lake Davis (station 11391490) completed in December 1966. Diversions for irrigation of about 400 acres (162 hm²) above station and domestic water supply via Grizzly Valley pipeline.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE (prior to regulation by Lake Davis).--22 years (water years 1926-32, 1951-53, 1955-66), 38.2 ft³/s (1,082 m³/s), 27,680 acre-ft/yr (34.1 hm³/yr); 12 years (water years 1967, 1969-79), 28.9 ft³/s (0.818 m³/s) 20,940 acre-ft/yr (25.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,080 ft³/s (116 m³/s) Feb. 1, 1963, gage height, 8.03 ft (2.448 m) site and datum then in use, from rating curve extended above 600 ft³/s (17 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 9.54 ft (2.908 m) former site and datum, Mar. 26, 1928; no flow Jan. 22 or 23, 1962. Maximum discharge since construction of Grizzly Valley Dam in 1966, 253 ft³/s (7.16 m³/s) May 13, 1969 (includes flow through spillway); no flow many days in September and October 1969.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 161 ft³/s (4.56 m³/s) Aug. 25 to Sept. 1; minimum daily, 3.7 ft³/s (0.10 m³/s) Oct. 1-8.

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	3.7	3.9	3.9	4.1	4.3	4.3	14	14	14	14	102	161
2	3.7	3.9	3.9	4.1	4.3	4.3	14	14	14	14	102	105
3	3.7	3.9	3.9	4.1	4.3	4.3	14	14	14	14	102	7.0
4	3.7	3.9	3.9	4.1	4.3	4.3	14	14	14	14	102	7.0
5	3.7	3.9	4.1	4.1	4.3	4.1	14	14	14	14	102	7.0
6	3.7	3.9	4.1	4.1	4.3	4.1	14	14	14	14	102	7.0
7	3.7	3.9	4.1	4.1	4.3	4.1	14	14	14	14	101	7.0
8	3.7	3.9	4.1	4.1	4.1	4.1	14	15	14	14	100	7.0
9	3.8	3.9	4.1	4.1	4.1	4.1	14	15	14	14	99	7.0
10	4.0	3.9	4.1	4.1	4.1	4.1	14	15	14	14	99	7.0
11	4.1	3.9	4.1	4.1	4.1	4.1	14	15	14	14	99	7.0
12	4.1	3.9	4.1	4.1	4.1	4.1	14	15	14	14	99	7.0
13	4.1	3.9	4.1	4.1	4.1	4.1	14	15	14	14	99	7.0
14	4.1	3.9	4.1	4.1	4.1	4.1	14	15	14	14	99	7.0
15	4.1	3.9	4.1	4.1	4.1	8.7	14	15	14	14	98	7.0
16	4.3	3.9	4.1	4.1	4.1	11	14	15	14	14	98	7.0
17	4.3	3.9	4.1	4.1	4.1	14	14	15	14	14	98	7.0
18	4.3	3.9	4.1	4.1	4.1	14	14	15	14	14	98	7.0
19	4.1	3.9	4.1	4.1	4.1	13	13	15	14	76	98	7.0
20	4.1	3.9	4.1	4.2	4.1	13	14	15	14	100	98	6.8
21	4.1	3.9	4.1	4.2	4.1	13	15	15	14	100	98	6.8
22	4.1	3.9	4.1	4.2	4.1	14	15	15	14	100	98	6.8
23	4.1	3.9	4.1	4.2	4.1	14	15	15	14	100	98	6.8
24	4.1	3.9	4.1	4.2	4.1	14	15	15	14	101	122	6.8
25	4.1	3.9	4.1	4.2	4.1	14	15	15	14	101	161	6.8
26	4.1	3.9	4.1	4.2	4.1	14	15	15	14	101	161	6.8
27	4.1	3.9	4.1	4.2	4.1	15	15	15	14	101	161	6.8
28	4.1	3.9	4.1	4.2	4.1	15	15	15	14	101	161	6.8
29	4.1	3.9	4.1	4.2	---	15	15	15	14	102	161	6.8
30	4.1	3.9	4.1	4.2	---	15	15	15	14	102	161	6.8
31	4.1	---	4.1	4.2	---	15	---	15	---	102	161	---
TOTAL	124.1	117.0	126.3	128.3	116.2	289.9	429	458	420	1539	3538	459.8
MEAN	4.00	3.90	4.07	4.14	4.15	9.35	14.3	14.8	14.0	49.6	114	15.3
MAX	4.3	3.9	4.1	4.2	4.3	15	15	15	14	102	161	161
MIN	3.7	3.9	3.9	4.1	4.1	4.1	13	14	14	14	98	6.8
AC-FT	246	232	251	254	230	575	851	908	833	3050	7020	912
‡	23	15	2.0	6.0	6.0	3.0	1.0	27	71	67	65	43

CAL YR 1978 TOTAL 2932.1 MEAN 8.03 MAX 14 MIN 3.5 AC-FT 5820
WTR YR 1979 TOTAL 7745.6 MEAN 21.2 MAX 161 MIN 3.7 AC-FT 15360

‡ Diversions, in acre-feet, to Grizzly Valley pipeline.

SACRAMENTO RIVER BASIN

11392100 MIDDLE FORK FEATHER RIVER NEAR PORTOLA, CA

LOCATION.--Lat 39°49'13", long 120°26'26", in SW¼NW¼ sec.29, T.23 N., R.14 E., Plumas County, Hydrologic Unit 18020123, on right bank 0.8 mi (1.3 km) downstream from Big Grizzly Creek and 1.5 mi (2.4 km) northeast of Portola.

DRAINAGE AREA.--590 mi² (1,528 km²).

PERIOD OF RECORD.--October 1968 September 1976, October 1977 to current year. November 1955 to September 1968 in bulletins of California Department of Water Resources.

REVISED RECORDS.--WDR CA-78-4: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,860 ft (1,481 m), from topographic map.

REMARKS.--Flow partly regulated by Frenchman Lake and Lake Davis (stations 11391370, 11391490).

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--10 years (1969-76, 1978-79), 226 ft³/s (6,400 m³/s), 163,700 acre-ft/yr (202 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,640 ft³/s (216 m³/s) Jan. 21, 1969, gage height, 10.18 ft (3.103 m); minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 11, 12, 1969, Oct. 1-4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) Feb. 16, gage height, 5.25 ft (1.600 m); minimum daily, 4.3 ft³/s (0.12 m³/s) Sept. 4.

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	10	18	38	20	34	143	156	28	34	15	96	159
2	11	21	38	18	34	161	124	22	33	16	96	138
3	11	21	37	18	37	166	108	24	34	14	96	10
4	13	22	35	18	37	170	99	33	35	14	96	4.3
5	13	22	35	17	37	187	92	45	36	14	96	4.4
6	13	22	23	17	37	230	89	56	35	12	96	6.3
7	14	22	27	18	37	300	87	77	33	13	96	5.7
8	13	22	20	19	38	376	89	96	30	13	96	6.1
9	14	22	20	20	42	410	89	108	29	13	96	6.4
10	14	22	20	22	49	376	89	145	27	12	96	6.5
11	14	19	21	39	56	330	87	159	25	12	94	7.0
12	14	18	25	76	70	281	87	145	23	12	94	6.5
13	14	17	22	94	103	253	80	122	21	12	94	6.3
14	16	17	29	268	227	245	71	101	20	14	94	6.2
15	16	18	28	337	647	230	71	89	20	14	94	5.6
16	16	21	25	236	871	239	71	76	18	14	94	5.8
17	17	22	33	132	487	230	71	62	18	14	94	5.4
18	17	23	24	108	290	219	73	57	26	14	94	5.5
19	17	26	25	84	206	193	79	53	26	41	94	5.8
20	17	33	25	70	170	168	79	51	20	97	94	5.3
21	19	36	28	57	159	154	67	45	34	101	94	5.6
22	25	39	25	52	149	138	43	42	31	105	94	5.7
23	20	40	25	49	132	124	57	41	21	101	94	5.9
24	20	39	26	49	118	112	62	40	18	99	110	5.8
25	20	37	26	45	116	105	70	38	16	99	154	5.9
26	20	34	26	47	116	99	82	40	15	99	154	6.0
27	19	29	25	41	118	105	87	41	14	99	154	6.7
28	18	28	24	36	122	134	84	41	14	99	156	6.8
29	18	30	23	33	---	190	71	39	14	99	159	6.4
30	18	34	24	31	---	230	62	39	14	99	159	5.9
31	18	---	24	33	---	203	---	37	---	97	159	---
TOTAL	499	774	826	2104	4539	6501	2476	1992	734	1477	3387	466.8
MEAN	16.1	25.8	26.6	67.9	162	210	82.5	64.3	24.5	47.6	109	15.6
MAX	25	40	38	337	871	410	156	159	36	105	159	159
MIN	10	17	20	17	34	99	43	22	14	12	94	4.3
AC-FT	990	1540	1640	4170	9000	12890	4910	3950	1460	2930	6720	926
CAL YR 1978 TOTAL	56544.9			MEAN 155	MAX 2350	MIN 3.3	AC-FT 112200					
WTR YR 1979 TOTAL	25775.8			MEAN 70.6	MAX 871	MIN 4.3	AC-FT 51130					

11392500 MIDDLE FORK FEATHER RIVER NEAR CLIO, CA

LOCATION.--Lat 39°45'14", long 120°35'42", in NW¼SE¼ sec.23, T.22 N., R.12 E., Plumas County, Hydrologic Unit 18020123, on left bank 0.6 mi (1.0 km) upstream from Frazier Creek, 1.0 mi (1.6 km) northwest of Clio, and 2.2 mi (3.5 km) southeast of Blairsden.

DRAINAGE AREA.--686 mi² (1,777 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to September 1979 (discontinued).

REVISED RECORDS.--WSP 1445: 1928, 1930, 1932. WSP 1931: Drainage area. WDR-78-4: 1976(M), 1977(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,380 ft (1,335 m), from topographic map. Prior to July 29, 1953, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good. Diversions for irrigation of about 40,000 acres (162 km²) above station, of which 14,500 acres (58.7 km²) receive supplemental water of about 7,000 acre-ft (8.63 hm³) annually from Little Truckee River. Flow partly regulated by Lake Davis (station 11391490) beginning in November 1966, and by Frenchman Lake (station 11391370) beginning in November 1961.

AVERAGE DISCHARGE.--54 years, 283 ft³/s (8.015 m³/s), 205,000 acre-ft/yr (253 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) Feb. 1, 1963, gage height, 16.19 ft (4.935 m); minimum, 4.3 ft³/s (0.12 m³/s) Sept. 5, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft³/s (31.7 m³/s) Feb. 16, gage height, 7.38 ft (2.249 m); minimum daily, 13 ft³/s (0.37 m³/s) Sept. 18, 20, 22.

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	37	45	78	41	54	211	271	148	112	37	111	165
2	36	51	71	40	54	217	228	123	106	38	110	165
3	36	48	68	42	53	229	201	124	103	37	111	89
4	38	49	67	42	53	246	188	136	103	34	110	26
5	39	49	66	42	53	273	188	193	100	34	108	20
6	39	49	60	44	56	345	230	221	99	33	109	17
7	39	48	55	45	56	439	205	277	95	32	110	16
8	40	48	50	50	58	536	199	270	90	32	111	15
9	40	48	48	52	66	572	203	260	86	32	109	15
10	40	48	48	63	75	541	193	268	82	30	109	15
11	40	49	49	491	86	502	182	285	75	27	109	16
12	40	45	52	194	129	461	174	280	70	26	110	16
13	40	45	54	146	351	412	174	257	66	25	111	16
14	40	45	54	225	486	390	168	240	64	24	109	16
15	40	45	55	384	532	461	163	225	60	23	108	15
16	41	44	57	260	952	412	174	210	57	23	108	15
17	41	47	58	182	650	348	176	194	59	23	109	14
18	41	48	64	144	379	328	167	188	58	23	107	13
19	41	54	51	128	280	300	158	183	67	22	107	14
20	41	84	51	119	232	265	155	182	60	93	109	13
21	41	83	51	102	226	243	149	185	54	122	110	14
22	43	75	51	88	205	223	129	188	72	125	108	13
23	46	74	51	86	199	205	145	175	61	121	107	14
24	43	72	51	82	168	192	167	165	51	117	109	14
25	44	69	50	77	170	185	155	157	47	116	148	17
26	44	66	50	73	177	187	182	159	42	115	164	16
27	44	62	46	67	172	338	209	163	40	114	165	16
28	44	60	45	63	182	338	195	156	37	111	166	16
29	44	61	43	60	---	328	178	141	36	112	170	18
30	43	64	42	57	---	344	170	128	37	113	171	18
31	43	---	41	55	---	319	---	117	---	112	167	---
TOTAL	1268	1675	1677	3544	6154	10390	5476	5998	2089	1926	3770	847
MEAN	40.9	55.8	54.1	114	220	335	183	193	69.6	62.1	122	28.2
MAX	46	84	78	491	952	572	271	285	112	125	171	165
MIN	36	44	41	40	53	185	129	117	36	22	107	13
AC-FT	2520	3320	3330	7030	12210	20610	10860	11900	4140	3820	7480	1680

CAL YR 1978 TOTAL 95574 MEAN 262 MAX 2830 MIN 21 AC-FT 189600
WTR YR 1979 TOTAL 44814 MEAN 123 MAX 952 MIN 13 AC-FT 88890

11392500 MIDDLE FORK FEATHER RIVER NEAR CLIO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C July 26, 1976; minimum recorded, 0.0°C on many days in most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 26.5°C July 16; minimum recorded, 0.0°C on many days during November to February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	10.5	6.5	3.5	6.0	3.0	0.0	0.0	0.0	0.0	5.0	3.0
2	16.0	10.5	9.0	6.0	4.5	2.0	0.0	0.0	1.0	0.0	5.0	3.0
3	15.5	9.5	9.0	4.5	3.5	1.0	0.0	0.0	0.0	0.0	6.5	4.5
4	15.5	9.5	8.5	4.5	5.0	0.5	0.0	0.0	0.5	0.0	8.0	4.5
5	15.5	10.0	8.5	4.0	4.0	0.5	1.5	0.0	1.5	0.0	9.0	6.0
6	15.0	10.5	8.5	4.5	0.5	0.0	2.5	0.5	2.5	0.0	10.0	6.5
7	14.5	8.5	8.0	4.5	0.0	0.0	2.0	0.5	2.5	0.0	10.5	6.5
8	13.5	8.0	8.0	3.5	0.5	0.0	2.0	1.0	3.0	0.0	12.0	7.5
9	14.0	8.5	7.5	4.0	1.0	0.0	3.5	1.5	3.5	0.5	12.0	7.5
10	14.0	8.5	5.0	2.5	3.0	0.5	4.0	2.0	3.5	0.5	11.5	7.5
11	14.0	8.5	4.0	1.5	3.0	0.0	2.5	1.0	3.5	1.0	12.0	8.0
12	14.0	8.5	2.0	0.5	3.5	1.5	3.5	1.0	3.5	0.5	12.5	6.5
13	14.0	8.0	4.0	1.0	3.0	0.5	2.0	0.5	2.0	1.5	11.0	6.5
14	13.5	8.0	3.0	0.5	3.0	0.0	1.0	0.5	3.0	0.0	10.5	6.5
15	14.0	9.5	2.5	0.0	2.5	0.0	1.5	0.5	3.5	0.0	10.0	8.0
16	13.0	8.0	4.5	1.5	2.0	0.0	3.0	1.5	2.5	1.0	8.0	6.0
17	13.0	8.0	5.0	2.5	2.0	1.0	1.5	0.0	3.0	0.0	9.0	5.0
18	12.5	7.5	4.5	1.0	2.0	1.0	2.0	0.0	1.5	0.0	7.0	5.5
19	11.5	7.0	4.5	2.5	2.5	0.0	0.5	0.0	4.0	1.5	9.0	6.0
20	11.5	6.5	4.0	3.0	0.0	0.0	1.0	0.0	3.0	1.5	8.5	5.0
21	11.5	7.0	4.5	3.5	0.0	1.0	2.0	0.0	3.5	1.0	7.5	5.0
22	10.5	6.0	6.0	3.5	0.0	1.0	1.5	0.0	3.0	1.5	9.0	5.5
23	10.5	5.5	5.0	2.5	0.0	0.0	1.5	0.0	4.0	1.5	9.5	5.5
24	10.0	5.5	5.0	2.0	0.0	0.0	2.5	0.0	5.5	2.5	11.0	5.0
25	10.0	5.5	4.0	1.0	0.0	0.0	1.5	0.0	6.5	3.0	11.0	6.0
26	10.0	5.0	4.0	1.0	0.0	0.0	0.0	0.0	6.5	3.5	8.5	6.0
27	10.0	5.0	3.5	0.5	1.0	0.0	0.0	0.0	6.0	3.0	7.5	4.5
28	9.5	5.0	4.5	1.0	0.5	0.0	0.0	0.0	5.0	3.5	7.0	4.5
29	9.5	5.5	6.5	4.0	0.0	0.0	0.0	0.0	---	---	8.5	4.0
30	6.5	4.5	6.0	4.5	0.0	0.0	0.0	0.0	---	---	8.5	5.5
31	6.0	4.0	---	---	0.0	0.0	0.5	0.0	---	---	9.5	4.5
MONTH	16.5	4.0	9.0	0.0	6.0	0.0	4.0	0.0	6.5	0.0	12.5	3.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	5.5	14.0	8.0	19.5	10.0	22.5	14.0	23.0	18.5	18.0	15.0
2	10.5	5.0	16.5	8.0	20.5	11.0	22.5	15.0	23.0	18.0	19.0	16.0
3	11.5	5.5	17.0	8.0	21.0	12.5	21.0	16.0	23.0	17.5	19.0	15.5
4	13.0	6.5	16.0	9.0	22.0	13.5	23.0	15.0	22.0	18.0	19.0	15.0
5	13.5	7.5	10.5	7.5	22.5	13.5	22.5	15.0	21.5	17.0	20.0	14.0
6	11.0	8.0	11.0	6.5	22.0	14.5	22.5	14.5	21.5	16.5	20.5	14.5
7	12.5	6.0	10.0	6.5	20.0	13.0	22.0	14.5	19.5	17.0	20.5	15.0
8	12.0	7.0	11.5	5.5	20.0	11.0	22.5	14.5	21.0	16.5	20.0	14.5
9	10.5	8.0	12.0	6.5	20.5	11.5	22.0	15.0	22.0	16.5	19.5	13.0
10	11.0	6.0	14.5	6.5	20.5	12.5	22.5	15.5	22.0	18.0	18.5	12.5
11	11.5	8.0	16.5	9.0	21.0	12.5	24.0	16.0	22.0	18.0	19.0	13.0
12	12.5	7.0	18.0	10.5	22.0	13.5	25.0	17.0	21.5	17.5	19.5	13.0
13	14.0	8.0	19.0	12.0	20.0	13.5	26.0	17.0	21.0	17.0	19.5	14.0
14	14.0	7.5	19.0	11.5	20.5	12.0	26.0	18.5	20.0	17.0	19.5	14.0
15	14.0	7.5	19.0	11.5	20.0	12.0	26.0	18.5	20.5	14.5	19.5	14.0
16	11.5	7.5	18.5	11.5	19.0	12.0	26.5	19.0	20.0	16.0	19.5	14.0
17	11.0	6.5	19.0	10.5	16.5	13.0	26.0	19.0	20.0	15.0	19.0	14.0
18	12.0	7.0	19.5	10.0	17.0	11.0	25.5	17.5	20.0	16.5	19.0	14.0
19	12.0	5.5	20.0	10.5	19.5	12.0	26.0	18.0	19.5	16.0	17.0	12.5
20	13.0	6.5	20.0	10.5	21.0	13.0	22.0	20.0	18.0	16.0	18.0	12.0
21	12.5	8.5	20.5	11.0	21.5	14.0	20.5	18.5	18.0	15.0	17.0	11.5
22	13.5	7.5	18.0	10.5	22.5	14.0	22.0	16.5	19.0	14.5	17.5	11.0
23	11.5	6.5	19.0	10.5	23.0	15.5	23.0	17.5	19.0	15.0	17.0	12.0
24	12.5	6.0	19.0	9.5	24.0	16.0	23.0	18.5	18.5	15.0	16.0	12.0
25	14.0	6.0	20.5	10.5	23.5	15.0	23.0	19.0	18.0	15.0	15.0	12.5
26	11.5	9.5	21.0	10.0	23.5	15.5	23.0	18.5	19.0	14.5	15.5	10.0
27	14.5	8.0	19.5	11.5	23.5	15.0	22.0	18.0	20.0	16.0	16.0	10.0
28	15.0	8.0	19.0	10.5	23.5	15.0	22.0	18.0	18.0	16.5	---	---
29	14.0	8.5	18.5	9.5	22.5	16.0	22.5	17.5	18.0	16.0	---	---
30	15.0	8.0	18.5	9.0	22.5	14.5	23.0	18.0	17.0	15.5	---	---
31	---	---	19.0	9.5	---	---	23.5	18.5	18.0	14.0	---	---
MONTH	15.0	5.0	21.0	5.5	24.0	10.0	26.5	14.0	23.0	14.0	20.5	10.0

11394500 MIDDLE FORK FEATHER RIVER NEAR MERRIMAC, CA

LOCATION.--Lat 39°42'30", long 121°16'10", in NW¼NE¼ sec.2, T.21 N., R.6 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 400 ft (122 m) downstream from bridge on Milsap Bar Road, 500 ft (152 m) downstream from Little North Fork, 4.5 mi (7.2 km) southeast of Merrimac, and 20 mi (32 km) northeast of Oroville.

DRAINAGE AREA.--1,062 mi² (2,751 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1931: 1960, drainage area. WDR CA-68-2: 1956(M), 1963(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (475 m), from topographic map. Prior to Jan. 21, 1965, on right bank at same site and datum.

REMARKS.--Records good. Diversions above station for irrigation of about 1,000 acres (4.05 km²) between stations near Clio and near Merrimac. Flow partly regulated by Antelope Lake (station 11401120) beginning in 1963, Lake Davis (station 11391490) beginning in 1966, and Frenchman Lake (station 11391370) beginning in 1961.

AVERAGE DISCHARGE.--28 years, 1,381 ft³/s (39.11 m³/s), 1,001,000 acre-ft/yr (1.23 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,200 ft³/s (2,440 m³/s) Dec. 22, 1964, gage height, 26.5 ft (8.08 m) from floodmarks, present site, from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 51 ft³/s (1.44 m³/s) Sept. 14, 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 10, 1937, reached a stage of 19.4 ft (5.91 m) from floodmarks, discharge, 46,100 ft³/s (1,310 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,230 ft³/s (148 m³/s), Feb. 14, gage height, 10.01 ft (3.051 m), no peak above base of 7,000 ft³/s (198 m³/s); minimum daily 136 ft³/s (3.85 m³/s) Sept. 19, 23.

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	203	187	351	180	301	1040	1590	2570	1640	405	290	326
2	200	191	334	200	303	944	1480	2430	1580	393	283	318
3	199	202	279	226	276	901	1400	2690	1550	385	279	308
4	195	202	260	227	287	896	1360	2990	1540	376	276	258
5	194	199	257	218	301	972	1470	3870	1490	365	273	184
6	194	197	243	215	295	1220	1830	4060	1450	355	269	169
7	194	197	203	215	292	1620	1760	3840	1300	347	269	159
8	194	194	168	364	294	1900	1720	3220	1150	334	269	155
9	194	194	228	427	295	2080	1760	2850	1060	324	268	152
10	193	190	247	404	306	2050	1680	2590	995	320	265	150
11	192	190	224	3070	332	2060	1590	2580	948	313	262	147
12	192	196	225	2400	354	2110	1560	2740	912	306	259	146
13	189	211	224	1100	1340	2060	1730	2980	864	297	259	145
14	186	208	219	866	4030	1980	1940	3230	802	287	259	143
15	186	201	209	983	1900	2310	2010	3410	748	280	259	142
16	186	203	206	907	1870	2470	2170	3510	708	276	259	140
17	186	210	292	714	1630	1960	2110	3470	756	267	258	138
18	187	206	274	596	1300	1740	1830	3610	691	262	257	138
19	186	251	260	514	1160	1570	1630	3700	652	260	258	136
20	186	412	204	463	1080	1450	1530	3680	631	250	256	137
21	186	414	193	442	1120	1350	1520	3670	597	291	269	138
22	186	347	216	415	1060	1270	1560	3640	571	357	271	138
23	186	287	210	385	977	1220	1660	3300	562	345	264	136
24	186	263	213	381	868	1200	1770	2950	538	332	260	137
25	186	254	222	372	803	1240	1670	2800	508	324	258	139
26	186	244	213	336	837	1310	1970	2810	482	313	280	144
27	186	236	223	303	822	2410	3100	2770	457	307	300	145
28	186	229	223	344	926	2670	2830	2530	441	301	302	143
29	186	227	196	289	---	2130	2630	2180	425	298	316	141
30	186	251	169	292	---	1870	2590	1900	410	298	343	141
31	186	---	164	331	---	1730	---	1740	---	295	345	---
TOTAL	5882	6993	7149	18179	25359	51733	55450	94310	26458	9863	8535	4993
MEAN	190	233	231	586	906	1669	1848	3042	882	318	275	166
MAX	203	414	351	3070	4030	2670	3100	4060	1640	405	345	326
MIN	186	187	164	180	276	896	1360	1740	410	250	256	136
AC-FT	11670	13870	14180	36060	50300	102600	110000	187100	52480	19560	16930	9900
CAL YR 1978 TOTAL	597338			1637	MAX	10900	MIN	164	AC-FT	1185000		
WTR YR 1979 TOTAL	314904			MEAN	863	MAX	4060	MIN	136	AC-FT	624600	

11394500 MIDDLE FORK FEATHER RIVER NEAR MERRIMAC, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

CHEMICAL ANALYSES: Water years 1963-66, 1970-72, 1977.

WATER TEMPERATURES: Water years 1963 to current year.

SEDIMENT RECORDS: Water years 1970-72.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Temperature recorder since October 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug. 3, 1966, July 17, 18, 1972, July 26, 27, 1976, Aug. 3, 4, 1977; minimum recorded, 0.0°C Jan. 31, Feb. 1, 1975.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 22.5°C July 8-12; minimum recorded, 1.5°C Dec. 10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

11394500 MIDDLE FORK FEATHER RIVER NEAR MERRIMAC, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SACRAMENTO RIVER BASIN

11394620 FALL RIVER NEAR FEATHER FALLS, CA

LOCATION.--Lat 39°40'00", long 121°08'01", in SW¼NW¼ sec.19, T.21 N., R.8 E., Plumas County, Hydrologic Unit 18020123, on right bank 0.5 mi (0.8 km) downstream from Coyote Creek, and 8 mi (13 km) northeast of Feather Falls.

DRAINAGE AREA.--9.89 mi² (25.62 km²).

PERIOD OF RECORD.--July 1963 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,000 ft (1,219 m), from topographic map.

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

AVERAGE DISCHARGE.--16 years, 41.8 ft³/s (1.184 m³/s), 30,280 acre-ft/yr (37.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s (107 m³/s) Dec. 22, 1964, gage height, 10.00 ft (3.048 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 0.76 ft³/s (0.022 m³/s) Aug. 23, Sept. 8-10, 1977.

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. 11	1100	188 5.32	3.30 1.006	May 18,19	1900	181 5.13	3.26 0.994
May 5	1730	*308 8.72	3.88 1.183				

Minimum daily, 2.0 ft³/s (0.057 m³/s) Sept. 23, 30.

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	2.7	2.6	4.9	2.6	6.9	22	63	129	55	10	4.2	3.2
2	2.6	2.6	4.2	2.6	6.9	14	59	129	51	9.7	4.1	3.1
3	2.7	2.6	4.1	2.6	7.2	12	56	138	47	9.5	3.9	3.0
4	2.8	2.6	3.4	2.6	6.5	13	58	143	44	9.2	3.8	2.9
5	2.8	2.5	3.2	2.6	6.4	14	64	201	41	8.9	3.7	2.8
6	2.8	2.4	3.3	2.7	6.3	16	80	237	38	8.6	3.6	2.8
7	2.8	2.4	3.2	3.1	6.3	22	79	210	34	8.3	3.6	2.5
8	2.8	2.4	3.1	8.1	6.3	29	80	168	31	8.0	3.5	2.4
9	2.7	2.5	3.0	8.2	6.4	36	84	145	29	7.8	3.4	2.4
10	2.6	2.6	2.9	11	6.7	42	82	130	27	7.6	3.4	2.4
11	2.6	2.9	2.8	111	6.9	49	80	126	25	7.5	3.4	2.3
12	2.6	3.1	3.0	61	7.0	56	79	132	23	7.2	3.4	2.2
13	2.6	2.8	2.8	30	22	60	89	143	22	6.9	3.4	2.2
14	2.6	3.0	2.8	24	92	65	98	153	20	6.6	3.3	2.2
15	2.6	3.0	2.7	24	43	86	105	160	19	6.4	3.2	2.2
16	2.6	2.9	2.6	16	33	85	110	161	19	6.1	3.2	2.1
17	2.6	3.1	2.6	13	25	71	104	160	23	5.9	3.1	2.1
18	2.6	6.6	3.3	12	24	62	90	163	18	5.6	3.0	2.1
19	2.6	6.6	3.2	11	22	54	80	164	17	5.4	3.0	2.1
20	2.6	5.1	2.9	10	20	50	75	161	16	5.4	3.0	2.1
21	2.4	4.2	2.8	9.8	21	46	71	156	15	5.8	3.3	2.1
22	2.4	3.6	2.8	9.3	17	45	72	146	15	5.8	3.2	2.1
23	2.4	3.6	2.8	9.0	16	43	74	133	14	5.4	3.1	2.0
24	2.4	3.3	2.8	8.7	15	44	75	120	13	5.4	3.0	2.1
25	2.4	3.2	2.8	8.3	14	46	73	112	13	5.2	2.9	2.3
26	2.4	3.2	2.8	8.3	14	52	98	105	12	5.0	2.8	2.3
27	2.4	3.4	2.8	8.1	14	111	144	98	12	4.8	2.8	2.2
28	2.4	4.1	2.7	7.5	15	105	141	89	11	4.7	2.8	2.1
29	2.5	9.3	2.8	6.9	---	88	134	76	11	4.6	3.2	2.1
30	2.6	6.8	2.9	7.8	---	76	132	67	10	4.5	4.8	2.0
31	2.6	---	2.6	7.2	---	68	---	61	---	4.3	3.6	---
TOTAL	80.2	109.0	94.6	449.0	486.8	1582	2629	4316	725	206.1	104.7	70.4
MEAN	2.59	3.63	3.05	14.5	17.4	51.0	87.6	139	24.2	6.65	3.38	2.35
MAX	2.8	9.3	4.9	111	92	111	144	237	55	10	4.8	3.2
MIN	2.4	2.4	2.6	2.6	6.3	12	56	61	10	4.3	2.8	2.0
AC-FT	159	216	188	891	966	3140	5210	8560	1440	409	208	140

CAL YR 1978 TOTAL 20465.1 MEAN 56.1 MAX 559 MIN 2.4 AC-FT 40590
WTR YR 1979 TOTAL 10852.8 MEAN 29.7 MAX 237 MIN 2.0 AC-FT 21530

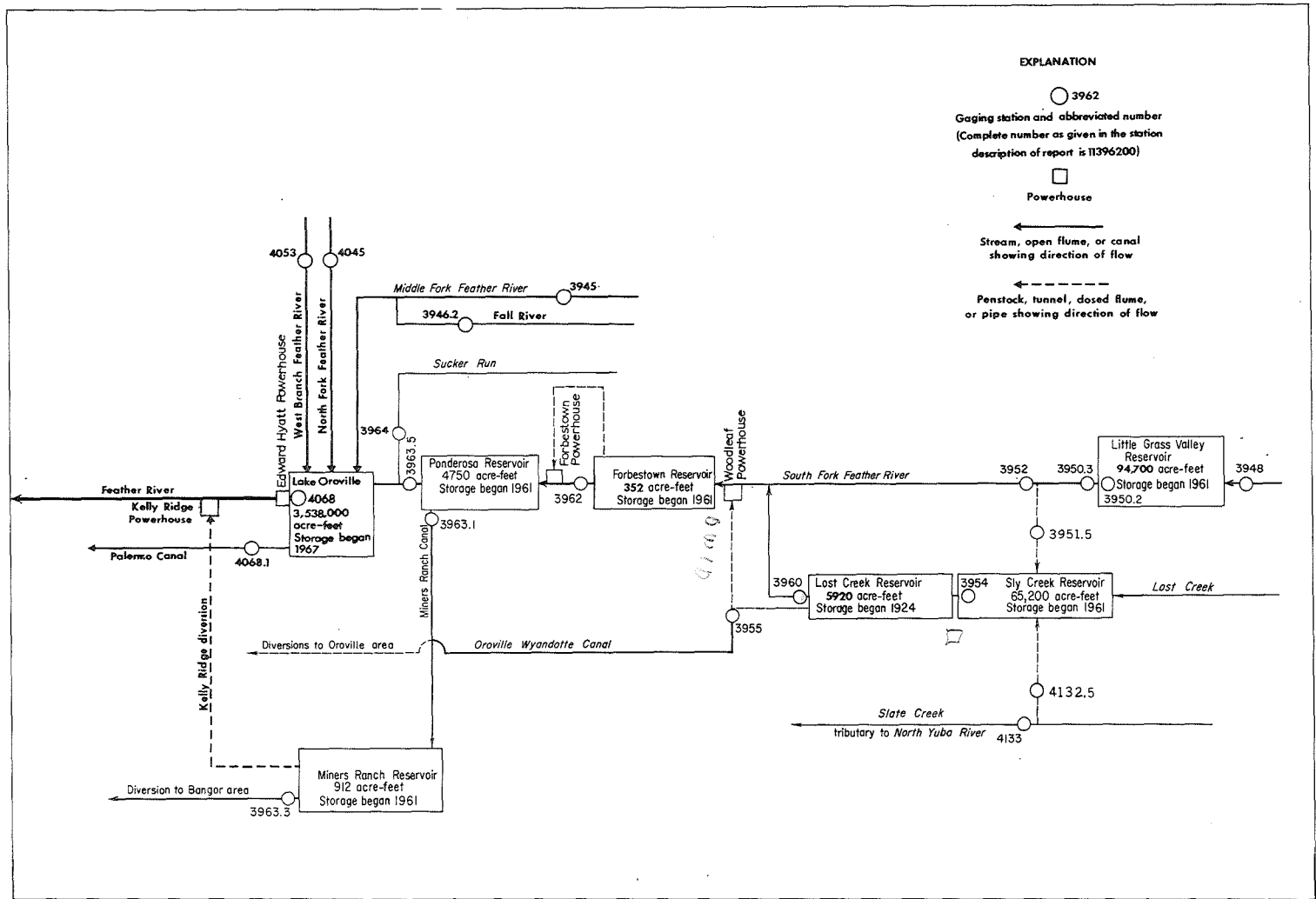


FIGURE 5.--Schematic diagram showing diversions and storage in South Fork Feather River basin.

SACRAMENTO RIVER BASIN

11394800 SOUTH FORK FEATHER RIVER ABOVE LITTLE GRASS VALLEY RESERVOIR, CA

LOCATION.--Lat 39°45'07", long 120°57'26", in NW¼SE¼ sec.22, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 0.5 mi (0.8 km) downstream from unnamed tributary, 4.5 mi (7.2 km) upstream from Little Grass Valley Dam, and 5 mi (8 km) north of La Porte.

DRAINAGE AREA.--8.09 mi² (20.95 km²).

PERIOD OF RECORD.--October 1960 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,080 ft (1,548 m), from topographic map.

REMARKS.--Records good. No storage or diversion above station. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--19 years, 29.5 ft³/s (0.835 m³/s), 21,370 acre-ft/yr (26.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,160 ft³/s (118 m³/s) Jan. 31, 1963, gage height, 7.12 ft (2.170 m), from rating curve extended above 140 ft³/s (3.96 m³/s) on basis of slope-area measurement at gage height 5.47 ft (1.667 m); no flow Dec. 29, 1976, to Jan. 1, 1977, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft³/s (3.96 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	150 4.25	a3.30 1.006	May 5	1730	243 6.88	3.27 0.997
Feb. 14	0330	203 5.75	a3.80 1.158	May 18	1730	282 7.99	3.36 1.024

a Backwater from ice.

Minimum daily, 0.05 ft³/s (0.001 m³/s) Sept. 25.

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	.61	.46	3.7	.98	2.1	4.9	20	111	75	3.9	.36	.56
2	.64	.55	2.2	1.0	2.0	4.5	20	113	75	3.7	.32	.44
3	.68	.56	1.3	.91	2.1	4.2	20	137	75	3.5	.30	.34
4	.64	.58	1.0	.91	1.9	4.4	22	165	73	3.2	.30	.27
5	.61	.56	1.0	.91	1.9	5.0	28	195	69	3.0	.30	.20
6	.60	.56	.81	.90	1.9	6.5	43	180	59	2.8	.30	.15
7	.56	.50	.81	.91	1.9	8.9	40	130	46	2.8	.30	.14
8	.54	.49	.92	1.1	1.9	12	42	102	37	2.7	.28	.13
9	.55	.49	1.0	1.4	2.1	14	45	85	32	2.5	.28	.12
10	.55	.49	.94	2.6	2.2	17	42	77	29	2.6	.28	.12
11	.53	.56	.91	45	2.3	21	39	78	26	2.6	.26	.12
12	.51	.57	.99	18	2.4	25	40	95	24	2.5	.24	.09
13	.49	.64	.92	8.1	11	26	51	128	21	2.2	.22	.08
14	.49	.68	.72	6.8	63	26	61	163	17	2.0	.20	.08
15	.47	.70	.56	6.0	14	32	71	195	15	1.9	.18	.08
16	.45	.76	.56	5.6	10	31	76	209	14	1.7	.16	.08
17	.45	.80	.72	4.6	9.0	27	67	221	15	1.5	.15	.08
18	.44	.76	1.0	3.9	7.3	24	56	234	12	1.3	.14	.08
19	.43	.83	1.4	3.6	6.8	22	49	225	11	1.2	.14	.08
20	.44	1.1	1.3	3.3	6.4	21	45	225	9.9	1.1	.14	.08
21	.44	1.2	.95	3.2	6.0	19	44	232	9.0	1.4	.18	.07
22	.43	1.0	.88	3.0	6.0	18	44	219	8.2	1.5	.17	.08
23	.43	.89	.90	3.1	6.0	18	41	192	7.4	1.2	.18	.08
24	.43	.85	.93	2.9	5.5	19	39	172	6.9	.95	.23	.07
25	.41	.81	.99	2.8	5.5	21	39	170	6.3	.83	.23	.05
26	.37	.81	1.0	2.8	5.4	25	71	177	5.8	.66	.21	.06
27	.37	.81	1.0	2.8	4.9	34	123	168	5.4	.55	.19	.07
28	.37	.77	1.0	2.7	5.2	28	113	141	5.0	.50	.19	.08
29	.37	1.1	1.0	2.7	---	24	109	108	4.7	.51	.22	.08
30	.40	1.6	1.0	2.3	---	22	112	88	4.3	.43	.52	.10
31	.43	---	.96	2.1	---	21	---	79	---	.40	.57	---
TOTAL	15.13	22.48	33.37	146.92	196.7	585.4	1612	4814	797.9	57.63	7.74	4.06
MEAN	.49	.75	1.08	4.74	7.03	18.9	53.7	155	26.6	1.86	.25	.14
MAX	.68	1.6	3.7	45	63	34	123	234	75	3.9	.57	.56
MIN	.37	.46	.56	.90	1.9	4.2	20	77	4.3	.40	.14	.05
AC-FT	30	45	66	291	390	1160	3200	9550	1580	114	15	8.1

CAL YR 1978	TOTAL	16032.60	MEAN 43.9	MAX 232	MIN .19	AC-FT 31800
WTR YR 1979	TOTAL	8293.33	MEAN 22.7	MAX 234	MIN .05	AC-FT 16450

11395020 LITTLE GRASS VALLEY RESERVOIR NEAR LA PORTE, CA

LOCATION.--Lat 39°43'25", long 121°01'10", in SE¼NW¼ sec.31, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 300 ft (91 m) upstream from dam on South Fork Feather River, 3.3 mi (5.3 km) northwest of La Porte.

DRAINAGE AREA.--25.8 mi² (66.8 km²).

PERIOD OF RECORD.--October 1961 to current year. Monthend elevation and contents only October 1961 to October 1962.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Oroville-Wyandotte Irrigation District). Prior to Nov. 1, 1962, in valve chamber in dam at same datum.

REMARKS.--Reservoir is formed by rockfill dam. Storage began in October 1961. Total capacity, 93,000 acre-ft (115 hm³) between elevations, 4,876 ft (1,486.2 m) invert of release valve, and 5,047 ft (1,538.3 m) top of spillway gates, all of which is available for release. Water is released down South Fork Feather River for power development and irrigation downstream. Records, including extremes, represent contents at 2400 hours. See schematic diagram of South Fork Feather River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 96,100 acre-ft (118 hm³) Apr. 29, 1965, elevation, 5,047.9 ft (1,538.60 m); minimum since reservoir first filled, 30,300 acre-ft (37.4 hm³) on many days in 1977, elevation, 4,994.8 ft (1,522.42 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,500 acre-ft (117 hm³) May 29, elevation, 5,046.9 ft (1,538.30 m); minimum, 49,200 acre-ft (60.7 hm³) Nov. 14-17, elevation, 4,914.2 ft (1,497.85 m).

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

4,990	26,260
5,000	34,600
5,010	44,400
5,020	55,900
5,030	68,900
5,040	83,500
5,048	96,300

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50600	49500	49800	50200	52900	55800	63400	76600	93800	93200	81300	65100
2	50300	49500	49800	50200	52900	55800	63600	77400	94000	93200	80800	64600
3	50200	49500	49800	50200	52900	55900	63800	78100	93800	93000	80300	64200
4	50200	49500	49800	50200	53000	56700	63900	78800	93800	93000	79700	63700
5	50000	49400	49800	50200	53000	56900	64300	80100	93800	93000	79200	63200
6	50000	49400	49800	50200	53000	56900	64700	81300	93700	93000	78700	62600
7	50000	49400	49800	50200	53000	57100	65000	82200	93300	93000	78200	62100
8	50000	49400	49900	50400	53000	57100	65400	82800	93200	93000	77600	61600
9	50000	49400	49900	50400	53000	57300	65600	83300	93200	92800	77200	61200
10	50000	49400	49900	50600	53000	57400	66000	83800	93200	92700	76600	60700
11	49900	49400	49900	51400	53000	57600	66400	84400	93200	92200	76000	60200
12	49900	49400	49900	51800	53100	57800	66700	84900	93200	91700	75600	59700
13	49900	49400	49900	51900	53700	58100	67100	85700	93300	91200	75000	59100
14	49900	49200	49900	52100	54200	58200	67500	86300	93300	90600	74400	58600
15	49900	49200	49900	52300	54400	58700	68000	87300	93300	90100	73900	58100
16	49800	49200	49900	52400	54500	59100	68500	88200	93300	89600	73400	57600
17	49800	49200	50200	52400	54700	59400	69200	89300	93300	89200	72800	57100
18	49800	49400	50200	52600	55000	59700	69600	89800	93500	88500	72200	56500
19	49800	49400	50200	52600	55100	59900	70100	90100	93300	88100	71800	56000
20	49800	49400	50200	52600	55400	60000	70500	90400	93200	87400	71200	55500
21	49800	49600	50200	52700	55700	60200	70800	90700	93200	87000	70600	55100
22	49700	49700	50200	52700	55700	60400	71200	91400	93200	86500	70200	54600
23	49700	49700	50200	52700	55700	60600	71700	91500	93200	86000	69600	54000
24	49700	49700	50200	52700	55700	60800	72000	92000	93200	85400	69200	53600
25	49700	49700	50200	52700	55800	61000	72400	92700	93200	84900	68500	53100
26	49700	49700	50200	52700	55800	61300	73000	93200	93200	84300	68000	52700
27	49600	49700	50200	52800	55800	62000	73900	93700	93200	83800	67600	52200
28	49600	49700	50200	52800	55800	62400	74400	94200	93200	83200	67100	51600
29	49600	49700	50200	52800	---	62600	75200	94500	93200	82800	66500	51200
30	49500	49700	50200	52800	---	62900	75900	94200	93200	82300	66200	50700
31	49500	---	50200	52900	---	63200	---	94000	---	81700	65600	---
MAX	50600	49700	50200	52900	55800	63200	75900	94500	94000	93200	81300	65100
MIN	49500	49200	49800	50200	52900	55800	63400	76600	93200	81700	65600	50700
†	5014.4	5014.6	5015.0	5017.4	5019.9	5025.6	5034.8	5046.6	5046.1	5038.8	5027.5	5015.5
‡	-1900	+200	+500	+2700	+2900	+7400	+12700	+18100	-800	-11500	-16100	-14900

CAL YR 1978 ‡ +10200
WTR YR 1979 ‡ -700

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

11395030 SOUTH FORK FEATHER RIVER BELOW LITTLE GRASS VALLEY DAM, CA

LOCATION.--Lat 39°43'26", long 121°01'16", in SW¼NW¼ sec.31, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.1 mi (0.2 km) downstream from Little Grass Valley Dam, 0.7 mi (1.1 km) downstream from Ice Creek, and 3.5 mi (5.6 km) northwest of La Porte.

DRAINAGE AREA.--25.9 mi² (67.1 km²).

PERIOD OF RECORD.--October 1927 to September 1933 (published as "near La Porte"), October 1960 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,809.0 ft (1,465.78 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1960, at site 0.4 mi (0.6 km) upstream at different datum. Oct. 1, 1960, to Oct. 30, 1962, at present site and datum. Nov. 1, 1962, to May 31, 1966, at site on outlet works at base of Little Grass Valley Dam 0.1 mi (0.2 km) upstream at datum 4,850.00 ft (1,478.280 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Little Grass Valley Reservoir (station 11395020) beginning in October 1961. No diversion above station. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE (adjusted for change in contents in Little Grass Valley Reservoir).--25 years, 94.1 ft³/s (2.665 m³/s), 68,180 acre-ft/yr (84.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft³/s (120 m³/s) Feb. 1, 1963; minimum, 0.2 ft³/s (0.006 m³/s) Oct. 28-31, Nov. 2, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 783 ft³/s (22.2 m³/s) May 18, gage height, 10.68 ft (3.255 m); minimum daily, 2.5 ft³/s (0.071 m³/s) May 11, 12.

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	378	8.7	4.4	4.0	4.0	4.4	4.8	4.6	188	7.0	257	245
2	228	5.8	4.0	4.0	4.0	4.4	4.8	5.5	188	7.0	256	245
3	110	4.4	4.0	4.0	4.0	4.4	4.8	5.3	188	7.0	255	245
4	15	4.4	4.0	4.0	4.0	4.4	4.8	4.4	188	7.0	255	245
5	8.7	4.4	4.0	4.0	4.0	4.6	5.0	9.4	188	6.7	255	244
6	8.7	4.4	3.9	4.0	4.0	4.6	5.3	5.3	188	6.7	255	244
7	8.7	4.4	3.9	4.0	4.0	4.8	5.3	4.0	188	6.7	255	244
8	8.7	4.4	4.0	4.0	4.0	4.8	5.3	3.4	130	6.4	254	244
9	8.7	4.4	4.0	4.2	4.0	5.0	5.3	3.0	88	6.4	254	243
10	8.7	4.4	4.0	4.4	4.0	5.3	5.3	2.8	88	131	253	242
11	9.1	4.2	4.0	14	4.0	5.3	5.3	2.5	52	251	253	242
12	9.1	4.2	4.0	5.9	4.0	5.3	5.5	2.5	6.4	248	252	242
13	9.1	4.2	4.0	4.6	4.5	5.3	6.1	2.7	6.1	248	252	242
14	9.1	4.2	4.0	4.4	6.5	5.5	6.1	2.8	5.8	248	252	242
15	9.1	4.2	4.0	4.2	4.8	6.4	6.4	3.5	5.8	248	251	241
16	9.1	4.2	4.0	4.2	4.6	5.8	6.4	2.7	5.8	248	250	241
17	9.1	4.2	4.0	4.2	4.6	5.3	6.4	90	5.8	248	250	241
18	9.1	4.2	4.0	4.2	4.6	5.0	5.0	277	5.8	248	250	240
19	8.7	4.2	4.0	4.2	4.6	5.0	3.4	373	144	248	249	240
20	8.7	4.2	4.0	4.0	4.4	5.0	3.2	373	113	248	249	240
21	8.7	4.2	4.0	4.0	4.4	4.8	3.2	328	6.4	248	249	240
22	8.7	4.0	4.0	4.0	4.4	4.8	3.2	300	6.4	248	248	240
23	8.7	4.0	4.0	4.0	4.4	4.8	3.2	297	6.1	248	248	239
24	8.7	4.0	4.0	4.0	4.4	4.8	3.2	194	6.1	248	248	239
25	8.7	4.0	4.0	4.0	4.4	4.8	3.2	106	5.8	248	248	239
26	8.7	4.0	4.0	4.0	4.4	5.0	3.9	106	5.8	248	247	242
27	8.7	4.0	4.0	4.0	4.4	5.8	5.0	106	7.4	254	247	246
28	8.7	3.9	4.0	4.0	4.4	5.3	3.9	104	7.0	257	246	246
29	8.7	4.0	4.0	4.0	---	5.0	3.7	215	7.0	256	246	246
30	8.7	4.0	4.0	4.0	---	5.0	3.7	291	7.0	256	246	245
31	8.7	---	4.0	4.0	---	5.0	---	231	---	256	245	---
TOTAL	969.1	131.8	124.2	138.5	121.8	155.7	140.7	3455.4	2037.5	5441.9	7775	7274
MEAN	31.3	4.39	4.01	4.47	4.35	5.02	4.69	111	67.9	176	251	242
MAX	378	8.7	4.4	14	6.5	6.4	6.4	373	188	257	257	246
MIN	8.7	3.9	3.9	4.0	4.0	4.4	3.2	2.5	5.8	6.4	245	239
AC-FT	1920	261	246	275	242	309	279	6850	4040	10790	15420	14430

CAL YR 1978 TOTAL 44898.7 MEAN 123 MAX 510 MIN 3.9 AC-FT 89060 MEAN ‡ 137 AC-FT ‡ 99260
WTR YR 1979 TOTAL 27765.6 MEAN 76.1 MAX 378 MIN 2.5 AC-FT 55070 MEAN ‡ 75.1 AC-FT ‡ 54370

‡ Adjusted for change in contents in Little Grass Valley Reservoir.

11395200 SOUTH FORK FEATHER RIVER BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°38'51", long 121°07'04", in NE¼SE¼ sec.30, T.21 N., R.8 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 0.1 mi (0.2 km) downstream from diversion dam, 3.1 mi (5.0 km) upstream from Rock Creek, and 5.8 mi (9.3 km) north of Strawberry Valley.

DRAINAGE AREA.--37.7 mi² (97.6 km²).

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

GAGE.--Water-stage recorder and since Nov. 7, 1962, concrete control. Datum of gage is 3,535.02 ft (1,077.474 m) National Geodetic Vertical Datum of 1929 (levels by Oroville-Wyandotte Irrigation District).

REMARKS.--Records good. Flow regulated by Little Grass Valley Reservoir (station 11395020). South Fork diversion tunnel, maximum capacity, about 600 ft³/s (17.0 m³/s) 500 ft (152 m) upstream, diverts to Sly Creek Reservoir (station 11395400); diversion began in November 1961. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE (adjusted for diversion to South Fork tunnel).--19 years, 148 ft³/s (4.191 m³/s), 107,200 acre-ft/yr (132 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,330 ft³/s (179 m³/s) Jan. 31, 1963, gage height, 13.21 ft (4.026 m), from rating curve extended above 700 ft³/s (19.8 m³/s) on basis of computation of peak flow over diversion dam; minimum daily, 0.3 ft³/s (0.008 m³/s) Dec. 25, 1962, to Jan. 2, 1963, Mar. 1-3, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 78 ft³/s (2.21 m³/s) May 19, gage height, 3.28 ft (1.000 m); minimum daily, 4.4 ft³/s (0.125 m³/s) on many days during March and April.

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	8.5	7.3	5.2	5.0	4.8	5.0	4.6	7.0	11	7.8	8.3	8.3
2	8.0	6.4	5.2	5.0	4.8	4.8	4.4	9.9	11	7.8	8.3	8.3
3	7.8	5.0	4.8	5.0	4.8	4.8	4.4	9.9	11	7.5	8.3	8.3
4	7.3	5.0	4.8	5.0	4.8	4.6	4.4	9.9	11	7.5	8.3	8.3
5	7.1	5.0	4.8	5.0	4.8	4.6	4.4	10	11	7.5	8.3	8.3
6	7.1	5.0	4.8	5.0	4.8	4.6	4.4	11	11	7.5	8.3	8.3
7	7.1	5.0	4.8	5.0	4.8	4.6	4.4	11	11	7.5	8.3	8.3
8	7.1	5.0	4.8	5.0	4.6	4.6	4.4	10	11	7.5	8.3	8.3
9	7.1	5.0	4.8	5.0	4.6	4.6	4.4	11	11	7.5	8.3	8.3
10	7.1	5.2	4.8	5.0	4.6	4.6	4.4	10	11	7.8	8.3	8.3
11	7.1	5.4	4.8	5.8	4.6	4.6	4.4	10	10	8.0	8.3	8.3
12	7.1	5.4	4.8	5.2	4.6	4.6	4.4	10	10	8.0	8.3	8.3
13	7.1	5.4	4.8	5.0	5.0	4.4	4.4	10	10	8.0	8.3	8.3
14	7.1	5.4	4.8	5.0	5.4	4.4	4.4	10	10	8.0	8.3	8.3
15	7.1	5.4	4.6	5.0	4.8	4.6	4.4	10	10	8.3	8.3	8.3
16	7.1	5.4	4.6	5.0	4.8	4.6	4.4	11	10	8.3	8.3	8.3
17	7.1	5.4	4.6	5.0	4.6	4.6	4.4	11	10	8.3	8.3	8.3
18	7.1	5.4	4.6	5.0	4.6	4.6	4.4	20	10	8.3	8.3	8.5
19	7.1	5.6	4.6	5.0	4.6	4.4	4.4	67	11	8.3	8.3	8.5
20	7.1	5.6	4.6	5.0	4.6	4.4	4.4	66	11	8.5	8.3	8.5
21	7.1	5.2	4.6	5.0	4.6	4.4	4.4	36	10	8.5	8.3	8.5
22	7.1	5.2	4.6	5.0	4.6	4.4	4.4	12	9.3	8.5	8.3	8.3
23	7.1	5.2	4.6	5.0	4.6	4.4	4.4	12	7.8	8.5	8.3	8.3
24	7.1	5.2	4.6	5.0	4.6	4.4	4.4	11	7.8	8.5	8.3	8.3
25	7.1	5.2	4.6	5.0	4.6	4.4	4.4	11	7.8	8.5	8.5	8.3
26	7.1	5.2	4.6	4.8	4.6	4.6	4.4	11	7.8	8.5	8.5	8.3
27	7.1	5.2	4.6	4.8	4.6	5.0	4.6	11	7.8	8.5	8.5	8.0
28	7.1	5.2	4.6	4.8	4.6	4.8	4.6	11	7.8	8.3	8.5	8.0
29	7.1	5.2	4.6	4.8	---	4.8	4.6	11	7.8	8.3	8.5	8.0
30	7.1	5.2	4.6	4.8	---	4.8	4.6	11	7.8	8.3	8.5	7.8
31	7.3	---	5.4	4.8	---	4.6	---	11	---	8.3	8.5	---
TOTAL	223.5	160.3	147.0	154.8	131.8	142.6	133.0	472.7	293.7	250.6	258.7	248.4
MEAN	7.21	5.34	4.74	4.99	4.71	4.60	4.43	15.2	9.79	8.08	8.35	8.28
MAX	8.5	7.3	5.4	5.8	5.4	5.0	4.6	67	11	8.5	8.5	8.5
MIN	7.1	5.0	4.6	4.8	4.6	4.4	4.4	7.0	7.8	7.5	8.3	7.8
AC-FT	443	318	292	307	261	283	264	938	583	497	513	493
MEAN ‡	37.9	12.2	12.1	38.2	46.8	112	128	269	95.8	194	264	253
AC-FT ‡	2330	726	743	2350	2600	6890	7620	16570	5700	11940	16220	15080
†	1890	408	451	2040	2340	6610	7360	15630	5120	11440	15710	14590
CAL YR 1978 TOTAL	3050.7											
WTR YR 1979 TOTAL	2617.1											
MEAN 8.36												
MAX 315												
MIN 2.3												
AC-FT 6050												
MEAN ‡ 195												
AC-FT ‡ 141500												
MEAN ‡ 123												
AC-FT ‡ 88780												

‡ Adjusted for diversion to South Fork tunnel.

† Diversion, in acre-feet, from South Fork Feather River to South Fork diversion tunnel.

SACRAMENTO RIVER BASIN

11395400 SLY CREEK RESERVOIR NEAR STRAWBERRY VALLEY, CA

LOCATION (REVISED).--Lat 39°35'01", long 121°06'59", in NE¼NE¼ sec.19, T.20 N., R.8 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 100 ft (30 m) upstream from dam on Lost Creek, 1.4 mi (2.3 km) northwest of Strawberry Valley.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

PERIOD OF RECORD.--November 1961 to current year (fragmentary prior to Mar. 14, 1962).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Oroville-Wyandotte Irrigation District). Prior to Sept. 30, 1966, water-stage recorder in valve chamber inside dam at same datum. Oct. 1, 1966, to December 1974, nonrecording gage read once day.

REMARKS.--Reservoir is formed by earthfill dam. Storage began in November 1961. Total capacity, 65,000 acre-ft (80.1 hm³) between elevations 3,285 ft (1,001.3 m), invert of outlet and 3,531 ft (1,076.2 m), top of spillway gate, all of which is available for release. Water is diverted into reservoir from South Fork Feather River through South Fork diversion tunnel and from North Yuba River basin through Slate Creek tunnel (station 11413250). Records, including extremes, show contents at 2400 hours. See schematic diagram of South Fork Feather River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 65,600 acre-ft (80.9 hm³) June 22, 1978, elevation, 3,530.9 ft (1,076.22 m); minimum, 860 acre-ft (1.06 hm³) Feb. 11, 1976, elevation, 3,320.0 ft (1,011.94 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 65,300 acre-ft (80.5 hm³) May 24-25, elevation, 3,530.5 ft (1,076.10 m); minimum, 8,410 acre-ft (10.4 hm³), Dec. 1, elevation, 3,385.4 ft (1,031.87 m).

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

3,320	860	3,420	16,600
3,340	2,150	3,450	26,300
3,360	4,300	3,480	38,500
3,380	7,360	3,510	53,400
3,400	11,500	3,532	66,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36200	16100	8410	9920	13500	11500	29800	48600	63600	59400	50600	40600
2	35800	15500	8640	10000	13000	11700	30400	49400	63600	59000	50300	40600
3	35000	15000	9010	10100	12500	10800	30800	50300	63600	59000	50000	40600
4	34000	14500	9370	10100	12100	10600	31300	51200	63600	58800	49600	40300
5	33100	14000	9520	10200	11500	10200	32000	52000	63400	58500	49200	39800
6	32200	13500	9590	10300	11200	10200	33000	53000	63300	58400	48800	39400
7	31200	13300	9650	10500	11000	10200	33800	55600	63100	58600	48500	39000
8	30300	13100	9720	10600	10600	11200	34300	59200	63000	58300	48000	38600
9	29400	12800	9760	10800	10000	11600	34900	60800	63100	58000	47600	38200
10	28500	12500	9830	11100	9320	12300	35200	61600	63100	57400	47300	37800
11	27600	12300	9870	13800	8760	13000	35200	61600	63000	58000	46900	37500
12	26700	12100	9940	15200	9560	13800	35400	61800	62800	57800	46600	37100
13	25700	11800	10000	15800	8990	14600	36000	62100	62500	56900	46200	36700
14	25500	11500	10100	16400	8970	15000	36500	62700	62100	56300	45800	36200
15	25000	11200	10100	16800	9700	16400	37200	63200	62300	56000	45500	35900
16	24800	10900	10100	17100	11600	17600	37900	63600	62500	56500	45100	35400
17	24200	10700	10200	17400	11400	18400	38500	64200	62800	56600	44700	35000
18	23300	10300	10300	17200	11000	19000	39000	64600	62500	55700	44600	34600
19	22900	10200	10400	16600	10300	19500	39200	64800	62300	54800	44600	34200
20	21800	10800	10400	16500	10000	19900	39300	65000	62300	54400	44500	33800
21	21300	11100	10500	16400	11100	20200	39700	65200	61900	54100	44000	33400
22	20700	10800	10600	16400	12500	20600	40800	65200	61500	53800	43700	33400
23	20500	10600	10600	16300	12500	21000	41500	65200	61300	53400	43400	33500
24	19600	10200	10700	16200	12600	21400	41900	65300	61500	53100	42900	33400
25	19000	9810	10800	16100	12200	21800	42200	65300	61100	52900	42600	33500
26	18500	9500	10800	15700	12100	22300	43000	64900	61000	52500	42500	33400
27	17700	9260	10900	15300	12200	24500	44400	64500	60400	52200	42300	33600
28	17000	9200	10800	14800	11400	26800	45600	64000	59900	51900	41800	33400
29	16400	8720	10500	14300	---	27900	46600	63700	59400	51500	41400	33600
30	16500	8520	10200	14100	---	28600	47600	63500	59400	50900	41000	33400
31	16700	---	10000	13600	---	29200	---	63600	---	51000	40600	---
MAX	36200	16100	10900	17400	13500	29200	47600	65300	63600	59400	50600	40600
MIN	16400	8520	8410	9920	8760	10200	29800	48600	59400	50900	40600	33400
†	3420.4	3386.0	3393.2	3408.7	3399.5	3457.8	3498.9	3527.5	3520.5	3505.4	3484.6	3468.3
‡	-19700	-8180	+1480	+3600	-2200	+17800	+18400	+16000	-4200	-8400	-10400	-7200

CAL YR 1978 ‡ -20300

WTR YR 1979 ‡ -3000

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

11395500 OROVILLE-WYANDOTTE CANAL NEAR CLIPPER MILLS, CA

LOCATION.--Lat 39°33'15", long 121°11'31", in NW¼NE¼ sec.33, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, in concrete valve house at head of canal, 2.5 mi (4.0 km) north of Clipper Mills.

PERIOD OF RECORD.--October 1927 to September 1941 (published as Forbestown ditch), October 1953 to current year. Monthly discharge only for October 1953 to September 1961, published with records for Lost Creek near Clipper Mills.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 3,166.0 ft (965.00 m) National Geodetic Vertical Datum of 1929 (levels by Oroville-Wyandotte Irrigation District). Prior to Sept. 30, 1941, nonrecording gages and Oct. 1, 1941, to Nov. 16, 1962, water-stage recorder at sites at different datums 4 mi (6 km) upstream in abandoned portion of canal, 0.3 mi (0.5 km) downstream from Lost Creek Dam.

REMARKS.--Records good. Water is discharged to canal through valve in Woodleaf penstock. Prior to Nov. 16, 1962, canal diverted from Lost Creek Dam. Water is used for irrigation and domestic supply. Demand for water reduced when a large lumber mill closed at Woodleaf in 1962. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--23 years (water years 1928-41, 1954-62, prior to closure of lumber mill), 21.0 ft³/s (0.595 m³/s), 15,200 acre-ft/yr (18.7 hm³/yr); 17 years (water years 1963-79), 8.81 ft³/s (0.250 m³/s), 6,380 acre-ft/yr (7.87 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft³/s (1.22 m³/s) Aug. 9 to Sept. 9, 1937, Aug. 13-15, 1977; no flow at times in many years.

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	16	10	4.9	4.9					0	17	20	24
2	16	5.2	4.9	4.9					2.5	16	20	24
3	16	5.1	4.9	4.9					3.4	17	20	23
4	15	5.8	4.9	4.9					3.1	16	20	24
5	15	6.6	4.9	4.9					2.9	15	20	23
6	15	6.7	4.9	4.9					3.5	16	20	23
7	17	7.0	4.9	5.0					4.4	15	21	23
8	18	7.1	4.9	5.0					7.5	14	22	23
9	18	8.2	4.9	3.0					11	15	24	23
10	18	9.8	4.9	1.4					11	16	25	23
11	18	10	4.9	.52					10	16	24	23
12	17	9.9	4.9	0					9.5	16	25	23
13	17	10	4.9	.01					9.8	17	25	23
14	20	10	4.9	0					9.8	17	25	23
15	20	10	4.9	0					11	17	25	23
16	19	9.9	4.9	0					10	17	25	23
17	19	9.8	4.9	0					10	17	25	23
18	19	9.8	4.9	0					9.5	19	25	23
19	19	10	4.9	0					11	20	25	23
20	19	10	4.9	0					13	20	25	23
21	19	7.9	4.9	0					12	20	25	23
22	19	4.8	4.9	0					11	21	25	23
23	19	4.5	4.9	0					12	20	25	23
24	19	4.1	4.9	0					12	20	25	23
25	19	4.5	4.9	0					11	20	25	23
26	19	5.7	4.9	0					11	20	25	23
27	18	5.4	4.9	0					10	20	25	23
28	18	4.9	4.8	0					11	20	25	23
29	19	4.6	4.7	0	---				13	20	25	23
30	20	4.9	4.7	0	---				17	20	25	23
31	17	---	4.8	0	---		---		---	20	23	---
TOTAL	557	222.2	151.3	44.33	0	0	0	0	272.9	554	734	693
MEAN	18.0	7.41	4.88	1.43	0	0	0	0	9.10	17.9	23.7	23.1
MAX	20	10	4.9	5.0	0	0	0	0	17	21	25	24
MIN	15	4.1	4.7	0	0	0	0	0	0	14	20	23
AC-FT	1100	441	300	88	0	0	0	0	541	1100	1460	1370
CAL YR 1978	TOTAL	2994.20	MEAN 8.20	MAX 23	MIN 0	AC-FT	5940					
WTR YR 1979	TOTAL	3228.73	MEAN 8.85	MAX 25	MIN 0	AC-FT	6400					

SACRAMENTO RIVER BASIN

11396000 LOST CREEK NEAR CLIPPER MILLS, CA

LOCATION.--Lat 39°34'25", long 121°08'26", in SE¼SW¼ sec.24, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.3 mi (0.5 km) downstream from Lost Creek Reservoir, and 2.8 mi (4.5 km) north of Clipper Mills.

DRAINAGE AREA.--30.0 mi² (77.7 km²).

PERIOD OF RECORD.--October 1927 to September 1941, October 1948 to current year. Records for Woodleaf powerplant from February 1963 to September 1966 in files of Geological Survey.

REVISED RECORDS.--WSP 1395: 1954. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,170 ft (966 m), from topographic map.

REMARKS.--Records fair. Flow regulated by Sly Creek Reservoir 1.5 mi (2.4 km) upstream (station 11395400) and Lost Creek Reservoir 0.3 mi (0.5 km) upstream, usable capacity, 5,920 acre-ft (7.30 hm³) with flashboards. Water is diverted into Sly Creek Reservoir through South Fork diversion tunnel from South Fork Feather River and through Slate Creek tunnel from North Yuba River basin. Woodleaf tunnel diverts from Lost Creek Reservoir to Woodleaf powerhouse. Oroville-Wyandotte Canal (station 11395500) diverts from Woodleaf penstock for irrigation and domestic use. Records represent seepage, release, or spill from Lost Creek Dam to Lost Creek. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--27 years (water years 1928-41, 1949-61, prior to regulation by Sly Creek Reservoir), 73.0 ft³/s (2.07 m³/s), 52,850 acre-ft/yr (65.2 hm³/yr); 18 years (water years 1962-79), 19.8 ft³/s (0.561 m³/s), 14,346 acre-ft/yr (17.7 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) Dec. 22, 1955, gage height, 6.90 ft (2.103 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90 ft³/s (2.55 m³/s) Apr. 18, gage height, 2.31 ft (0.704 m); minimum daily, 0.82 ft³/s (0.023 m³/s) Aug. 9-11, 31.

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	1.2	1.0	1.1	1.0	.94	1.3	1.4	3.8	1.9	.98	.94	.86
2	1.2	1.0	1.0	1.0	.94	1.1	1.2	3.7	1.9	.98	.90	.86
3	1.2	1.1	1.0	1.0	.94	1.1	1.2	3.5	1.8	.98	.90	.94
4	1.2	1.1	1.0	1.0	.94	1.1	1.1	3.3	1.7	.98	.90	.94
5	1.2	1.1	.98	1.0	.94	1.1	1.1	3.5	1.7	.98	.86	.94
6	1.1	1.1	.98	1.0	.90	1.2	1.2	3.5	1.6	.98	.86	.94
7	.94	1.1	.98	1.2	.90	1.5	1.1	3.8	1.6	.98	.86	.94
8	.94	1.1	.98	2.0	.90	1.6	1.0	3.4	1.5	.98	.86	.94
9	.94	1.1	.98	1.2	.90	1.7	1.0	1.6	1.5	.98	.82	.94
10	.98	1.2	.98	1.3	.90	1.7	.98	1.5	1.5	.98	.82	.94
11	.98	1.3	1.0	4.2	.90	1.6	10	1.5	1.5	1.0	.82	.94
12	.98	1.4	1.1	1.3	.94	1.5	22	1.5	1.5	.90	.86	.90
13	1.0	1.5	1.2	1.1	4.6	1.4	19	3.1	1.5	.90	.86	.90
14	1.0	1.5	1.2	1.2	5.2	1.2	15	3.5	1.5	1.4	.86	.90
15	1.0	1.5	1.2	1.4	2.0	1.7	12	3.1	1.5	1.3	.86	.94
16	1.0	1.5	1.2	1.2	1.8	1.8	10	2.9	1.5	1.1	.86	.94
17	1.0	1.5	1.5	1.1	1.5	1.5	9.5	2.6	1.5	.90	.90	.94
18	1.0	1.5	1.2	1.0	1.5	1.3	31	2.5	1.5	.90	.90	.94
19	1.0	1.5	1.1	1.0	1.6	1.2	8.0	2.3	1.5	1.1	.90	.94
20	1.1	1.5	1.0	.98	1.8	1.1	7.5	2.2	1.2	1.4	.90	.90
21	1.1	1.4	1.0	.98	2.1	1.0	7.0	2.1	.98	1.2	.90	.90
22	1.2	1.2	1.0	.98	1.8	1.0	7.0	2.1	.98	1.2	.90	.94
23	1.1	1.1	1.0	.94	1.6	.98	6.0	2.1	.98	1.1	.86	.94
24	1.1	1.0	1.0	.94	1.5	.94	5.5	2.1	.98	1.0	.86	.94
25	1.2	.98	1.0	.94	2.2	.90	5.3	2.0	.98	1.0	.86	.98
26	1.2	.98	1.0	.94	1.0	1.0	5.1	2.0	.98	.98	.86	.98
27	1.2	.98	1.0	.94	1.0	3.3	4.7	2.0	.98	.98	.82	.98
28	1.2	1.0	1.0	.94	1.2	2.6	4.5	2.0	.98	.98	.82	.98
29	1.2	1.0	1.0	.94	---	2.1	4.1	2.0	.98	.94	.82	.98
30	1.2	1.0	1.0	.94	---	1.7	4.0	1.9	.98	.94	.90	.98
31	1.2	---	1.0	.94	---	1.5	---	1.9	---	.94	.82	---
TOTAL	33.86	36.24	32.68	36.60	43.44	44.72	208.48	79.0	41.20	31.96	26.86	28.08
MEAN	1.09	1.21	1.05	1.18	1.55	1.44	6.95	2.55	1.37	1.03	.87	.94
MAX	1.2	1.5	1.5	4.2	5.2	3.3	31	3.8	1.9	1.4	.94	.98
MIN	.94	.98	.98	.94	.90	.90	.98	1.5	.98	.90	.82	.86
AC-FT	67	72	65	73	86	89	414	157	82	63	53	56
†	23760	10320	1010	7310	15710	17970	25380	29050	18140	21380	26940	21860

CAL YR 1978 TOTAL 2601.06 MEAN 7.13 MAX 629 MIN .58 AC-FT 5160
WTR YR 1979 TOTAL 643.12 MEAN 1.76 MAX 31 MIN .82 AC-FT 1280

† Diversion, in acre-feet, to Woodleaf powerplant.

11396200 SOUTH FORK FEATHER RIVER BELOW FORBESTOWN DAM, CA

LOCATION.--Lat 39°33'05", long 121°12'30", in SE¼NE¼ sec.32, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 500 ft (152 m) downstream from Forbestown Dam, 0.4 mi (0.6 km) upstream from Oroleve Creek, and 4.0 mi (6.4 km) northeast of Forbestown.

DRAINAGE AREA.--87.5 mi² (226.6 km²).

PERIOD OF RECORD.--July 1962 to current year. Records for Forbestown powerplant from February 1963 to September 1966 in files of Geological Survey.

GAGE.--Water-stage recorder. Altitude of gage is 1,690 ft (515 m), from topographic map.

REMARKS.--Records good. Flow regulated by Little Grass Valley Reservoir (station 11395020), Sly Creek Reservoir, (station 11395400), and smaller reservoirs. Water from North Yuba River basin is imported through Slate Creek tunnel (station 11413250) to Sly Creek Reservoir. Oroville-Wyandotte Canal (station 11395500) diverts above station. Tunnel 600 ft (183 m) above station diverts most flow through Forbestown powerplant except fish-water releases and uncontrolled spill over Forbestown Dam. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--17 years, 53.1 ft³/s (1.504 m³/s), 38,470 acre-ft/yr (47.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,510 ft³/s (213 m³/s) Jan. 31, 1963, gage height, 13.85 ft (4.221 m) in gage well, 15.3 ft (4.66 m) from floodmarks; minimum daily, 0.6 ft³/s (0.017 m³/s) Apr. 4, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83 ft³/s (2.35 m³/s) Apr. 18, gage height, 4.14 ft (1.262 m); minimum daily, 4.0 ft³/s (0.11 m³/s) on several days during January.

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	10	9.8	5.1	5.0	4.8	5.6	5.2	5.0	9.4	8.5	8.9	8.5
2	7.7	9.9	11	5.0	4.8	5.4	5.2	5.0	9.4	8.5	8.7	8.5
3	6.8	6.6	20	5.0	4.8	5.4	5.2	6.1	9.4	8.3	8.5	8.5
4	9.6	4.9	20	5.0	4.8	5.3	5.2	9.2	9.4	8.3	8.5	8.5
5	9.8	4.9	20	5.0	4.7	5.2	5.2	9.2	9.4	8.3	8.5	8.5
6	9.8	4.9	19	5.0	4.8	5.2	5.2	9.2	9.4	8.3	8.7	8.5
7	9.8	4.8	18	5.0	5.3	5.2	5.2	9.2	9.4	8.2	8.7	8.5
8	9.8	4.8	19	5.2	4.9	5.2	5.2	9.2	9.4	8.3	8.5	8.4
9	9.8	4.9	19	5.1	4.9	5.2	5.2	9.3	9.2	8.3	8.5	8.4
10	9.8	5.0	19	5.1	4.9	5.2	5.2	9.2	9.2	8.4	8.5	8.4
11	9.8	5.0	19	5.6	4.9	5.2	5.2	9.4	9.2	8.4	8.5	8.4
12	9.8	5.0	19	4.0	4.9	5.2	5.2	9.4	9.2	8.4	8.5	8.4
13	9.8	5.0	18	4.0	6.1	5.2	5.2	9.4	9.2	8.4	8.5	8.4
14	9.7	5.0	18	4.1	5.1	5.5	5.2	9.4	9.2	8.4	8.5	8.4
15	9.8	5.0	18	4.1	4.9	5.4	5.2	9.4	9.2	8.4	8.5	8.4
16	9.8	5.0	18	4.0	5.1	5.4	5.2	9.4	8.9	8.4	8.5	8.5
17	9.8	5.1	31	4.0	5.0	5.3	5.3	9.4	8.9	8.7	8.5	8.4
18	9.7	4.9	27	4.0	5.8	5.2	14	9.4	9.1	8.7	8.5	8.4
19	9.7	5.0	22	4.0	5.0	5.2	5.2	9.4	9.1	8.7	8.5	8.4
20	9.7	5.1	20	4.4	5.1	5.2	5.0	33	9.1	8.7	8.5	8.4
21	9.8	5.1	20	4.9	5.2	5.2	5.0	9.4	9.0	8.7	8.5	8.5
22	9.7	5.0	20	4.9	5.4	5.2	5.1	9.2	8.7	8.7	8.5	8.4
23	9.8	5.0	19	5.0	5.4	5.2	5.2	9.2	8.7	8.7	8.5	8.4
24	9.8	5.1	19	5.0	5.3	5.2	5.1	9.2	8.7	8.7	8.5	8.4
25	9.8	5.1	19	5.0	5.2	5.2	5.0	9.2	8.7	8.7	8.5	8.5
26	9.8	5.1	19	5.0	5.2	5.2	5.1	9.2	8.7	8.7	8.5	8.5
27	9.8	5.1	19	5.0	5.2	5.5	5.1	9.2	8.7	8.7	8.5	8.5
28	9.8	5.2	13	5.0	5.4	5.2	5.0	9.2	8.7	8.7	8.5	8.5
29	9.8	5.2	5.0	5.0	---	5.2	5.0	9.4	8.5	8.7	8.5	8.4
30	9.8	5.0	5.0	5.0	---	5.2	5.0	9.4	8.5	8.6	8.5	8.5
31	9.8	---	5.0	5.4	---	5.2	---	9.4	---	8.7	8.5	---
TOTAL	298.2	161.5	543.1	147.8	142.9	163.2	163.3	300.2	271.6	264.2	264.5	253.4
MEAN	9.62	5.38	17.5	4.77	5.10	5.26	5.44	9.68	9.05	8.52	8.53	8.45
MAX	10	9.9	31	5.6	6.1	5.6	14	33	9.4	8.7	8.9	8.5
MIN	6.8	4.8	5.0	4.0	4.7	5.2	5.0	5.0	8.5	8.2	8.5	8.4
AC-FT	591	320	1080	293	283	324	324	595	539	524	525	503
‡	23180	9280	920	8400	18390	32220	30430	33640	19190	21890	26880	21280
CAL YR 1978 TOTAL	17257.6											
MEAN	47.3											
MAX	742											
MIN	4.0											
AC-FT	34230											
WTR YR 1979 TOTAL	2973.9											
MEAN	8.15											
MAX	33											
MIN	4.0											
AC-FT	5900											

‡ Diversion, in acre-feet, to Forbestown powerplant, furnished by Oroville-Wyandotte Irrigation District.

11396310 MINERS RANCH CANAL BELOW PONDEROSA DAM, NEAR FORBESTOWN, CA

LOCATION.--Lat 39°33'00", long 121°18'20", in SE¼NW¼ sec.33, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, on right bank 800 ft (244 m) downstream from Ponderosa Dam, and 3 mi (5 km) northwest of Forbestown.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 975 ft (297 m), from topographic map.

REMARKS.--Records good. Canal diverts from South Fork Feather River at Ponderosa Dam. Water is used for power development and irrigation. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--17 years, 200 ft³/s (5.664 m³/s), 144,900 acre-ft/yr (179 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 289 ft³/s (8.184 m³/s) Sept. 10, 1976; no flow at times in most years.

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	181	175	174	172	178	177	177	127	169	184	185	186
2	180	175	56	66	133	177	177	171	169	184	184	186
3	180	175	29	0	177	177	177	171	169	184	184	186
4	180	175	28	0	178	177	23	171	169	184	184	186
5	180	175	28	0	179	177	0	171	169	184	184	183
6	180	175	28	0	179	177	30	171	169	183	184	183
7	180	175	19	0	156	177	178	171	169	183	184	183
8	179	175	7.7	0	178	177	176	171	169	182	184	183
9	178	175	19	0	178	177	176	170	169	182	184	183
10	178	174	19	0	178	177	176	170	169	183	184	26
11	178	174	19	0	178	177	176	170	169	183	184	0
12	178	174	19	0	178	177	176	170	169	183	184	0
13	178	174	41	0	32	177	176	170	169	183	184	0
14	178	174	9.3	0	102	177	176	170	169	183	184	0
15	177	174	10	55	177	177	176	170	168	183	184	0
16	177	174	0	108	177	177	176	170	168	183	184	0
17	177	174	0	93	178	177	176	169	168	183	184	54
18	177	174	0	84	178	177	176	169	167	182	184	154
19	177	174	0	89	177	177	176	169	168	182	184	233
20	177	174	0	75	178	177	176	169	173	182	185	288
21	177	174	0	81	177	177	176	169	177	182	185	284
22	177	174	10	82	177	177	176	169	182	182	185	280
23	177	174	23	89	177	177	176	169	185	182	185	280
24	177	174	23	104	177	177	176	169	185	182	185	280
25	177	174	23	112	177	176	176	169	185	182	185	280
26	177	174	31	134	177	176	176	169	184	183	185	280
27	177	174	44	179	177	177	176	169	184	183	185	260
28	177	174	85	178	177	177	176	169	185	183	185	264
29	177	174	172	178	---	177	176	169	185	183	185	281
30	176	174	172	178	---	177	16	169	184	185	185	281
31	176	---	172	178	---	177	---	169	---	185	186	---
TOTAL	5515	5229	1261.0	2235	4685	5485	4648	5219	5214	5670	5718	5184
MEAN	178	174	40.7	72.1	167	177	155	168	174	183	184	173
MAX	181	175	174	179	179	177	177	171	185	185	186	288
MIN	176	174	0	0	32	176	0	127	167	181	184	0
AC-FT	10940	10370	2500	4430	9290	10880	9220	10350	10340	11250	11340	10280
†	8760	8550	1510	1630	8090	9830	8620	7780	7530	7840	8770	7740

CAL YR 1978 TOTAL 60767.00 MEAN 166 MAX 245 MIN 0 AC-FT 120500
WTR YR 1979 TOTAL 56063.00 MEAN 154 MAX 288 MIN 0 AC-FT 111200

† Diversion, in acre-feet, to Kelly Ridge powerplant.

11396330 BANGOR CANAL BELOW MINERS RANCH RESERVOIR, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'15", long 121°27'16", in NE¼SW¼ sec.18, T.19 N., R.5 E., Butte County, Hydrologic Unit 18020124, on left bank 400 ft (122 m) downstream from outlet at Miners Ranch Dam, and 5 mi (8 km) east of Oroville.

PERIOD OF RECORD.--January 1963 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 815 ft (248 m), from topographic map.

REMARKS.--Records excellent. Flow regulated by Miners Ranch Reservoir, capacity, 912 acre-ft (1.12 hm³). Canal completed in November 1962. Water is used for irrigation. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--16 years, 15.8 ft³/s (0.447 m³/s), 11,450 acre-ft/yr (14.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 65 ft³/s (1.84 m³/s) Aug. 17-20, 1963; no flow for several days in 1965, 1969.

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	21	19	9.0	8.4	6.0	7.5	7.8	16	27	23	21	21
2	22	17	9.2	8.4	5.9	7.6	7.8	17	29	23	21	21
3	22	17	9.2	8.4	5.9	7.5	7.8	17	30	24	20	21
4	22	17	9.2	8.4	5.9	7.5	7.8	18	31	25	21	21
5	22	18	9.3	8.4	5.9	7.5	7.8	18	31	26	20	21
6	22	18	9.1	8.4	6.9	7.5	7.7	18	31	27	20	21
7	22	18	8.9	8.2	7.6	7.5	7.9	17	32	26	21	21
8	21	17	8.8	8.1	7.1	7.7	8.6	17	29	26	20	21
9	21	17	8.1	7.4	7.1	7.8	9.3	17	26	25	21	21
10	21	17	7.8	6.4	7.2	7.8	9.0	17	26	25	21	22
11	21	16	7.8	6.4	7.2	7.8	8.7	17	25	25	20	21
12	21	14	8.0	6.4	9.1	7.8	10	17	27	25	21	20
13	21	14	8.1	6.4	9.3	7.8	11	17	28	25	21	20
14	21	14	8.1	6.4	8.1	7.8	13	19	27	25	21	20
15	21	14	8.1	6.4	8.1	7.8	15	23	27	25	21	21
16	21	14	8.0	6.2	8.2	7.8	16	25	27	27	21	21
17	22	14	7.8	6.2	8.0	7.8	16	25	27	26	21	20
18	22	14	7.8	6.2	7.8	7.8	17	25	27	25	20	21
19	21	14	8.1	6.2	7.8	7.8	17	25	27	25	20	22
20	21	14	9.0	5.9	7.5	7.8	17	25	24	25	21	22
21	21	14	8.9	5.9	7.5	7.8	17	28	23	25	23	21
22	21	14	8.6	5.8	7.5	7.8	17	28	23	24	23	21
23	21	14	8.6	5.6	7.5	7.8	17	27	22	23	23	21
24	21	11	8.7	5.6	7.5	7.8	17	27	22	23	23	21
25	21	9.1	8.7	5.5	7.5	7.8	17	27	22	24	23	21
26	21	9.4	9.0	5.8	7.5	7.8	17	27	23	24	23	21
27	21	9.4	9.2	6.2	7.5	7.8	17	27	24	24	23	21
28	21	9.1	9.6	6.1	7.5	7.8	17	28	23	23	23	20
29	20	8.9	8.8	6.0	---	7.8	17	27	23	23	23	20
30	19	8.9	7.8	5.9	---	7.8	16	27	24	23	23	20
31	20	---	8.0	5.9	---	7.8	---	27	---	22	22	---
TOTAL	655	424.8	265.3	207.5	206.6	239.7	391.2	690	787	761	665	626
MEAN	21.1	14.2	8.56	6.69	7.38	7.73	13.0	22.3	26.2	24.5	21.5	20.9
MAX	22	19	9.6	8.4	9.3	7.8	17	28	32	27	23	22
MIN	19	8.9	7.8	5.5	5.9	7.5	7.7	16	22	22	20	20
AC-FT	1300	843	526	412	410	475	776	1370	1560	1510	1320	1240

CAL YR 1978 TOTAL 5446.1 MEAN 14.9 MAX 30 MIN 5.3 AC-FT 10800
WTR YR 1979 TOTAL 5919.1 MEAN 16.2 MAX 32 MIN 5.5 AC-FT 11740

SACRAMENTO RIVER BASIN

11396350 SOUTH FORK FEATHER RIVER AT PONDEROSA DAM, CA

LOCATION.--Lat 39°32'52", long 121°18'11", in NW¼SE¼ sec.33, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, at entrance to Miners Ranch Canal on the left end of Ponderosa Dam, 2,800 ft (853 m) upstream from Sucker Run, and 2.6 mi (4.2 km) northwest of Forbestown.

DRAINAGE AREA.--108 mi² (280 km²).

PERIOD OF RECORD.--July 1962 to current year.

GAGE.--Water-stage recorder, high level sluice gate, and concrete spillway of Ponderosa Dam. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Oroville-Wyandotte Irrigation District). Prior to Oct. 1, 1967, at site 1,800 ft (550 m) downstream at different datum.

REMARKS.--Records good. Records are combined flow through sluice gate and flow over spillway. Flow regulated by several reservoirs and diversions. Water is imported from North Yuba River basin through Slate Creek tunnel (station 11413250). Miners Ranch Canal (station 11396310) diverts at Ponderosa Dam for power development and irrigation; diversion began in October 1962. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE (adjusted for diversion to Miners Ranch Canal).--17 years, 441 ft³/s (12.49 m³/s), 319,500 acre-ft/yr (394 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Dec. 22, 1964, gage height, 11.52 ft (3.511 m) in gage well, 12.7 ft (3.87 m) outside from floodmarks, site and datum then in use; no flow for several months most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 872 ft³/s (24.7 m³/s) Feb. 14 no flow for many days.

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	375	124		0	166	555	291	580	438	0	310	126
2	375	129		0	173	370	296	502	416	0	300	83
3	375	136		0	148	283	212	502	432	0	315	16
4	365	136		0	140	279	395	490	432	0	305	236
5	365	134		0	139	299	460	65	416	0	305	350
6	365	103		0	102	287	466	24	427	0	295	275
7	365	0		0	108	283	283	349	416	0	315	300
8	365	0		20	108	252	488	520	372	0	295	275
9	362	0		97	149	269	435	508	76	0	325	300
10	358	0		45	127	268	460	526	96	63	320	405
11	358	0		568	133	280	466	514	144	280	305	490
12	365	0		255	137	265	460	508	166	305	305	496
13	369	0		103	373	266	460	508	154	310	305	496
14	213	0		110	872	276	454	508	179	295	305	502
15	9.5	0		223	538	301	454	496	40	300	305	438
16	58	0		147	309	410	449	460	0	300	300	508
17	156	0		128	199	327	454	472	0	310	300	444
18	158	0		118	327	309	502	466	0	305	169	315
19	160	0		124	400	283	472	502	41	310	65	232
20	161	0		109	346	296	466	532	84	310	149	151
21	162	0		115	499	252	361	526	161	305	315	125
22	161	0		116	425	272	11	490	153	310	226	0
23	158	0		124	375	255	163	478	31	310	226	0
24	159	0		148	314	257	514	478	4.1	275	310	0
25	159	0		243	351	229	484	460	5.5	300	305	0
26	161	0		187	233	256	478	444	6.0	300	160	0
27	165	0		164	270	360	508	449	138	320	160	0
28	168	0		155	354	410	361	444	148	310	345	0
29	171	0		191	---	405	496	438	176	290	340	0
30	161	0		173	---	356	664	427	30	223	320	0
31	140	---		106	---	337	---	422	---	265	325	---
TOTAL	7442.5	762	0	3769	7815	9547	12463	14088	5181.6	6296	8625	6563
MEAN	240	25.4	0	122	279	308	415	454	173	203	278	219
MAX	375	136	0	568	872	555	664	580	438	320	345	508
MIN	9.5	0	0	0	102	229	11	24	0	0	65	0
AC-FT	14760	1510	0	7480	15500	18940	24720	27940	10280	12490	17110	13020
MEAN ‡	418	200	40.7	194	446	485	570	623	347	386	463	392
AC-FT ‡	25700	11880	2500	11910	24790	29820	33940	38290	20620	23740	28450	23300
CAL YR 1978 TOTAL	138415.50			MEAN 379	MAX 2320	MIN 0	AC-FT 274500		MEAN ‡ 546	AC-FT ‡ 395100		
WTR YR 1979 TOTAL	82552.10			MEAN 226	MAX 872	MIN 0	AC-FT 163700		MEAN ‡ 380	AC-FT ‡ 274900		

‡ Adjusted for diversion to Miners Ranch Canal.

SACRAMENTO RIVER BASIN

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11396400 SUCKER RUN NEAR FORBESTOWN, CA

LOCATION.--Lat 39°33'12", long 121°18'04", in NW¼NE¼ sec.33, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, on left bank at upstream side of road bridge, 0.7 mi (1.1 km) upstream from confluence with South Fork Feather River, and 2.8 mi (4.5 km) northwest of Forbestown.

DRAINAGE AREA.--18.7 mi² (48.4 km²).

PERIOD OF RECORD.--June 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 960 ft (292 m), from topographic map.

REMARKS.--Records good. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--14 years, 24.2 ft³/s (0.685 m³/s), 17,530 acre-ft/yr (21.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) Jan. 21, 1967, gage height, 6.03 ft (1.838 m), from rating curve extended as explained below; minimum daily, 0.40 ft³/s (0.011 m³/s) Oct. 7, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 7.4 ft (2.26 m) from floodmarks, discharge, 2,190 ft³/s (62 m³/s) from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of computation of maximum flow over rock control.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 311 ft³/s (8.81 m³/s) Feb. 14, gage height, 3.64 ft (1.109 m), no other peak above base of 300 ft³/s (8.50 m³/s); minimum daily, 2.9 ft³/s (0.082 m³/s) Oct. 13-15, 24-26.

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	3.4	3.5	9.7	5.4	7.3	115	36	25	12	6.8	4.1	4.7
2	3.4	3.6	6.7	5.4	7.1	67	33	24	11	6.7	4.1	4.4
3	3.2	3.6	5.7	5.4	6.8	61	31	23	11	6.8	4.1	4.2
4	3.1	3.6	5.6	5.5	6.7	52	29	22	11	6.8	4.1	4.2
5	3.1	3.6	5.6	5.4	6.9	47	28	34	11	6.7	4.1	4.1
6	3.2	3.4	5.4	5.4	6.9	48	28	33	10	6.4	4.1	4.1
7	3.1	3.4	5.3	5.8	6.9	48	27	38	9.9	6.2	4.0	4.0
8	3.2	3.5	5.2	18	7.0	47	25	31	9.8	6.1	4.0	4.0
9	3.2	3.4	5.2	19	6.9	44	25	27	9.6	5.9	4.0	4.0
10	3.2	3.4	5.4	16	7.0	40	24	25	9.5	6.0	4.0	3.9
11	3.1	3.5	5.4	132	7.2	38	23	23	9.4	6.0	4.0	3.8
12	3.0	3.8	5.3	32	7.2	35	22	22	9.2	5.7	4.0	3.8
13	2.9	4.6	5.2	17	7.4	33	21	21	8.9	5.4	4.0	3.8
14	2.9	4.3	5.1	26	183	31	21	20	9.0	5.1	4.0	3.7
15	2.9	4.1	5.0	70	48	49	19	20	8.9	4.9	4.0	3.7
16	3.0	4.1	5.0	35	50	53	21	19	9.1	4.8	3.9	3.7
17	3.1	4.5	12	21	36	42	28	18	9.7	4.7	3.9	3.7
18	3.0	4.4	11	16	54	40	27	17	9.2	4.5	3.9	3.7
19	3.0	9.3	7.9	14	67	37	24	16	9.0	4.5	3.9	3.7
20	3.1	14	6.6	12	82	33	21	16	8.8	4.6	3.9	3.7
21	3.1	13	6.1	11	117	31	20	16	8.4	5.3	4.2	3.7
22	3.1	11	6.0	10	84	30	21	16	8.3	6.0	4.1	3.6
23	3.0	7.2	5.9	9.6	70	28	42	15	8.1	5.4	4.0	3.6
24	2.9	5.9	5.8	9.0	51	27	47	15	8.0	4.9	4.0	3.7
25	2.9	5.6	5.8	8.8	41	26	32	15	7.8	4.7	3.9	3.8
26	2.9	5.4	5.8	8.2	49	27	34	14	7.6	4.5	3.9	3.8
27	3.0	5.3	5.6	8.0	39	97	36	14	7.3	4.4	3.8	3.8
28	3.0	5.2	5.6	7.8	79	72	30	14	7.1	4.2	3.8	3.8
29	3.1	5.2	5.6	7.5	---	51	27	13	7.0	4.1	4.0	3.7
30	3.2	5.2	5.6	7.5	---	44	26	13	6.8	3.9	7.8	3.7
31	3.3	---	5.5	7.8	---	39	---	12	---	4.1	5.6	---
TOTAL	95.6	160.6	191.6	561.5	1207.9	1432	828	631	272.4	166.1	129.2	116.1
MEAN	3.08	5.35	6.18	18.1	43.1	46.2	27.6	20.4	9.08	5.36	4.17	3.87
MAX	3.4	14	12	132	183	115	47	38	12	6.8	7.8	4.7
MIN	2.9	3.4	5.0	5.4	6.7	26	19	12	6.8	3.9	3.8	3.6
AC-FT	190	319	380	1110	2400	2840	1640	1250	540	329	256	230

CAL YR 1978 TOTAL 9988.8 MEAN 27.4 MAX 513 MIN 2.6 AC-FT 19810
WTR YR 1979 TOTAL 5792.0 MEAN 15.9 MAX 183 MIN 2.9 AC-FT 11490

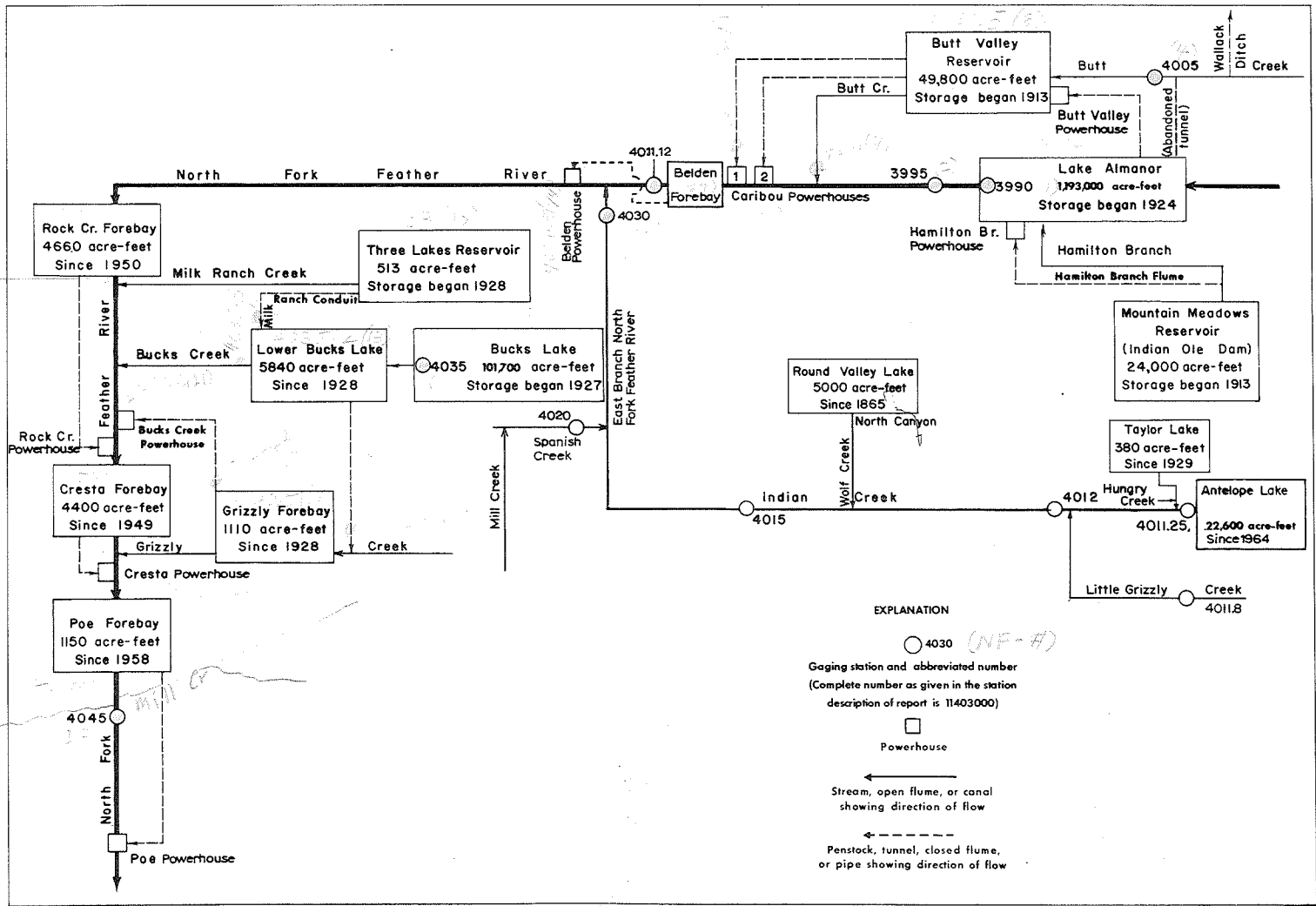


FIGURE 6.--Schematic diagram showing diversions and storage in North Fork Feather River basin.

255 204

11399000 LAKE ALMANOR AT PRATTVILLE, CA

LOCATION.--Lat 40°12'50", long 121°09'40", in SW¼NE¼ sec.11, T.27 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, at outlet tower to No. 2 tunnel on North Fork Feather River at Prattville, 4.7 mi (7.6 km) northwest of Lake Almanor Dam, and 5.6 mi (9.0 km) northwest of Canyon Dam.

DRAINAGE AREA.--491 mi² (1,272 km²).

PERIOD OF RECORD.--July 1913 to current year. Monthly contents only for some periods, published in WSP 1315-A. Published as "near Prattville" 1937-60. Prior to October 1964, records published as usable contents.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Nonrecording gage monitored once daily. Datum of gage is 10.23 ft (3.118 m) below National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.). Prior to June 1, 1965, nonrecording gage at site 4.7 mi (7.6 km) southeast at same datum.

REMARKS.--Lake is formed by earthfill dam; storage began in July 1913; dam raised to gage height, 4,455 ft (1,357.9 m) in 1917 and 4,515 ft (1,376.2 m) in 1927. Capacity, 1,184,000 acre-ft (1.46 km³) between gage heights 4,495.5 ft (1,370.23 m), upper storage limit and 4,422 ft (1,347.8 m), bottom of lowest outlet, of which 8,950 acre-ft (11.0 hm³) is not available for release. Water is diverted by tunnel and penstock to Butt Valley Reservoir and powerhouse for use in Caribou powerplants; some water also released down North Fork Feather River (station 11399500). Figures given herein represent total contents at 2400 hours. See schematic diagram of North Fork Feather River basin.

COOPERATION.--Records furnished by Pacific Gas and Electric Co., in connection with a Federal Energy Regulatory Commission Project.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 1,142,000 acre-ft (1.41 km³) June 4, 5, 10, 11, 1974, gage height, 4,493.96 ft (1,369.759 m); minimum, 5,230 acre-ft (6.45 hm³) Feb. 5, 1918, gage height, 4,416.1 ft (1,346.03 m).

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents observed, 890,856 acre-ft (1.10 km³) Oct. 1, gage height, 4,484.29 ft (1,366.812 m); minimum observed, 656,273 acre-ft (809 hm³) Mar. 5, gage height, 4,474.26 ft (1,363.754 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

4,422	8,950	4,432	34,200	4,450	220,800	4,475	672,700
4,424	10,100	4,434	49,500	4,455	294,500	4,480	787,300
4,426	11,300	4,437	74,200	4,460	376,700	4,485	908,500
4,428	13,500	4,440	101,900	4,465	467,000	4,490	1,036,000
4,430	21,200	4,445	156,400	4,470	565,500	4,495.5	1,184,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	890856	833563	808652	771545	713844	668215	703182	750807	818202	823471	764063	713616
2	890362	831396	809129	768502	711343	665332	704766	752430	817245	823950	761032	714071
3	889375	828992	809129	766632	707485	662675	706125	754286	818441	824910	757772	714526
4	887155	826590	808890	765699	704087	659361	707485	756610	819159	825630	754519	715436
5	884690	824910	808652	764297	700921	656273	709526	758703	818680	826590	751039	714754
6	882967	823950	806271	762430	697985	657375	711116	761265	819877	827070	747796	713161
7	882721	823711	802941	761498	694604	658919	712707	766398	820595	827791	744558	709526
8	881000	823711	800565	760799	691228	660244	714298	768269	821793	828511	741558	707258
9	879525	823231	798429	758936	687859	661791	715664	770374	822512	826830	738793	705445
10	878051	822272	797243	757540	684719	663339	716803	772014	822512	826110	736031	704087
11	875352	820835	796057	759634	681585	664889	717714	773890	821314	824430	733043	703860
12	872656	819638	794636	761265	680244	666219	718854	775767	819877	822272	733043	701825
13	870698	818202	793452	762430	679573	667993	719994	777646	819159	820595	732583	699114
14	869230	816767	792505	761032	695054	669770	721592	780703	816528	817245	733043	699114
15	867519	814616	789903	759634	692353	671993	723191	783294	817963	814855	732124	699791
16	866297	814138	787776	756842	692803	673774	725249	786124	818680	811990	728684	698888
17	864100	812945	788249	753590	692128	675333	727080	788721	819877	809367	725707	697760
18	862149	810321	787304	750807	692128	677564	728455	789903	819398	806747	722277	697760
19	860200	808176	784944	748028	686532	678903	729371	791795	820356	803416	720679	698436
20	858253	807461	783294	745252	686737	680020	730977	794873	821314	801515	719310	699114
21	855821	807223	781174	742020	684943	681585	732124	797243	821793	798666	719994	699565
22	853634	806271	779056	739714	682480	683152	733732	800090	821793	795583	720451	699791
23	851449	806747	777881	737411	681138	684495	736261	803178	822752	792978	719082	700243
24	849509	807699	777881	735571	681585	685840	738102	806033	822272	789667	716347	698662
25	847328	808652	778586	732124	682233	687634	739484	808176	822512	787068	714526	696181
26	845391	809129	777646	729142	675333	689880	742020	810559	821793	783294	714526	693028
27	842972	807699	777411	726851	671993	694604	743635	812467	821553	780232	713161	690104
28	840798	806033	776002	724334	670436	696632	745252	814855	821074	777411	712934	686961
29	838383	807223	775297	721364	---	698436	747102	815572	821553	774124	714298	687410
30	836213	807699	773186	718170	---	700017	748722	817006	822752	771077	714981	686961
31	835249	---	771545	717031	---	701599	---	817963	---	767333	713616	---
MAX	890856	833563	809129	771545	713844	701599	748722	817963	822752	828511	764063	715436
MIN	835249	806033	771545	717031	670436	656273	703182	750807	816528	767333	712934	686961
(+)	4482.01	4480.86	4479.33	4476.97	4474.90	4476.29	4478.35	4481.29	4481.49	4479.15	4476.82	4475.64
(-)	-58100	-27600	-36200	-54500	-46600	+31200	+47100	+69200	+4790	-55400	-53700	-26700

CAL YR 1978 † +228500

WTR YR 1979 ‡ -206400

† Gage height, in feet, at end of month.

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

11399500 NORTH FORK FEATHER RIVER NEAR PRATTVILLE, CA

LOCATION.--Lat 40°10'10", long 121°05'29", in NE¼SW¼ sec.28, T.27 N., R.8 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.5 mi (0.8 km) downstream from Almanor Dam, 4.5 mi (7.2 km) southeast of Prattville, and 9 mi (14 km) upstream from Butt Creek.

DRAINAGE AREA.--493 mi² (1,277 km²).

PERIOD OF RECORD.--June 1905 to current year (daily discharges for July 1921 to September 1936 include water diverted through Almanor-Butt Creek tunnel). Records for water year 1911 incomplete, yearly estimate published in WSP 1315-A. Published as "below Prattville" prior to 1911. Supplemental records for Almanor-Butt Creek tunnel diversion computed November 1924 to Dec. 30, 1958, as difference of flow between Butt Creek above Almanor-Butt Creek tunnel (unpublished prior to 1936 and since 1964), and Butt Creek below Almanor-Butt Creek tunnel (unpublished prior to 1936 and 1960-64).

REVISED RECORDS.--WSP 1245: 1951 (yearly summaries). WSP 1285: 1952 (yearly summaries).

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 4,390.09 ft (1,338.099 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1936, nonrecording gages or water-stage recorders at several sites within 0.5 mi (0.8 km) of present site at various datums.

REMARKS.--Flow regulated by Lake Almanor (station 11399000) 0.5 mi (0.8 km) upstream and Mountain Meadows Reservoir since 1924, capacity, 24,000 acre-ft (29.6 hm³). Water diverted for power from Lake Almanor through old Almanor-Butt Creek tunnel to Butt Creek until Dec. 30, 1958. Diversion through new tunnel and Butt Valley powerhouse began Dec. 31, 1958. See schematic diagram of North Fork Feather River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for diversion and leakage).--74 years, 906 ft³/s (25.66 m³/s), 656,400 acre-ft/yr (809 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s (283 m³/s) Mar. 19, 1907, before construction of dam, gage height, 16.2 ft (4.94 m) at former site, from rating curve extended above 3,700 ft³/s (105 m³/s); no flow Apr. 15, 16, 1914, at times January to April 1919, Apr. 21, 1923.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 58 ft³/s (1.64 m³/s) Jan. 30; minimum daily, 18 ft³/s (0.51 m³/s) Jan. 31.

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	37	35	42	39	38	52	41	39	41	39	37	35
2	37	35	42	39	37	52	42	39	41	39	37	35
3	38	35	42	39	37	51	42	39	40	39	37	35
4	38	35	42	39	37	51	39	39	40	39	37	35
5	37	35	41	39	36	49	38	40	40	39	37	35
6	37	35	41	39	47	45	38	40	40	39	38	35
7	37	35	41	39	57	40	38	40	40	39	38	35
8	37	35	41	39	55	37	38	40	40	39	38	34
9	37	35	41	39	55	37	38	40	39	39	37	34
10	37	35	41	38	55	37	38	37	39	39	37	34
11	37	35	41	38	54	38	38	37	39	39	37	34
12	37	35	41	38	54	38	38	37	39	39	37	34
13	37	35	41	38	55	38	38	38	39	39	37	34
14	37	35	40	38	55	38	38	38	39	39	37	34
15	37	35	40	38	55	38	38	38	39	38	37	34
16	37	35	40	38	55	38	38	38	39	38	36	34
17	37	35	40	38	55	39	38	38	39	38	36	36
18	37	34	40	38	55	39	39	38	39	38	36	36
19	36	34	40	38	55	39	39	38	39	38	36	36
20	36	34	40	37	55	39	39	38	39	38	36	36
21	36	34	40	37	55	39	39	39	38	38	36	36
22	35	37	40	37	54	39	39	39	38	38	36	36
23	36	42	40	37	54	39	39	39	38	37	35	36
24	35	43	40	37	54	40	39	39	38	38	35	36
25	36	44	40	36	54	40	39	39	39	39	35	36
26	36	44	40	36	53	40	40	40	39	38	35	35
27	36	44	39	35	53	41	40	40	39	38	35	35
28	36	43	39	35	52	41	40	40	39	38	35	35
29	36	42	39	35	---	41	40	40	39	38	35	35
30	35	42	39	58	---	41	39	40	39	37	35	35
31	35	---	39	18	---	41	---	41	---	37	35	---
TOTAL	1133	1112	1252	1169	1431	1277	1170	1207	1176	1190	1125	1050
MEAN	36.5	37.1	40.4	37.7	51.1	41.2	39.0	38.9	39.2	38.4	36.3	35.0
MAX	38	44	42	58	57	52	42	41	41	39	38	36
MIN	35	34	39	18	36	37	38	37	38	37	35	34
AC-FT	2250	2210	2460	2320	2840	2530	2320	2390	2330	2360	2230	2080
MEAN ‡	1399	997	1109	1553	1627	360	48.4	81.4	532	1304	1161	754
AC-FT ‡	86050	59310	68190	95510	90360	22170	2880	5000	31670	80170	71390	44890

CAL YR 1978 TOTAL 15107 MEAN 41.4 MAX 78 MIN 20 AC-FT 29960 MEAN ‡ 611 AC-FT ‡ 442200
WTR YR 1979 TOTAL 14292 MEAN 39.2 MAX 58 MIN 18 AC-FT 28350 MEAN ‡ 908 AC-FT ‡ 657600

‡ Adjusted for diversion through Butt Valley powerhouse and leakage from Butt Valley tunnel No. 1.

11400500 BUTT CREEK BELOW ALMANOR-BUTT CREEK TUNNEL, NEAR PRATTVILLE, CA

LOCATION.--Lat 40°11'12", long 121°11'11", in NW¼NW¼ sec.22, T.27 N., R.7 E., Plumas County, Hydrologic Unit 18020121, on right bank 400 ft (122 m) downstream from outlet of old tunnel from Lake Almanor to Butt Creek, and 2.2 mi (3.5 km) southwest of Prattville.

DRAINAGE AREA.--69.3 mi² (179.5 km²).

PERIOD OF RECORD.--October 1936 to September 1959, October 1964 to current year. Published as "below tunnel No. 1" 1938-40. Records for water years 1937-38 published in WSP 1515.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,400 ft (1,341 m), from topographic map. Prior to Oct. 5, 1937, at site 200 ft (61 m) downstream at datum 4 ft (1.2 m) lower.

REMARKS.--No regulation above station. Howell-Bunger valve in conduit from Lake Almanor to Butt Valley power-house is opened for short periods several times a year causing sharp peaks. Wallack ditch, above station, diverts several cubic feet per second during each irrigation season into Yellow Creek basin. Leakage from Almanor-Butt Creek tunnel No. 1 was 6,670 acre-ft (8.22 hm³) during the current year. See schematic diagram of North Fork Feather 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 (natural flow of Butt Creek, adjusted for leakage from Almanor-Butt Creek tunnel No. 1).--43 years (including records for station 11400000 Butt Creek above Almanor-Butt Creek tunnel, near Prattville for water years 1960-64), 82.3 ft³/s (2.331 m³/s), 59,630 acre-ft/yr (73.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,830 ft³/s (108 m³/s) Dec. 23, 1964, gage height, 5.87 ft (1.789 m), from rating curve extended above 1,400 ft³/s (39.6 m³/s); minimum daily, 26 ft³/s (0.74 m³/s) May 26-28, June 1-5, 13-15, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 321 ft³/s (9.09 m³/s) Jan. 11, gage height, 1.69 ft (0.515 m); minimum daily, 34 ft³/s (0.96 m³/s) Sept. 6-19.

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	52	51	66	49	59	58	105	169	100	50	39	40
2	52	52	57	51	59	56	104	167	97	50	39	39
3	53	50	54	55	59	56	110	179	94	50	39	37
4	52	51	54	56	59	58	126	184	91	50	39	35
5	52	51	56	55	60	61	151	242	86	49	39	35
6	52	50	46	55	60	67	166	232	83	49	37	34
7	52	50	50	54	62	75	156	208	80	49	37	34
8	52	50	58	55	62	84	159	186	79	49	36	34
9	52	51	56	55	65	89	159	164	77	48	37	34
10	52	51	55	59	66	91	139	158	74	48	37	34
11	52	52	56	203	66	97	141	161	70	47	37	34
12	52	50	55	130	68	103	150	170	69	46	37	34
13	52	54	53	78	76	108	171	181	68	46	37	34
14	52	51	52	70	106	106	177	190	65	45	38	34
15	52	51	51	65	90	125	184	195	65	44	39	34
16	52	53	51	61	73	115	189	196	65	43	36	34
17	51	52	51	59	66	97	169	196	65	42	35	34
18	52	52	54	58	64	89	142	202	66	42	35	34
19	52	54	50	56	62	87	127	205	64	41	35	34
20	52	65	56	50	61	93	123	202	62	42	36	35
21	52	60	56	57	61	92	125	200	58	43	39	35
22	51	56	54	54	59	90	127	190	57	43	36	35
23	50	53	54	55	58	91	141	174	58	42	36	35
24	51	54	54	56	57	98	148	161	58	41	36	35
25	50	53	53	52	57	107	133	153	53	41	36	36
26	50	52	53	49	57	116	168	148	52	41	36	36
27	50	52	54	58	57	131	191	139	52	41	36	36
28	50	53	52	56	59	121	174	127	51	40	35	36
29	50	57	51	55	---	111	172	116	50	40	40	36
30	50	58	50	60	---	108	174	109	49	39	48	36
31	51	---	48	55	---	106	---	104	---	39	42	---
TOTAL	1595	1589	1660	1987	1806	2886	4501	5408	2058	1360	1164	1053
MEAN	51.5	53.0	53.5	64.1	64.6	93.1	150	174	68.6	44.5	37.5	35.1
MAX	53	65	66	203	106	131	191	242	100	50	48	40
MIN	50	50	46	49	57	56	104	104	49	39	35	34
AC-FT	3160	3150	3290	3940	3590	5720	8930	10730	4080	2740	2310	2090
CAL YR 1978	TOTAL	42250	MEAN	116	MAX	368	MIN	46	AC-FT	83800		
WTR YR 1979	TOTAL	27089	MEAN	74.2	MAX	242	MIN	34	AC-FT	53730		

11401112 NORTH FORK FEATHER RIVER BELOW BELDEN DAM, CA

LOCATION.--Lat 40°04'18", long 121°09'46", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.26 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.2 mi (0.3 km) downstream from Belden Dam, 0.4 mi (0.6 km) upstream from Deadwood Canyon, and 6.2 mi (10.0 km) northeast of Belden.

DRAINAGE AREA.--612 mi² (1,585 km²).

PERIOD OF RECORD.--October 1969 to current year. July 1959 to September 1969 in files of Pacific Gas and Electric Co.

REVISED RECORDS.--WDR CA-78-4: 1977 (monthly and yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 2,811.00 ft (856.793 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow regulated by Belden Reservoir 0.2 mi (0.3 km) upstream, Lake Almanor (station 11399000), Butt Valley Reservoir, and Mountain Meadows Reservoir, combined capacity, 1,267,000 acre-ft (1.56 km³). Diversion through tunnel to Belden powerhouse began on Aug. 27, 1969. See schematic diagram of North Fork Feather River basin.

COOPERATION.--Records were 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 (including diversion to Belden powerhouse).--10 years, 1,146 ft³/s (32.45 m³/s), 830,300 acre-ft/yr (1.02 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s (86.1 m³/s) Nov. 18, 1974, gage height, 8.89 ft (2.710 m); minimum daily, 11 ft³/s (0.31 m³/s) Dec. 4-9, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft³/s (60.6 m³/s) Sept. 12, gage height, 7.83 ft (2.387 m); minimum daily, 59 ft³/s (1.67 m³/s) Sept. 16.

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	61	70	74	69	70	72	76	297	134	138	141	148
2	60	71	73	69	71	72	76	330	135	136	142	147
3	61	71	74	69	71	72	75	362	134	136	144	127
4	60	71	74	68	71	72	75	402	135	136	142	64
5	61	71	74	68	70	73	74	403	136	140	144	62
6	61	70	74	68	70	73	71	412	132	137	143	61
7	60	72	74	68	71	72	70	333	126	135	144	61
8	66	71	73	71	74	70	72	136	134	136	143	61
9	69	72	73	70	74	71	102	135	136	137	142	61
10	68	73	69	70	75	73	136	136	135	137	143	60
11	65	71	72	71	74	72	130	135	134	137	141	66
12	67	72	70	71	74	73	120	133	133	140	144	1560
13	69	70	70	70	73	74	114	132	136	139	143	1860
14	70	73	68	68	72	76	132	131	134	137	146	500
15	69	71	69	69	73	75	140	133	132	138	146	60
16	69	70	69	69	71	75	140	133	134	138	144	59
17	71	71	69	71	72	75	140	136	134	141	144	64
18	70	71	70	70	71	76	128	135	135	141	144	73
19	71	71	69	69	70	75	150	136	134	140	142	73
20	70	70	69	70	73	75	166	134	133	139	146	73
21	70	71	69	70	75	76	166	135	136	140	144	74
22	72	69	68	69	74	75	169	136	135	141	145	73
23	72	71	70	69	72	76	167	133	135	141	144	75
24	70	70	71	71	73	76	168	133	134	141	144	73
25	71	72	70	71	73	76	165	132	134	140	145	72
26	71	72	70	70	74	76	163	131	134	142	144	73
27	70	71	70	70	73	77	193	132	131	143	146	73
28	71	74	70	70	72	77	227	134	135	142	145	73
29	71	74	70	70	---	76	226	135	137	143	145	73
30	69	74	70	70	---	76	231	136	137	140	148	73
31	71	---	70	86	---	76	---	134	---	141	146	---
TOTAL	2096	2140	2195	2174	2026	2303	4062	5755	4024	4312	4464	5972
MEAN	67.6	71.3	70.8	70.1	72.4	74.3	135	186	134	139	144	199
MAX	72	74	74	86	75	77	231	412	137	143	148	1860
MIN	60	69	68	68	70	70	70	131	126	135	141	59
AC-FT ‡	4160	4240	4350	4310	4020	4570	8060	11420	7980	8550	8850	11850
MEAN ‡	1479	1080	1234	1725	1882	593	215	386	679	1339	1264	872
AC-FT ‡	90950	64280	75880	106100	104500	36450	12800	23750	40380	82300	77730	51890
CAL YR 1978 TOTAL	34095											
MEAN	93.4											
MAX	161											
MIN	56											
AC-FT	67630											
MEAN ‡	835											
WTR YR 1979 TOTAL	41523											
MEAN	114											
MAX	1860											
MIN	59											
AC-FT	82360											
MEAN ‡	1059											
AC-FT ‡	767000											

‡ Adjusted for diversion through Belden powerhouse.

11401125 INDIAN CREEK NEAR BOULDER CREEK GUARD STATION, NEAR TAYLORSVILLE, CA

LOCATION.--Lat 40°10'47", long 120°36'27", in SE¼SE¼ sec.22, T.27 N., R.12 E., Plumas County, Hydrologic Unit 18020122, on left bank 150 ft (46 m) downstream from Antelope Dam, 1.8 mi (2.9 km) upstream from Cold Stream, 1.3 mi (2.1 km) south of Boulder Creek Guard Station, 12.3 mi (19.8 km) northeast of Genesee, and 14.3 mi (23.0 km) northeast of Taylorsville.

DRAINAGE AREA.--68.6 mi² (177.7 km²).

PERIOD OF RECORD.--October 1965 to current year. June 1961 to September 1965 in reports of California Department of Water Resources.

GAGE.--Water-stage recorder and steel-lipped concrete control. Supplementary water-stage recorder on dam and concrete spillway. Altitude of gage is 4,930 ft (1,502 m), from topographic map. October 1965 to September 1968, at site 0.9 mi (1.4 km) downstream at different datum.

REMARKS.--Flow regulated since Nov. 25, 1963 by Antelope Lake, capacity, 22,500 acre-ft (27.7 hm³). See schematic diagram of North Fork Feather River basin. Records since October 1968 are combined flow of release from Antelope Dam and flow over spillway.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--14 years, 47.6 ft³/s (1.348 m³/s), 34,490 acre-ft/yr (42.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 828 ft³/s (23.4 m³/s) May 24, 1967, gage height, 6.31 ft (1.923 m) previous site and datum, and Jan. 24, 1970 (includes flow over spillway); no flow for several months in 1971-72, 1977 (caused by draining of Antelope Lake).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 20 ft³/s (0.57 m³/s) on many days during October to January and May; minimum daily, 5.0 ft³/s (0.14 m³/s) Sept. 18-20.

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	20	20	20	20	10	10	10	10	14	10	10	10
2	20	20	20	20	10	10	10	10	13	10	10	10
3	20	20	20	20	10	10	10	10	12	10	10	10
4	20	20	20	20	10	10	9.6	10	12	10	10	10
5	20	20	20	20	10	10	10	10	11	10	10	10
6	20	20	20	20	10	10	10	10	11	10	10	10
7	20	20	20	20	10	10	10	10	10	10	9.7	10
8	20	20	20	20	10	10	10	10	10	10	9.3	10
9	20	20	20	20	10	10	10	10	10	10	9.3	10
10	20	20	20	20	10	10	10	10	10	10	9.3	10
11	20	20	20	20	10	10	10	10	10	10	9.3	10
12	20	20	20	20	10	10	10	10	10	10	9.3	10
13	20	20	20	20	10	10	10	10	10	10	9.3	10
14	20	20	20	20	10	10	10	10	10	10	9.3	10
15	20	20	20	20	10	10	10	10	10	10	9.3	10
16	20	20	20	20	10	10	10	10	10	10	9.3	10
17	20	20	20	20	10	10	10	10	10	10	9.3	6.7
18	20	20	20	15	10	10	10	10	10	10	9.3	5.0
19	20	20	20	10	10	10	10	10	10	10	9.3	5.0
20	20	20	20	10	10	10	10	10	10	10	9.3	5.0
21	20	20	20	10	10	10	10	11	10	10	9.3	7.5
22	20	20	20	10	10	10	10	14	10	10	9.3	10
23	20	20	20	10	10	10	10	16	10	10	9.3	10
24	20	20	20	10	10	10	10	19	10	10	9.7	10
25	20	20	20	10	10	10	10	20	10	10	10	10
26	20	20	20	10	10	10	10	20	10	10	10	10
27	20	20	20	10	10	10	10	20	10	10	10	10
28	20	20	20	10	10	10	10	19	10	10	10	10
29	20	20	20	10	---	10	10	18	10	10	10	10
30	20	20	20	10	---	10	10	16	10	10	10	10
31	20	---	20	10	---	10	---	15	---	10	10	---
TOTAL	620	600	620	485	280	310	299.6	388	313	310	298.2	279.2
MEAN	20.0	20.0	20.0	15.6	10.0	10.0	9.99	12.5	10.4	10.0	9.62	9.31
MAX	20	20	20	20	10	10	10	20	14	10	10	10
MIN	20	20	20	10	10	10	9.6	10	10	10	9.3	5.0
AC-FT	1230	1190	1230	962	555	615	594	770	621	615	591	554

CAL YR 1978 TOTAL 9100.7 MEAN 24.9 MAX 170 MIN 1.0 AC-FT 18050
WTR YR 1979 TOTAL 4803.0 MEAN 13.2 MAX 20 MIN 5.0 AC-FT 9530

SACRAMENTO RIVER BASIN

11401180 LITTLE GRIZZLY CREEK NEAR GENESEE, CA

LOCATION.--Lat 40°00'50", long 120°45'11", in NE¼SW¼ sec.21, T.25 N., R.11 E., Plumas County, Hydrologic Unit 18020122, Plumas National Forest, on right bank 2 mi (3 km) south of Genesee, and 2.5 mi (4.0 km) upstream from Indian Creek.

DRAINAGE AREA.--29.6 mi² (76.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1964 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,180 ft (1,274 m), from topographic map.

REMARKS.--Records fair. No known diversion or regulation above station. See schematic diagram of North Fork Feather River basin.

AVERAGE DISCHARGE.--15 years, 48.4 ft³/s (1.371 m³/s), 35,070 acre-ft/yr (43.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) Jan. 24, 1970, gage height, 6.15 ft (1.875 m), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement at gage height, 5.90 ft (1.798 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Aug. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 207 ft³/s (5.86 m³/s) May 21, gage height, 3.15 ft (0.960 m), no peak above base of 300 ft³/s (8.50 m³/s); minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 19-23.

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	6.2	6.0	12	6.0	7.0	18	32	96	70	13	5.4	5.4
2	6.2	6.9	8.1	6.0	6.7	17	30	95	64	13	5.4	4.9
3	6.3	6.5	6.8	6.0	6.5	16	30	106	60	13	5.4	4.9
4	6.3	6.1	7.1	5.9	6.5	16	32	119	58	12	5.4	4.6
5	6.3	6.0	8.1	6.0	6.3	19	39	149	55	12	5.4	4.1
6	6.3	6.0	6.6	5.9	6.3	27	57	146	51	11	5.1	4.1
7	6.2	5.8	6.4	6.0	6.3	38	49	141	47	11	5.1	3.9
8	6.2	5.8	6.4	6.8	6.3	46	51	133	43	10	5.1	3.9
9	6.2	5.8	6.5	7.0	6.5	48	52	119	40	10	5.1	3.9
10	6.1	5.6	7.1	8.3	6.9	45	47	115	37	9.9	5.1	3.7
11	6.1	5.7	6.7	30	7.3	44	45	116	35	9.8	4.9	3.7
12	6.0	5.9	7.2	38	8.7	44	49	123	33	9.5	5.1	3.7
13	5.9	6.0	6.5	19	32	43	64	141	91	9.0	5.4	3.5
14	5.9	6.0	6.3	15	56	41	71	158	29	8.7	5.4	3.5
15	5.9	6.5	6.1	13	40	46	77	170	27	8.1	5.1	3.5
16	5.9	6.8	5.5	12	32	42	77	173	27	7.8	4.9	3.5
17	6.0	6.4	5.8	11	24	33	67	176	37	7.4	4.9	3.3
18	5.9	6.2	6.1	10	20	28	56	180	30	7.0	4.9	3.3
19	5.8	7.0	6.1	9.4	17	25	49	183	27	6.8	4.9	3.1
20	5.8	8.4	6.2	9.2	16	23	48	182	25	6.7	4.9	3.1
21	5.6	7.9	6.2	8.8	15	23	51	186	22	8.1	5.4	3.1
22	5.6	7.3	6.2	8.2	14	22	51	184	21	8.2	5.1	3.1
23	5.7	6.6	6.2	8.0	13	21	50	166	20	7.3	4.6	3.1
24	5.6	6.4	6.2	7.8	12	23	51	148	18	6.8	4.6	3.3
25	5.5	6.0	6.1	7.7	12	25	51	137	17	6.5	4.4	3.9
26	5.6	5.7	6.0	7.6	13	28	75	134	17	6.2	4.4	3.8
27	5.5	5.6	6.1	7.5	14	42	105	129	16	6.2	4.1	3.5
28	5.5	6.3	6.1	7.4	16	47	101	118	15	6.3	4.6	3.4
29	5.6	7.6	6.1	7.4	---	42	98	102	14	6.2	6.0	3.4
30	5.6	8.6	6.1	7.4	---	36	100	88	14	6.0	6.8	3.2
31	5.7	---	6.1	7.4	---	34	---	78	---	5.7	6.0	---
TOTAL	183.0	193.4	205.0	315.7	427.3	1002	1755	4291	1000	269.2	158.9	111.4
MEAN	5.90	6.45	6.61	10.2	15.3	32.3	58.5	138	33.3	8.68	5.13	3.71
MAX	6.3	8.6	12	38	56	48	105	186	70	13	6.8	5.4
MIN	5.5	5.6	5.5	5.9	6.3	16	30	78	14	5.7	4.1	3.1
AC-FT	363	384	407	626	848	1990	3480	8510	1980	534	315	221
CAL YR 1978 TOTAL	18885.6			MEAN 51.7	MAX 276	MIN 5.5	AC-FT 37460					
WTR YR 1979 TOTAL	9911.9			MEAN 27.2	MAX 186	MIN 3.1	AC-FT 19660					

11401180 LITTLE GRIZZLY CREEK NEAR GENESEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1964 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from August 1964 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 22.0°C June 25, 27-29, July 21, 1977; minimum recorded, -0.5°C on many days in 1978-79.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 12.5°C Oct 1; minimum recorded, -0.5°C on many days in December and January.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

11401200 INDIAN CREEK NEAR TAYLORSVILLE, CA

LOCATION.--Lat 40°02'53", long 120°49'01", in SE¼NW¼ sec.12, T.25 N., R.10 E., Plumas County, Hydrologic Unit 18020122, on right bank 0.3 mi (0.5 km) upstream from Montgomery Creek, and 2.3 mi (3.7 km) southeast of Taylorsville.

DRAINAGE AREA.--526 mi² (1,362 km²).

PERIOD OF RECORD.--May 1957 to September 1973, October 1974 to September 1976, October 1978 to September 1979.

GAGE.--Water-stage recorder. Altitude of gage is 3,580 ft (1,091 m), from topographic map. Prior to Oct. 22, 1963, at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Flow partly regulated by Antelope Lake (station 11401120) and storage in Taylor Lake since 1929, capacity, 380 acre-ft (46,900 m³). Some diversions for irrigation upstream. See schematic diagram of North Fork Feather River basin.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--19 years, (1958-73, 1975, 1976, 1979) 349 ft³/s (9.884 m³/s), 252,900 acre-ft/yr (312 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,200 ft³/s (855 m³/s) Feb. 1, 1963, gage height, 10.65 ft (3.246 m) site and datum then in use, from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurements at gage heights 10.3 ft (3.14 m) and 10.65 ft (3.246 m); minimum daily, 13 ft³/s (0.37 m³/s) Aug. 2-4, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 11.5 ft (3.50 m) from floodmarks, site and datum then in use (discharge unknown).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) Jan. 11, gage height, 7.90 ft (2.408 m); minimum daily, 25 ft³/s (0.71 m³/s) Sept. 22.

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	50	56	71	110	63	120	305	306	188	50	33	37
2	50	60	76	119	56	103	282	294	174	48	33	35
3	49	61	65	106	55	106	251	304	167	47	33	34
4	50	59	65	80	58	106	258	326	155	46	33	34
5	50	58	69	63	56	119	290	396	153	46	32	34
6	49	58	54	57	55	209	388	442	146	46	32	34
7	49	56	71	48	54	391	367	457	132	45	32	34
8	49	56	57	50	55	488	345	481	124	45	32	34
9	48	56	70	52	56	492	340	471	116	44	32	33
10	46	56	71	59	56	471	315	450	110	43	32	33
11	45	55	63	293	57	449	292	402	103	42	32	31
12	45	53	65	396	67	489	287	400	99	42	31	95
13	45	65	62	148	184	471	306	417	92	42	31	31
14	45	56	59	107	594	464	330	423	88	41	31	30
15	45	54	58	94	400	480	339	431	87	40	31	30
16	45	66	54	82	254	480	347	447	85	39	31	30
17	45	64	67	77	196	356	342	410	103	39	31	30
18	45	61	65	90	154	296	319	406	99	38	30	36
19	45	65	61	75	129	274	284	400	85	37	30	27
20	45	76	49	73	119	256	252	553	81	36	30	26
21	45	77	68	76	116	240	235	396	76	36	30	26
22	45	73	66	69	111	233	234	415	70	36	30	25
23	46	66	66	64	105	217	240	360	68	38	30	27
24	46	63	71	73	100	213	262	329	64	38	29	28
25	46	61	80	76	98	228	258	314	63	38	29	91
26	46	58	111	65	97	236	271	309	63	38	29	161
27	46	55	96	69	95	334	359	301	58	38	29	83
28	48	59	72	68	101	404	346	282	56	37	29	31
29	51	61	82	67	---	416	324	254	55	37	31	32
30	55	64	93	78	---	413	317	226	53	34	36	32
31	55	---	101	70	---	333	---	205	---	33	39	---
TOTAL	1469	1828	2178	2954	3541	9887	9085	11607	3013	1259	973	1244
MEAN	47.4	60.9	70.3	95.3	126	319	303	374	100	40.6	31.4	41.5
MAX	55	77	111	396	594	492	388	553	188	50	39	161
MIN	45	53	49	48	54	103	234	205	53	33	29	25
AC-FT	2910	3630	4320	5860	7020	19610	18020	23020	5980	2500	1930	2470

11401500 INDIAN CREEK NEAR CRESCENT MILLS, CA

LOCATION.--Lat 40°04'42", long 120°55'36", in SW¼SW¼ sec.25, T.26 N., R.9 E., Plumas County, Hydrologic Unit 18020122, on left bank 0.8 mi (1.3 km) upstream from Dixie Creek, and 1.5 mi (2.4 km) south of Crescent Mills.

DRAINAGE AREA.--739 mi² (1,914 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1906 to December 1909, September 1911 to March 1918, October 1930 to current year.

REVISED RECORDS.--WSP 1445: 1906-9. WSP 1931: 1956, 1958(M).

GAGE.--Water-stage recorder. Altitude of gage is 3,500 ft (1,070 m), from topographic map. Prior to March 1918, nonrecording gage at site 800 ft (240 m) upstream at different datum.

REMARKS.--Records good. Natural flow affected by storage in Round Valley Reservoir since 1865; capacity 5,000 acre-ft (6.2 hm³), Taylor Lake since 1929, capacity, 380 acre-ft (469,000 m³), and Antelope Lake (station 11401120) since November 1963. Diversions above station for irrigation of about 11,800 acres (47.8 km²) of which 9,700 acres (39.2 km²) are in Indian and Genesee Valleys. See schematic diagram of North Fork Feather River basin.

AVERAGE DISCHARGE.--58 years (water years 1907-9, 1912-17, 1931-79), 539 ft³/s (15.26 m³/s), 390,500 acre-ft/yr (481 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 25,000 ft³/s (708 m³/s) Mar. 19, 1907, gage height, 20.2 ft (6.16 m) site and datum then in use; minimum daily, 0.90 ft³/s (0.025 m³/s) July 28, 29, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) Feb. 14, gage height, 6.22 ft (1.896 m), no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 6.0 ft³/s (0.17 m³/s) Aug. 18.

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	50	77	109	83	94	434	503	534	181	27	15	19
2	55	78	110	81	99	321	470	498	167	31	13	19
3	53	80	96	85	87	294	450	505	152	24	11	15
4	51	79	91	88	100	280	440	534	132	24	10	14
5	53	78	98	88	97	294	470	630	126	28	8.8	12
6	58	74	85	88	97	407	560	762	118	28	11	14
7	60	74	75	88	96	670	660	838	95	28	7.2	13
8	60	74	75	98	97	825	580	850	81	26	9.3	14
9	60	74	86	119	98	850	530	814	84	24	7.1	16
10	59	73	92	152	101	800	530	732	84	18	9.1	15
11	53	74	94	476	106	740	470	695	87	24	12	17
12	53	72	98	775	113	760	440	674	80	21	8.1	20
13	36	80	94	312	440	760	481	671	75	17	11	18
14	32	79	86	248	1470	740	537	675	75	18	11	17
15	32	73	85	232	826	780	548	653	68	18	12	15
16	34	81	82	217	560	940	582	649	64	17	11	16
17	35	83	98	186	375	940	605	626	79	18	7.4	14
18	39	81	108	169	307	830	542	602	86	20	6.0	12
19	37	89	97	142	311	600	456	583	75	15	7.9	14
20	38	121	78	127	307	485	400	573	65	14	7.1	15
21	40	125	87	131	340	431	377	565	51	18	17	13
22	41	110	95	119	319	578	368	551	47	17	19	14
23	41	99	90	109	281	532	416	494	43	16	11	16
24	38	93	90	114	255	481	515	431	42	18	13	16
25	45	89	90	118	260	452	468	378	41	20	12	22
26	51	87	89	92	298	475	486	368	36	16	13	21
27	48	87	94	95	264	561	673	359	31	18	12	22
28	50	89	86	108	283	705	643	311	29	12	8.9	21
29	52	90	77	87	---	623	585	256	26	17	14	15
30	68	93	74	94	---	594	562	221	24	12	15	15
31	77	---	81	105	---	567	---	200	---	14	23	---
TOTAL	1499	2556	2790	5026	8081	18749	15347	17240	2344	618	352.9	484
MEAN	48.4	85.2	90.0	162	289	605	512	556	78.1	19.9	11.4	16.1
MAX	77	125	110	775	1470	940	673	858	181	31	23	22
MIN	32	72	74	81	87	280	368	200	24	12	6.0	12
AC-FT	2970	5070	5530	9970	16030	37190	30440	34200	4650	1230	700	960

CAL YR 1978 TOTAL 207034.0 MEAN 567 MAX 4530 MIN 21 AC-FT 410700
WTR YR 1979 TOTAL 75086.9 MEAN 206 MAX 1470 MIN 6.0 AC-FT 148900

SACRAMENTO RIVER BASIN

11401500 INDIAN CREEK NEAR CRESCENT MILLS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-79.

CHEMICAL ANALYSES: Water years 1951-66, 1972.

WATER TEMPERATURES: Water years 1963 to January 1979 (discontinued).

SEDIMENT RECORDS.--Water years 1957-66.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from October 1962 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C June 30, 1977, Aug. 6, 1978; minimum recorded, 0.0°C on many days during most years.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 19.0°C Oct. 1; minimum recorded, 1.5°C Jan. 29.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

11402000 SPANISH CREEK ABOVE BLACKHAWK CREEK, AT KEDDIE, CA

LOCATION.--Lat 40°00'11", long 120°57'12", in SE¼NE¼ sec.27, T.25 N., R.9 E., Plumas County, Hydrologic Unit 18020122, on right bank 200 ft (61 m) upstream from Blackhawk Creek, and 0.9 mi (1.4 km) southeast of Keddle.

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--October 1933 to current year. Prior to October 1953, published as "at Keddle." Records for October 1911 to September 1933 at site 1.2 mi (1.9 km) downstream not equivalent owing to inflow.

REVISED RECORDS.--WSP 1041: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 3,129.86 ft (953.981 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by five small reservoirs having a combined capacity of 800 acre-ft (986,000 m³). Approximately 4,600 acres (18.6 km²) irrigated above station (from information furnished by U.S. Forest Service). City of Quincy diverts about 450 acre-ft (555,000 m³) annually for municipal supply. See schematic diagram of North Fork Feather River basin.

AVERAGE DISCHARGE.--46 years, 265 ft³/s (7.505 m³/s), 192,000 acre-ft/yr (237 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,400 ft³/s (436 m³/s) Dec. 22, 1964, gage height, 13.53 ft (4.124 m), from rating curve extended above 5,200 ft³/s (147 m³/s) on basis of slope-area measurement at gage height 12.47 ft (3.801 m); minimum, 3.8 ft³/s (0.11 m³/s) Aug. 12, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,650 ft³/s (75.0 m³/s), Feb. 14 (0630 hrs), gage height, 6.14 ft (1.871 m), no other peak above base of 1,700 ft³/s (48.1 m³/s); minimum daily, 14 ft³/s (0.40 m³/s) Sept. 14.

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	37	39	55	43	50	371	392	495	196	50	25	26
2	38	40	57	47	51	271	355	460	179	48	24	25
3	37	40	51	48	53	245	327	496	171	49	27	25
4	37	40	49	47	62	249	328	532	160	44	26	25
5	36	40	50	48	62	286	390	663	150	45	24	25
6	35	39	45	48	62	377	543	718	144	46	26	24
7	35	39	41	49	61	497	466	843	137	46	25	26
8	36	40	43	63	61	569	439	751	128	47	24	22
9	36	40	44	94	63	583	444	636	122	42	20	22
10	35	42	46	82	68	543	396	550	118	45	19	26
11	34	40	47	445	73	552	354	525	108	43	19	23
12	34	40	49	383	80	591	346	527	99	43	19	15
13	34	43	47	194	849	563	402	541	93	40	20	19
14	33	43	46	169	1660	513	459	557	89	38	20	14
15	34	41	45	166	554	692	471	552	84	37	21	15
16	35	43	44	145	401	706	516	544	79	35	19	16
17	36	43	59	122	287	498	479	517	106	31	17	16
18	35	43	60	106	252	403	391	522	96	26	18	17
19	36	49	52	93	261	345	325	513	76	25	17	17
20	37	94	44	85	252	312	297	492	75	25	17	19
21	37	91	48	83	274	290	292	474	75	28	22	22
22	38	74	49	78	255	280	308	441	70	29	26	21
23	37	61	47	73	226	274	393	385	68	30	26	22
24	37	55	48	75	208	283	490	353	61	29	25	19
25	40	53	48	73	215	313	417	311	58	27	28	22
26	39	50	48	60	239	343	495	313	57	28	26	29
27	37	48	49	58	224	1030	753	298	56	28	24	29
28	37	48	48	55	252	985	626	282	54	25	22	27
29	37	48	42	51	---	651	548	250	52	27	24	26
30	37	50	41	50	---	512	525	224	52	27	28	25
31	38	---	46	49	---	440	---	206	---	27	33	---
TOTAL	1124	1456	1488	3182	7155	14567	12967	14991	3013	1110	711	659
MEAN	36.3	48.5	48.0	103	256	470	432	484	100	35.8	22.9	22.0
MAX	40	94	60	445	1660	1030	753	843	196	50	33	29
MIN	33	39	41	43	50	245	292	206	52	25	17	14
AC-FT	2230	2890	2950	6310	14190	28890	25720	29730	5980	2200	1410	1310

CAL YR 1978 TOTAL 122578 MEAN 336 MAX 4210 MIN 29 AC-FT 243100
WTR YR 1979 TOTAL 62423 MEAN 171 MAX 1660 MIN 14 AC-FT 123800

11403000 EAST BRANCH OF NORTH FORK FEATHER RIVER NEAR RICH BAR, CA

LOCATION.--Lat 40°00'38", long 121°13'03", in SW¼NE¼ sec.20, T.25 N., R.7 E., Plumas County, Hydrologic Unit 18020122, Plumas National Forest, on left bank 0.5 mi (0.8 km) upstream from mouth, and 1.3 mi (2.1 km) west of Rich Bar.

DRAINAGE AREA.--1,025 mi² (2,655 km²).

PERIOD OF RECORD.--October 1950 to September 1961, 1965-67 (annual maximum), December 1967 to current year.

REVISED RECORDS.--WSP 1245: 1951(M).

GAGE.--Water-stage recorder. Altitude of gage is 2,300 ft (701 m), from topographic map. Prior to Nov. 29, 1950, at site 30 ft (9 m) downstream at same datum.

REMARKS.--No storage or diversion between stations on Indian and Spanish Creeks and station near Rich Bar.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. and reviewed by Geological Survey.

AVERAGE DISCHARGE.--22 years (water years 1951-61, 1969-79), 1,019 ft³/s (28.86 m³/s), 738,300 acre-ft/yr (910 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,300 ft³/s (1,370 m³/s) Dec. 22, 1964, gage height, 16.56 ft (5.048 m), from rating curve extended above 15,000 ft³/s (425 m³/s) on basis of study of upstream and downstream peak discharges; minimum daily, 23 ft³/s (0.65 m³/s) Aug. 29-31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,590 ft³/s (130 m³/s) Feb. 14, gage height, 8.17 ft (2.490 m); minimum daily, 39 ft³/s (1.10 m³/s) Aug. 20.

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	108	129	185	147	172	991	1180	1290	522	127	68	88
2	102	131	195	175	148	867	1080	1220	493	128	68	76
3	100	135	164	164	133	714	994	1250	470	129	65	74
4	104	133	158	151	151	687	965	1310	436	122	65	71
5	102	131	161	154	175	738	1060	1420	412	117	62	69
6	100	127	145	158	182	938	1350	1780	389	121	57	67
7	102	127	149	162	180	1350	1400	1890	342	122	61	67
8	107	129	137	164	182	1660	1270	1930	307	121	56	66
9	107	127	137	425	194	1740	1250	1770	290	117	55	63
10	108	129	151	665	199	1640	1160	1590	282	111	49	67
11	103	127	156	1140	212	1600	1050	1490	274	105	46	71
12	103	127	164	1040	239	1660	1000	1470	258	109	49	69
13	92	139	156	527	1650	1660	1060	1480	242	103	47	65
14	86	135	147	545	3590	1550	1210	1510	228	95	48	64
15	84	123	145	481	1860	1700	1240	1470	221	93	49	58
16	86	139	149	422	1210	1970	1310	1470	214	91	50	57
17	88	141	198	366	936	1510	1320	1410	233	86	47	58
18	88	139	200	329	741	1230	1190	1390	248	82	42	57
19	90	166	161	283	720	1090	1000	1360	225	78	40	57
20	92	264	145	259	731	988	892	1330	208	71	39	58
21	93	260	119	262	795	912	853	1310	194	74	45	63
22	94	208	156	248	810	861	856	1270	184	83	63	63
23	94	180	156	231	688	822	960	1140	173	82	83	62
24	92	164	156	223	622	813	1220	1030	167	80	73	65
25	96	156	156	217	604	859	1130	975	158	79	71	65
26	104	151	143	137	681	923	1170	921	154	78	72	75
27	101	149	161	135	666	1670	1690	890	146	75	69	82
28	101	151	145	200	647	2280	1600	822	139	75	68	82
29	104	158	117	170	---	1750	1420	690	135	67	63	80
30	121	164	119	131	---	1490	1350	613	128	72	75	72
31	129	---	182	195	---	1310	---	561	---	68	82	---
TOTAL	3081	4539	4813	9906	19118	39973	35230	40052	7872	2961	1827	2031
MEAN	99.4	151	155	320	683	1289	1174	1292	262	95.5	58.9	67.7
MAX	129	264	200	1140	3590	2280	1690	1930	522	129	83	88
MIN	84	123	117	131	133	687	853	561	128	67	39	57
AC-FT	6110	9000	9550	19650	37920	79290	69880	79440	15610	5870	3620	4030
CAL YR 1978 TOTAL	387789			1062		9910		63		769200		
WTR YR 1979 TOTAL	171403			470		3590		39		340000		

11403500 BUCKS LAKE NEAR BUCKS LODGE, CA

LOCATION.--Lat 39°53'45", long 121°12'10", in NW¼ sec.33, T.24 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, in intake tower No. 2 upstream from dam on Bucks Creek, 2 mi (3 km) northwest of Bucks Lodge, and 15 mi (24 km) west of Quincy.

DRAINAGE AREA.--28.6 mi² (74.1 km²).

PERIOD OF RECORD.--1927-28 (year-end contents only, published in WSP 1315-A), October 1928 to current year. Prior to October 1954, published as Bucks Creek Reservoir near Bucks Ranch.

GAGE.--Water-stage recorder and nonrecording gage monitored once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Feather River Power Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam completed in 1927; storage began in May 1927. Capacity, 101,400 acre-ft (125 hm³) between elevations 5,064.75 ft (1,543.736 m), sill of outlet gate and 5,154.85 ft (1,571.198 m), spillway crest, NGVD. Released water flows down Bucks Creek to Lower Bucks Lake, where it enters tunnel that discharges into Grizzly Creek, then to Bucks Creek powerhouse. Figures given herein represent total contents, of which 274 acre-ft (338,000 m³) is not available for release. See schematic diagram of North Fork Feather 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, 105,800 acre-ft (130 hm³) June 23, 1938, elevation, 5,157.1 ft (1,571.88 m); minimum, 12,330 acre-ft (15.2 hm³) Feb. 27, 1929, elevation, 5,090.7 ft (1,551.65 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 78,700 acre-ft (97.0 hm³) July 11, elevation, 5,141.70 ft (1,567.190 m); minimum, 34,600 acre-ft (42.7 hm³) Mar. 6, elevation, 5,111.70 ft (1,558.046 m).

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

5,064.75	274	5,075	2,400	5,100	21,200	5,125	52,500
5,066	388	5,080	4,740	5,105	26,600	5,130	60,000
5,068	635	5,085	7,920	5,110	32,500	5,140	75,900
5,070	977	5,090	11,700	5,115	38,800	5,150	93,000
5,072	1,440	5,095	16,200	5,120	45,500	5,160	111,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71487	57726	49671	49105	44787	36490	40494	49105	70840	78547	70518	61070
2	71325	57274	49671	49105	44924	36111	39837	49388	71325	78214	70036	61070
3	71001	56824	49671	49105	44924	36734	40098	50100	71973	78214	69583	61070
4	70518	56377	49671	49147	44924	35358	40362	50671	72621	78214	69037	61070
5	70197	55930	49814	49247	44924	34981	40494	51678	73273	78214	68594	61070
6	69714	55483	49814	49247	41684	35107	40889	52545	73763	78361	68114	61070
7	69232	55040	49671	49247	41285	35609	41021	53276	74089	78361	67637	60917
8	68753	54597	49247	49530	40889	35860	41285	53568	74416	78547	67161	60917
9	68274	54155	48823	49671	40758	35985	41417	53714	74909	78547	66686	60610
10	67795	53714	48540	49814	40362	35985	41684	54302	75237	78547	66053	60610
11	67320	53276	48117	50243	39968	36236	41950	54745	75566	78714	65581	60610
12	66844	52837	48117	50386	39707	36363	42217	55188	75730	78547	65109	59997
13	66369	52401	48117	50100	39968	36617	42484	55781	75894	78214	64637	59541
14	65895	52256	48117	49957	40098	36744	42751	56377	76059	77715	64325	59238
15	65581	51967	48117	49814	39837	36999	43156	57274	76225	77383	63857	58782
16	65109	51678	48117	49388	39707	37253	43696	58027	76390	77052	63389	58782
17	64637	51534	48398	49105	39316	37507	44101	58782	76721	76390	63077	58630
18	64169	51245	48681	48823	39185	37636	44238	59845	77217	75894	62613	58478
19	63701	51245	48681	48540	38924	37764	44375	60610	77383	75401	62458	58478
20	63233	51245	48681	48117	38794	38022	44619	61685	77548	75237	62149	58478
21	62768	51245	48681	47838	38537	38151	44924	62613	77548	74580	62304	58478
22	62304	51100	48681	47418	38408	38279	45335	63545	77715	74745	62304	58478
23	61839	50957	48823	46859	38151	38408	45611	64481	77881	74580	61994	58478
24	61337	50814	48823	46443	37764	38537	45888	65424	78048	74252	61839	58328
25	60764	50671	48823	46166	37507	38665	46166	66210	78048	73763	61839	58782
26	60459	50528	48823	45749	37253	39185	46720	67003	78214	73273	61839	57425
27	59997	50243	48823	45472	36872	39576	47278	67795	78214	72784	61685	56973
28	59541	50100	48964	45061	36617	39837	47698	68755	78214	72297	61685	56256
29	59086	49957	48964	44924	---	40098	48257	69392	78214	71811	61223	56228
30	58630	49814	49105	44787	---	40230	48540	69875	78547	71325	61223	56228
31	58177	---	49105	44787	---	40494	---	70357	---	70840	61070	---
MAX	71487	57726	49814	50386	44924	40494	48540	70357	78547	78714	70518	61070
MIN	58177	49814	48117	44787	36617	34981	39837	49105	70840	70840	61070	56228
(†)	5128.8	5123.1	5122.6	5119.5	5113.3	5116.3	5122.2	5136.6	5141.6	5136.9	5130.7	5127.5
(‡)	-13500	-8360	-709	-4320	-8170	+3880	+8050	+21800	+8190	-7710	-9770	-4840

CAL YR 1978 † +4870

WTR YR 1979 † -15400

† Elevations, in feet, at end of month.

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

SACRAMENTO RIVER BASIN

11404500 NORTH FORK FEATHER RIVER AT PULGA, CA

LOCATION.--Lat 39°47'39", long 121°27'03", in SW¼NE¼ sec.6, T.22 N., R.5 E., Butte County, Hydrologic Unit 18020121, Plumas National Forest, on left bank between railroad and highway bridges, 0.5 mi (0.8 km) downstream from Flea Valley Creek and Pulga, and 1.5 mi (2.4 km) downstream from Poe Dam.

DRAINAGE AREA.--1,953 mi² (5,058 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods and yearly estimates for water years 1911 and 1938, published in WSP 1315A. Prior to October 1960, published as "at Big Bar."

REVISED RECORDS.--WSP 931: 1938(M), 1940. WSP 1515: 1935. WDR CA-77-4: 1976 (yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 1,305.62 ft (397.953 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1937, at site 1.1 mi (1.8 km) upstream at different datum. Oct. 1, 1937, to Sept. 30, 1958, at present site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair to good. Flow regulated by Lake Almanor (station 11399000), Bucks Lake (station 11403500), Mountain Meadows Reservoir, Butt Valley Reservoir, and five forebays, combined capacity, 1,386,000 acre-ft (1.71 km³). Diversion through Poe powerhouse began on May 29, 1958. See schematic diagram of North Fork Feather River basin.

COOPERATION.--Gage-height record and eight discharge measurements furnished by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (including diversion through Poe powerhouse).--69 years, 2,953 ft³/s (83.63 m³/s), 2,139,000 acre-ft/yr (2.64 km³/yr).

EXTREMES FOR PERIOD OF RECORD (prior to diversion to Poe powerhouse).--Maximum discharge, 72,400 ft³/s (2,050 m³/s) Dec. 23, 1955, gage height, 35.60 ft (10.851 m) present datum, from rating curve extended above 34,000 ft³/s (963 m³/s); minimum daily, 235 ft³/s (6.66 m³/s) Oct. 31, 1932. 1958 to current year: Maximum discharge, 73,000 ft³/s (2,070 m³/s) Dec. 22, 1964, gage height, 35.80 ft (10.912 m), from rating curve extended above 34,000 ft³/s (963 m³/s); minimum daily, 5.4 ft³/s (0.15 m³/s) Sept. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,540 ft³/s (157 m³/s) Feb. 14, gage height, 12.18 ft (3.712 m); minimum daily, 48 ft³/s (1.36 m³/s) Oct. 24.

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	54	52	54	54	60	166	104	100	73	61	55	54
2	54	50	52	53	97	132	102	97	71	61	52	54
3	52	49	53	52	60	119	99	99	70	60	53	54
4	52	50	54	56	59	110	98	94	70	60	54	55
5	52	50	51	57	61	107	98	241	70	60	54	54
6	52	49	52	57	60	113	103	770	68	59	56	54
7	54	51	49	57	59	112	99	454	68	59	54	54
8	54	50	53	84	60	110	95	329	68	59	55	52
9	54	50	54	77	60	108	95	152	68	60	55	53
10	54	50	54	73	61	106	94	109	67	58	55	52
11	53	50	54	418	62	106	94	107	65	58	52	53
12	54	51	53	146	63	103	92	105	65	56	55	53
13	54	50	55	70	439	102	91	104	65	56	53	51
14	54	50	54	84	2740	102	90	97	64	57	56	53
15	53	49	55	119	376	118	90	100	65	57	55	52
16	52	51	54	91	122	127	95	93	64	57	55	52
17	53	50	69	79	104	112	101	92	63	57	58	52
18	53	54	62	73	111	108	92	89	65	56	56	53
19	53	59	57	69	130	105	90	112	62	55	59	53
20	51	73	56	67	132	103	88	88	64	56	61	51
21	50	61	54	65	166	97	87	86	63	57	59	52
22	50	61	54	65	155	96	86	84	62	56	56	53
23	49	56	53	65	140	94	97	83	60	55	55	53
24	48	56	55	64	120	92	115	80	59	55	54	53
25	52	55	55	63	107	91	102	79	61	55	54	53
26	51	55	54	62	104	92	115	78	62	56	54	54
27	50	52	53	61	100	151	117	77	57	56	54	54
28	49	51	54	62	139	203	109	76	60	56	54	53
29	50	51	53	60	---	130	104	74	61	54	55	53
30	50	55	54	61	---	115	102	72	61	56	56	54
31	54	---	53	59	---	108	---	73	---	54	54	---
TOTAL	1615	1591	1687	2523	5947	3538	2944	4294	1941	1772	1708	1591
MEAN	52.1	53.0	54.4	81.4	212	114	98.1	139	64.7	57.2	55.1	53.0
MAX	54	73	69	418	2740	203	117	770	73	61	61	55
MIN	48	49	49	52	59	91	86	72	57	54	52	51
AC-FT	3200	3160	3350	5000	11800	7020	5840	8520	3850	3510	3390	3160
MEAN ‡	2007	1636	1665	2649	3430	2968	2617	3264	1527	1826	1626	1152
AC-FT ‡	123400	97360	102400	162900	190500	182500	155700	200700	90840	112300	100000	68530

CAL YR 1978	TOTAL	212059	MEAN	58.1	MAX	15100	MIN	42	AC-FT	420600	MEAN ‡	3145	AC-FT ‡	2277000
WTR YR 1979	TOTAL	31151	MEAN	85.3	MAX	2740	MIN	48	AC-FT	61790	MEAN ‡	2192	AC-FT ‡	1587000

‡ Adjusted for diversion through Poe powerhouse.

11404500 NORTH FORK FEATHER RIVER AT PULGA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

CHEMICAL ANALYSES: Water years 1963-66, 1972, 1977.

WATER TEMPERATURES: Water years 1963 to current year.

PERIOD OF DAILY RECORD:

WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Temperature recorder since October 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C Aug. 4-9, 1978; minimum recorded, 0.5°C Jan. 4, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug. 1; minimum recorded, 1.5°C Jan. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SACRAMENTO RIVER BASIN

11404500 NORTH FORK FEATHER RIVER AT PULGA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

LOCATION.--Lat 39°47'12", long 121°33'42", in SE₄SE₄ sec.6, T.22 N., R.4 E., Butte County, Hydrologic Unit 18020121, on right bank 0.6 mi (1.0 km) upstream from Griffin Gulch, and 4.0 mi (6.4 km) northeast of Paradise.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Altitude of gage is 1,370 ft (418 m), from topographic map. Prior to June 1, 1970, on left bank at same datum.

REMARKS.--Records good. Dewey, Miners, and Hendricks Canals divert from headwaters of West Branch Feather River into Butte Creek basin for power development at DeSaba and Centerville plants of Pacific Gas and Electric Co. Upper Miocene Canal diverts about 50 ft³/s (1.42 m³/s) to Lime Saddle powerplant. Flow regulated by Round Valley Reservoir, usable capacity, 5,000 acre-ft (6.16 hm³) and Philbrook Reservoir, capacity, 5,010 acre-ft (6.18 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,300 ft³/s (745 m³/s) Dec. 22, 1964, gage height, 26.2 ft (7.99 m) from floodmarks, from rating curve extended above 14,000 ft³/s (396 m³/s); minimum daily, 0.29 ft³/s (0.008 m³/s) Aug. 24, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,010 ft³/s (114 m³/s) Feb. 14 (0330 hrs), gage height, 10.74 ft (3.274 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily, 0.66 ft³/s (0.019 m³/s) Oct. 4-8.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.85	9.4	1.2	10	555	333	576	303	10	1.4	1.5
2	.73	.89	8.0	1.2	13	347	325	578	293	9.0	1.2	1.3
3	.68	.94	1.8	1.2	9.4	289	287	669	287	8.0	1.6	1.4
4	.66	.97	1.3	1.2	9.4	252	293	701	275	7.0	1.7	1.3
5	.66	.97	1.2	1.2	9.8	244	339	1090	282	6.0	1.7	1.2
6	.66	1.0	1.1	1.2	9.9	270	426	1060	268	5.5	1.7	1.1
7	.66	1.1	1.1	3.0	10	343	354	916	238	5.0	1.6	1.1
8	.66	1.1	.99	57	11	373	355	714	189	4.5	1.5	1.2
9	1.1	1.1	.97	115	11	366	367	622	154	3.5	1.4	1.0
10	1.1	1.0	.97	64	13	346	331	559	130	3.0	1.5	1.1
11	1.1	1.0	.97	1110	18	365	310	564	105	2.6	1.4	1.1
12	1.0	1.2	.97	595	22	370	305	631	74	2.1	1.3	1.1
13	.91	1.6	.97	238	903	380	348	701	84	1.8	1.4	1.0
14	.85	1.3	4.4	246	2070	406	402	730	73	1.6	1.6	1.0
15	.82	.90	3.1	450	542	630	422	712	60	1.4	1.6	1.0
16	.80	.73	1.0	207	463	650	506	714	50	1.5	1.5	1.1
17	.80	.70	55	125	275	450	514	691	43	1.7	1.4	1.2
18	.80	.70	67	80	298	370	394	803	42	1.7	1.3	1.2
19	.80	1.7	48	79	331	309	322	880	37	1.6	1.3	1.2
20	.79	56	39	50	365	273	295	863	34	1.6	1.4	1.2
21	.80	21	37	43	563	242	295	835	31	1.7	1.9	1.2
22	.85	18	36	36	461	227	298	788	28	2.0	1.8	1.1
23	.85	4.9	36	29	370	214	381	702	24	1.8	1.6	.97
24	.85	1.7	35	28	262	218	541	639	22	1.7	1.4	.97
25	.85	1.3	36	24	210	241	431	622	21	1.8	1.3	4.9
26	.85	1.2	36	18	228	258	552	546	18	1.7	1.2	7.3
27	.85	1.2	35	18	231	956	911	569	16	1.7	1.2	6.3
28	.88	1.1	35	17	389	770	701	461	14	1.7	1.2	5.0
29	.91	1.1	21	10	---	531	619	405	13	1.7	3.9	4.3
30	.91	1.1	2.3	14	---	429	626	372	11	1.6	9.2	4.1
31	.90	---	2.0	15	---	372	---	347	---	1.5	4.5	---
TOTAL	25.82	128.35	558.54	3678.2	8107.5	12046	12583	21060	3219	97.8	58.7	59.44
MEAN	.83	4.28	18.0	119	290	389	419	679	107	3.15	1.89	1.98
MAX	1.1	56	67	1110	2070	956	911	1090	303	10	9.2	7.3
MIN	.66	.70	.97	1.2	9.4	214	287	347	11	1.4	1.2	.97
AC-FT	51	255	1110	7300	16080	23890	24960	41770	6380	194	116	118
CAL YR 1978	TOTAL	153381.15	MEAN	420	MAX	5070	MIN	.66	AC-FT	304200		
WTR YR 1979	TOTAL	61622.35	MEAN	169	MAX	2070	MIN	.66	AC-FT	122200		

11405300 WEST BRANCH FEATHER RIVER NEAR PARADISE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Temperature recorder since October 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 36.0°C June 21, 1977; minimum recorded, 0.0°C Dec. 24, 26-29, 1976, Dec. 30, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 29.5°C July 31, Aug. 1, 2; minimum recorded, 0.0°C Dec. 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.5	17.0	10.5	8.5	9.0	7.5	2.5	0.5	2.5	2.0	6.0	4.5
2	24.5	16.5	12.0	9.5	7.5	6.0	2.5	1.0	2.5	1.5	6.0	4.5
3	23.0	16.0	12.0	9.5	6.5	5.0	3.5	1.0	3.0	1.5	6.0	5.5
4	23.5	15.5	12.0	9.5	7.0	5.0	4.0	2.0	3.5	2.0	7.5	5.5
5	22.5	15.5	12.0	9.0	6.5	4.0	4.5	3.0	4.0	2.5	8.0	6.5
6	22.0	16.0	12.0	9.5	4.0	3.0	5.0	3.5	5.0	3.0	8.5	6.5
7	22.0	15.0	11.5	9.5	3.5	2.0	4.5	4.0	5.5	4.0	8.0	6.5
8	20.5	14.0	11.5	9.0	3.5	1.5	6.0	4.5	6.0	4.0	7.5	6.0
9	20.0	15.0	11.5	9.0	4.0	2.0	6.0	5.0	6.5	4.5	7.5	6.0
10	21.0	15.0	8.5	7.0	4.5	3.0	6.0	5.5	6.5	5.5	7.5	6.0
11	20.5	14.5	8.5	6.5	5.5	3.5	6.0	5.5	7.0	6.0	7.5	6.5
12	22.0	15.5	6.5	5.5	6.0	4.5	5.5	4.5	6.5	6.0	7.5	6.0
13	21.5	15.0	7.5	6.0	5.5	4.5	4.5	3.5	6.5	5.5	8.0	6.0
14	20.5	14.5	7.0	4.5	5.5	3.5	4.0	3.5	6.0	4.5	7.5	7.0
15	20.0	15.0	6.5	4.5	5.0	3.5	5.0	4.0	5.0	4.0	7.5	6.0
16	19.5	15.0	7.5	6.0	4.5	3.0	5.0	4.0	5.0	4.5	6.0	4.5
17	19.0	14.0	7.5	5.0	5.0	3.5	4.5	3.5	5.5	4.0	6.5	4.5
18	20.0	14.0	7.5	5.0	3.5	2.5	4.5	3.5	5.0	4.5	6.5	6.0
19	17.5	14.0	7.0	6.0	2.5	1.5	4.0	3.0	6.0	4.5	7.0	5.0
20	16.0	13.0	7.5	6.5	1.5	1.0	4.0	3.0	5.5	5.0	8.0	5.5
21	16.5	13.5	7.0	6.5	2.0	1.0	4.5	3.5	5.5	4.5	7.0	6.0
22	16.0	13.0	7.5	6.5	2.0	1.0	4.0	3.0	5.0	4.5	8.0	7.0
23	15.5	12.5	7.5	6.0	2.0	1.0	4.0	3.0	6.0	5.0	8.5	6.5
24	15.0	12.5	7.5	6.0	2.5	1.5	3.5	3.0	6.5	5.0	8.5	6.5
25	15.0	12.0	7.0	5.5	2.0	1.5	3.5	2.5	6.5	5.5	8.0	6.5
26	15.5	12.0	6.5	5.0	2.5	1.0	2.5	1.5	7.0	6.0	8.0	7.5
27	15.0	11.5	6.5	5.0	3.0	2.0	2.5	1.5	6.5	4.5	7.5	5.5
28	14.0	11.5	7.0	5.5	2.5	1.5	2.5	1.5	6.0	5.5	6.5	5.5
29	14.0	11.0	8.0	7.0	2.0	0.5	2.0	1.0	---	---	7.0	5.5
30	11.5	9.5	8.0	7.0	2.0	0.0	2.5	1.0	---	---	8.0	6.5
31	11.0	10.0	---	---	2.5	0.5	2.5	2.0	---	---	7.5	5.5
MONTH	24.5	9.5	12.0	4.5	9.0	0.0	6.0	0.5	7.0	1.5	8.5	4.5
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	6.0	9.5	7.5	14.0	11.5	---	---	29.5	23.0	21.5	18.0
2	7.5	6.0	10.0	7.0	14.5	12.0	---	---	29.5	23.0	23.0	18.5
3	8.5	6.0	10.5	8.0	15.5	12.5	22.5	18.5	29.0	23.0	23.5	18.5
4	9.0	7.0	10.5	8.0	16.0	13.5	22.5	18.0	27.5	23.0	23.5	18.5
5	9.5	7.5	9.0	6.0	16.5	14.0	22.5	18.0	27.0	22.0	24.0	19.0
6	9.5	6.5	6.5	5.5	16.5	14.0	23.0	18.5	27.0	21.0	24.5	19.5
7	8.5	5.5	6.5	6.0	15.5	13.0	23.5	18.5	27.0	21.5	24.0	19.5
8	9.0	7.5	7.0	5.0	15.0	11.5	24.0	18.5	27.5	22.0	23.5	19.0
9	9.5	7.5	8.5	5.5	15.5	12.5	22.0	19.5	27.5	22.0	23.5	18.5
10	7.5	5.5	9.5	7.0	---	---	25.0	19.0	28.5	23.0	23.0	18.0
11	8.5	6.5	10.5	8.0	---	---	25.5	20.0	28.0	23.0	23.0	18.5
12	9.5	7.5	11.0	9.0	---	---	26.5	20.5	27.0	22.5	23.0	18.5
13	10.0	8.0	11.0	8.5	---	---	27.5	21.0	25.0	22.0	23.5	19.0
14	9.5	7.0	11.0	8.0	---	---	27.5	21.0	26.0	21.5	24.0	19.0
15	10.0	8.0	11.5	8.5	---	---	27.5	21.5	26.0	21.0	23.5	19.0
16	9.5	7.5	11.5	8.0	---	---	28.5	22.0	25.5	20.5	23.5	19.5
17	7.0	5.5	12.0	9.0	---	---	29.0	22.5	26.0	20.5	23.5	19.0
18	7.0	4.5	12.0	9.0	---	---	29.0	22.0	25.5	20.5	22.0	18.5
19	7.5	5.0	12.0	9.0	---	---	29.0	22.5	24.5	20.5	22.0	18.0
20	8.5	6.5	12.5	8.5	---	---	28.5	23.5	21.5	20.5	22.0	18.0
21	8.5	7.5	12.5	9.0	---	---	26.0	24.0	23.5	19.5	22.0	18.0
22	9.0	8.0	12.5	9.5	---	---	28.0	22.5	24.0	19.0	21.5	17.5
23	8.0	6.5	12.0	9.5	---	---	29.0	23.0	24.0	19.5	21.0	17.0
24	7.5	6.0	12.5	9.5	---	---	29.0	23.5	24.5	19.0	21.5	17.5
25	8.5	6.5	13.0	10.5	---	---	29.0	23.5	24.5	19.0	20.0	18.5
26	9.0	8.0	13.0	11.0	---	---	28.0	23.0	24.5	19.5	19.0	16.5
27	8.5	6.5	13.0	11.5	---	---	28.0	23.0	25.0	20.0	19.0	15.5
28	9.0	6.5	13.0	11.0	---	---	29.0	22.5	22.0	20.5	19.0	15.5
29	9.5	7.0	11.5	9.5	---	---	29.0	22.5	23.0	19.5	19.0	15.5
30	9.5	7.5	12.5	10.0	---	---	29.0	23.0	20.5	19.0	19.0	16.0
31	---	---	13.0	10.5	---	---	29.5	23.5	22.0	17.5	---	---
MONTH	10.0	4.5	13.0	5.0	---	---	29.5	18.0	29.5	17.5	24.5	15.5

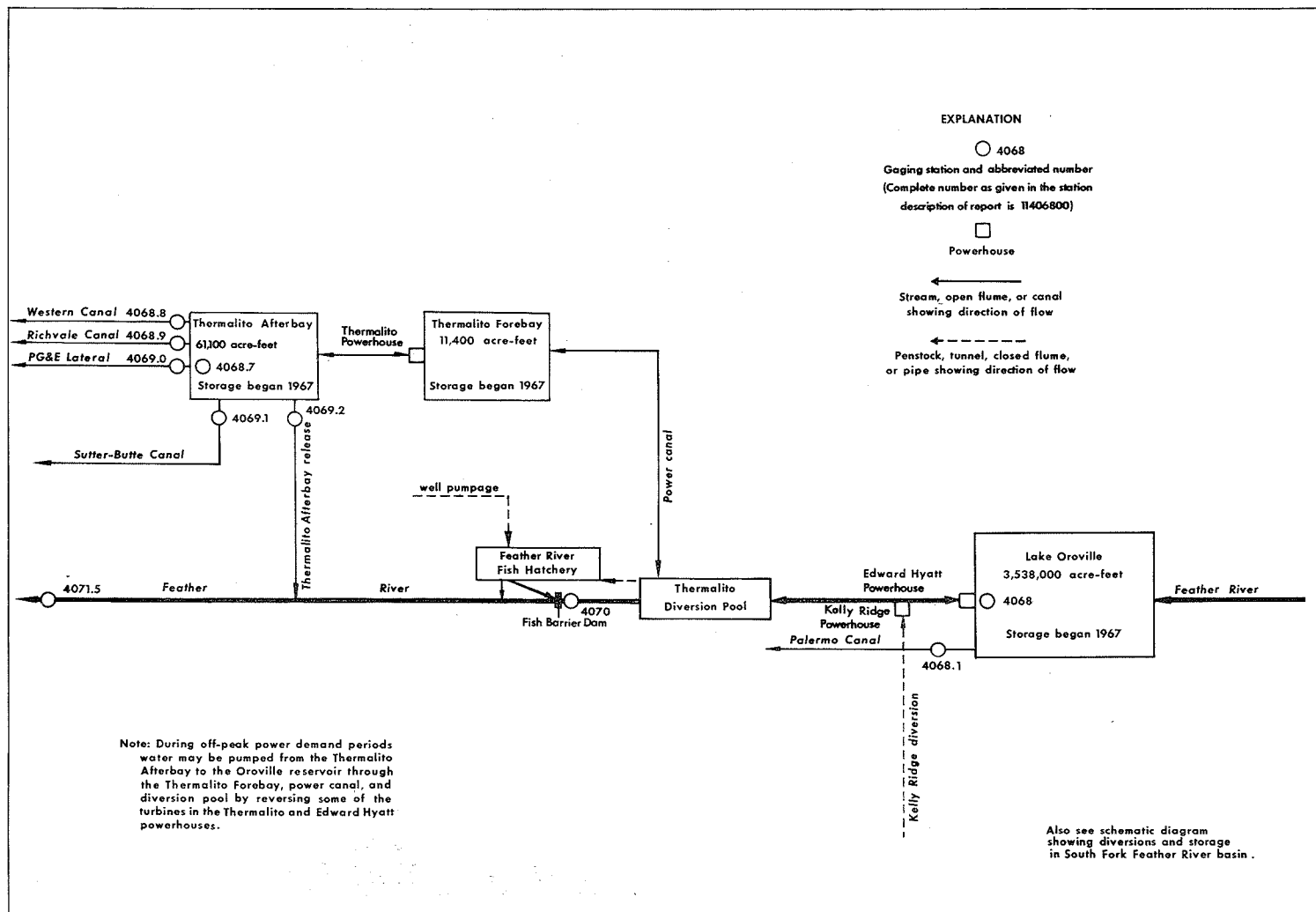


FIGURE 7.--Schematic diagram showing diversions and storage from Feather River at Lake Oroville.

SACRAMENTO RIVER BASIN

11406800 LAKE OROVILLE NEAR OROVILLE, CA

LOCATION.--Lat 39°32'06", long 121°28'25", in NE&SW¼ sec.1, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020123, near intake structure at left end of Oroville Dam on Feather River, 1.0 mi (1.6 km) downstream from North Fork Feather River, and 4.2 mi (6.8 km) east of Oroville.

DRAINAGE AREA.--3,607 mi² (9,342 km²).

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.47 ft (0.143 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources).

REMARKS.--Reservoir is formed by an earthfill dam with concrete chute-type sidehill spillway completed May 13, 1968; storage began Nov. 14, 1967. Usable capacity, 2,685,385 acre-ft (3.31 km³) between elevations 640.0 ft (195.07 m) minimum power pool, and 900.0 ft (274.32 m) normal maximum pool. Dead storage, 852,192 acre-ft (1.05 km³). Total capacity at normal maximum pool, 3,537,577 acre-ft (4.36 km³); temporary detention storage occurred at times during construction; maximum was 155,200 acre-ft (191 hm³) Dec. 23, 1964. Water is released to Edward Hyatt powerhouse through penstock in left abutment of dam and to Palermo Canal (station 11406810) through concrete tunnel also in left abutment of dam. Three of the total of six turbines in the Edward Hyatt powerplant are reversible and during periods of low power demand water is pumped at times from the river back into Lake Oroville. Records, including extremes, represent total contents at 2400 hours. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project. Contents not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,536,000 acre-ft (4.36 km³) June 4, 1973, gage height, 899.88 ft (274.283 m); minimum since initial storage began, 882,395 acre-ft (1.09 km³) Sept. 7, 1977, gage height, 645.11 ft (196.630 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,519,435 acre-ft (4.34 km³) June 3, gage height, 898.85 ft (273.970 m); minimum, 2,640,537 acre-ft (3.26 km³) Jan. 5, gage height, 837.22 ft (255.185 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

640	852,192	730	1,498,175	820	2,425,571
650	911,975	740	1,586,086	830	2,548,850
660	974,560	750	1,677,554	840	2,676,446
670	1,040,003	760	1,772,690	850	2,808,349
680	1,108,406	770	1,871,511	860	2,944,741
690	1,179,915	780	1,974,240	870	3,085,747
700	1,254,634	790	2,080,969	880	3,231,454
710	1,332,547	800	2,191,742	890	3,382,038
720	1,413,685	810	2,306,597	900	3,537,577

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2749235	2723419	2700644	2657029	2771365	2921373	3070150	3305379	3505440	3315477	3027796	2765523
2	2743425	2723026	2702472	2652383	2774689	2931176	3080016	3311857	3513769	3298007	3019460	2759953
3	2746593	2723157	2704170	2649160	2782944	2932697	3084742	3314873	3519435	3292251	3008464	2755186
4	2749500	2727885	2696992	2648903	2794556	2931591	3090335	3325446	3518647	3372375	3004945	2746989
5	2748310	2732751	2691910	2640537	2798969	2927169	3100391	3340895	3514398	3264311	2994267	2736438
6	2747518	2725258	2683196	2644653	2803522	2921235	3110470	3355787	3514398	3249116	2984596	2728937
7	2750160	2721713	2677873	2647743	2807543	2919030	3120861	3366147	3514398	3239015	2975925	2731962
8	2750293	2719221	2669963	2650320	2811165	2921511	3129249	3374850	3511411	3228200	2967132	2736306
9	2748046	2717779	2680599	2654060	2817748	2925098	3137508	3384334	3503556	3217557	2954603	2733146
10	2741710	2716468	2689047	2651609	2820841	2927722	3143604	3388317	3499948	3207380	2945993	2728280
11	2737492	2712931	2690088	2674370	2826631	2932973	3153637	3393070	3494618	3201344	2937540	2721583
12	2733541	2713717	2686835	2691130	2830406	2942665	3161504	3396906	3489607	3192085	2925236	2720271
13	2726440	2705868	2682417	2694907	2841345	2950296	3169532	3406435	3492112	3184017	2913245	2722107
14	2730515	2704300	2676446	2709137	2876114	2958914	3178305	3411668	3488355	3179476	2897996	2719615
15	2734199	2705345	2670092	2721320	2890050	2967272	3186363	3417524	3480694	3176403	2890598	2716338
16	2738150	2702864	2676057	2730121	2907331	2983756	3193260	3424622	3472109	3169239	2883486	2713849
17	2736569	2700514	2685535	2731436	2920546	2986977	3198403	3433742	3462917	3160921	2871615	2712932
18	2734462	2702864	2685925	2735384	2937263	2975737	3210180	3439315	3455762	3148254	2867530	2706784
19	2733673	2706652	2686185	2738282	2953908	2989079	3216081	3451257	3449704	3140265	2860730	2701950
20	2733804	2706783	2680599	2746593	2965459	2987257	3220954	3457938	3439780	3130842	2848654	2695819
21	2735648	2705607	2679430	2752011	2970340	2988798	3228200	3464318	3430185	3126355	2839452	2691260
22	2737228	2705999	2675408	2753731	2963230	2989639	3231161	3473201	3420300	3114075	2826092	2688267
23	2732093	2709137	2676187	2753069	2949185	2995109	3234121	3480069	3408127	3105427	2822456	2683976
24	2727228	2716206	2676446	2752011	2932282	3002555	3241687	3482257	3398289	3096509	2818420	2680340
25	2723157	2717516	2674889	2754657	2915310	3008605	3246440	3481163	3387550	3088900	2812911	2677355
26	2719221	2720795	2670222	2757172	2897584	3010435	3251794	3489920	3378366	3078155	2804192	2677485
27	2721451	2717385	2664396	2763002	2885126	3025675	3265654	3497125	3366758	3069007	2794690	2680340
28	2726309	2714503	2656900	2769632	2901014	3035865	3275515	3502301	3353961	3060021	2791616	2677744
29	2730910	2713324	2646455	2770037	---	3047358	3286148	3503243	3341199	3055179	2784943	2675667
30	2732620	2707306	2649805	2770568	---	3053329	3294401	3504498	3328471	3046931	2776285	2672165
31	2727885	---	2653028	2771631	---	3059593	---	3502144	---	3037849	2769240	---
MAX	2750293	2732751	2704170	2771631	2970340	3059593	3294401	3504498	3519435	3372375	3027796	2765523
MIN	2719221	2700514	2646455	2640537	2771365	2919030	3070150	3305379	3328471	3037849	2769240	2672165
†	843.94	842.37	838.19	847.25	856.83	868.17	884.22	897.75	886.48	866.64	847.07	839.67
‡	-16332	-20579	-54278	+118603	+129383	+158579	+234808	+207743	-173673	-290622	-268609	-97075
††	6123	2350	1106	1026	1243	2415	3912	7432	10700	10873	9241	8364

CAL YR 1978 † +1533111

WTR YR 1979 † -72052

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet

†† Evaporation, in acre-feet.

11406810 PALERMO CANAL NEAR OROVILLE, CA

LOCATION.--Lat 39°31'59", long 121°28'54", in SW¼SW¼ sec.1, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020106, on right bank 50 ft (15 m) downstream from Oroville Dam, and 4.4 mi (7.1 km) east of Oroville.

PERIOD OF RECORD.--April 1965 to current year. Daily discharge of diversion from Kelly Ridge penstock for period April 1965 to October 1968 when Kelly Ridge penstock supplied the entire flow of Palermo Canal are in files of California district office of Geological Survey.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 547.67 ft (166.930 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). April 1965 to October 1968, water-stage recorder and Parshall flume at site of diversion from Kelly Ridge penstock, 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Canal diverts from left end of Oroville Dam. Water is used for irrigation near Oroville. During period of construction of Oroville Dam, water was released from Kelly Ridge penstock to meet irrigation requirements.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--14 years, 11.9 ft³/s (0.337 m³/s) 8,620 acre-ft/yr (10.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 28 ft³/s (0.79 m³/s) several days in July to September 1967; no flow at times in 1967, 1970, 1974-75.

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	19	16	1.8	1.5	1.8		0	.39	20	20	20	18
2	19	16	1.6	1.6	1.8		0	.35	20	20	20	18
3	19	15	1.6	1.6	1.8		0	.35	20	20	22	18
4	19	14	1.6	1.6	1.8		0	.35	20	20	22	18
5	19	14	1.6	1.6	.40		0	.36	20	20	22	18
6	19	13	1.6	1.6	0		0	.36	20	20	22	18
7	19	13	1.6	1.6	0		0	.37	20	20	22	18
8	19	10	1.6	1.6	0		0	.37	20	20	22	18
9	19	9.4	1.6	1.6	0		0	.36	20	20	22	18
10	19	9.4	1.6	1.6	0		0	.36	20	20	22	18
11	19	9.4	1.6	1.6	0		0	.36	20	20	22	18
12	19	9.4	1.6	1.6	0		0	.36	20	20	22	18
13	19	8.4	1.6	1.6	0		0	.36	20	20	22	19
14	19	6.7	1.6	1.6	0		0	.36	20	20	22	20
15	19	6.7	1.5	1.8	0		.26	.35	20	20	22	20
16	19	6.7	1.5	1.8	0		.41	.35	20	20	22	20
17	19	6.7	1.5	1.8	0		.41	5.5	20	20	22	20
18	19	6.7	1.5	1.8	0		.41	9.8	20	20	21	20
19	19	5.9	1.5	1.8	0		.41	12	20	19	20	20
20	18	4.5	1.5	1.8	0		.42	13	20	20	20	20
21	17	3.7	1.5	1.8	0		.41	15	20	20	20	20
22	17	2.7	1.5	1.8	0		.42	17	20	20	20	20
23	17	2.7	1.5	1.8	0		.41	17	20	20	20	20
24	17	2.7	1.5	1.8	0		.42	17	20	20	20	20
25	16	2.7	1.5	1.8	0		.43	17	20	20	20	20
26	16	2.7	1.5	1.8	0		.43	17	20	20	20	20
27	16	2.7	1.5	1.8	0		.45	17	20	20	20	20
28	16	2.7	1.5	1.8	0		.45	17	20	20	20	20
29	16	2.7	1.5	1.8	---		.45	17	20	20	19	20
30	16	2.7	1.5	1.8	---		.46	17	20	20	18	20
31	16	---	1.5	1.8	---		---	18	---	20	18	---
TOTAL	559	228.9	48.1	52.9	7.60	0	6.65	232.06	600	619	646	575
MEAN	18.0	7.63	1.55	1.71	.27	0	.22	7.49	20.0	20.0	20.8	19.2
MAX	19	16	1.8	1.8	1.8	0	.46	18	20	20	22	20
MIN	16	2.7	1.5	1.5	0	0	0	.35	20	19	18	18
AC-FT	1110	454	95	105	15	0	13	460	1190	1230	1280	1140
CAL YR 1978 TOTAL	3976.40			MEAN 10.9	MAX 25	MIN .85	AC-FT 7890					
WTR YR 1979 TOTAL	3575.21			MEAN 9.80	MAX 22	MIN 0	AC-FT 7090					

SACRAMENTO RIVER BASIN

11406870 THERMALITO AFTERBAY NEAR OROVILLE, CA

LOCATION.--Lat 39°27'30", long 121°38'17", in NE4SE4 sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, at dam 195 ft (59 m) northeast of centerline of outlet structure, and 5.7 mi (9.2 km) southwest of Oroville.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft (30.623 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). Auxiliary water-stage recorder 90 ft (27 m) southwest of centerline of Western Canal outlet, and 7.2 mi (11.6 km) west of Oroville.

REMARKS.--Reservoir is formed by an earthfill dam completed in 1967; diversion from the reservoir began Oct. 12, 1967. Usable capacity, 61,144 acre-ft (75.4 hm³) between gage heights 120.0 ft (36.58 m) and 139.0 ft (42.37 m) extreme operating levels. Normal operating range is 123 ft (37.5 m) to 136.5 ft (41.61 m). Water is released to four canals (stations 11406880, 11406890, 11406900, and 11406910), and to the Feather River (station 11406920) from the reservoir. Total maximum release to the four canals is approximately 4,000 ft³/s (113 m³/s). Water is pumped, at times, from Thermalito Afterbay back into Thermalito Forebay during off-peak periods to be re-released through Thermalito powerplant for power generation during peak demand periods. Records, including extremes, represent total contents at 2400 hours. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 57,300 acre-ft (70.7 hm³) May 24, 1969, gage height, 136.56 ft (41.623 m); minimum since initial operation began, 5,590 acre-ft (6.89 hm³) Mar. 1, 1968, gage height, 119.09 ft (36.299 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,824 acre-ft (51.6 hm³) Dec. 8, gage height, 132.73 ft (40.456 m); minimum, 14,163 acre-ft (17.5 hm³) May 1, gage height, 123.57 ft (37.664 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

120	7,054	128	25,832
122	10,792	130	32,150
124	15,157	134	46,719
126	20,171	139	68,198

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24941	22610	24941	20951	29513	26737	20066	14163	25921	17732	20816	22077
2	30153	23518	21060	23116	29353	23602	16591	16348	20762	21497	22077	20681
3	26042	23921	16643	24939	24939	21579	17257	21497	16518	24005	24529	18495
4	22023	20064	20385	22411	17431	20439	18727	20627	18010	22355	19773	21005
5	21829	16060	24414	28093	16738	20439	16812	17257	22861	18546	20627	24616
6	21580	21884	32684	23116	16469	19456	16227	16689	21442	22861	20816	29929
7	18780	23461	36502	18315	16836	20386	14231	20306	19641	20951	20439	24208
8	17734	24123	41824	17782	17306	20762	14969	21250	19509	19404	19959	17481
9	19273	23719	32150	16689	15132	18315	15462	20119	22861	20012	23602	16469
10	25236	23204	21196	24353	15962	18598	18367	21250	22946	21250	23259	19273
11	27906	26616	20064	25711	15086	18598	16130	20816	24208	20493	22355	22946
12	31226	25088	21251	21196	16738	18469	15842	22608	25771	22748	21196	22664
13	37747	31918	24530	23259	23316	17606	15675	17556	15890	24324	19826	20386
14	32617	32150	29193	19959	23861	18315	15890	18367	19038	22805	23116	20681
15	27534	31292	35207	20951	25353	22748	16738	20439	18908	18184	21005	18960
16	22751	32383	28311	19038	23003	19879	19773	20762	18495	19273	20573	18908
17	23005	34345	19456	21579	20573	21060	24121	18675	18546	19220	25413	16738
18	23863	32150	20870	21332	18598	22077	19879	21332	18315	24412	21579	17959
19	23404	32450	19456	21141	16227	19273	19773	18086	18727	23060	17909	18010
20	22807	36927	24123	16518	22411	20119	19404	18010	18908	23316	20493	20573
21	20304	39266	24414	15297	28093	19773	16130	19959	18495	17909	21141	20252
22	18496	40814	26737	16227	31589	22021	15344	20306	19641	20978	25981	18960
23	22864	34345	23119	19694	32853	20870	16812	19456	22160	20978	23918	18137
24	26951	25503	19404	23516	31986	17656	15462	20493	19641	20012	21827	18495
25	28468	21580	17384	24121	29865	15628	15344	25621	19220	19090	20199	20762
26	30606	16302	19693	24324	31919	19273	16518	21634	18908	21060	20172	18061
27	27596	18599	23204	21579	36679	16910	15250	18598	18960	21579	24412	16738
28	22948	18676	27319	18727	31589	21882	15890	17083	19694	22355	20439	19142
29	17659	16987	36115	20306	---	21882	14969	17381	20199	19773	19826	17257
30	15749	19878	30834	24121	---	22748	16518	20816	18188	19404	23659	18010
31	17559	---	25982	26191	---	24353	---	24939	---	18960	25413	---
MAX	37747	40814	41824	28093	36679	26737	24121	25621	25921	24412	25981	29929
MIN	15749	16060	16643	15297	15086	15628	14231	14163	15890	17732	17909	16469
†	124.99	125.89	128.05	128.12	129.83	127.50	124.57	127.70	125.24	125.54	127.87	125.17
‡	-12369	+2319	+6104	+209	+5398	-7236	-7835	+8421	-6751	+772	+6453	-7403
††	1589	855	401	319	344	617	1036	2051	2684	2800	2530	2209

CAL YR 1978 † +8772

WTR YR 1979 † -11918

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

11406880 WESTERN CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'19", long 121°41'06", in SW¼NW¼ sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank 500 ft (152 m) downstream from Thermalito Afterbay Dam, and 7.3 mi (11.7 km) west of Oroville.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft (30.623 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources).

REMARKS.--Water is diverted from Thermalito Afterbay and is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--11 years, 303 ft³/s (8.581 m³/s), 219,500 acre-ft/yr (271 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,170 ft³/s (33.1 m³/s) Apr. 24, 27, 28, 1977; no flow for several months most years.

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	151	254	202	204			0	380	647	909	888	488
2	152	253	202	204			0	382	646	902	890	488
3	209	253	202	203			0	464	668	894	886	467
4	188	254	203	204			0	553	701	896	884	423
5	179	253	201	203			0	724	760	894	886	401
6	254	254	201	203			0	744	790	894	888	361
7	255	252	203	204			0	743	790	902	882	310
8	254	252	202	204			0	842	826	916	885	289
9	255	252	202	141			0	868	861	915	876	269
10	254	252	201	61			0	954	878	915	870	246
11	253	248	201	0			0	993	894	912	869	245
12	254	253	201	0			0	993	880	920	869	204
13	255	254	201	0			19	988	862	932	863	191
14	254	247	200	0			45	951	866	942	855	192
15	255	240	202	0			45	908	864	942	853	168
16	253	241	200	0			114	868	910	952	855	148
17	252	246	200	0			155	815	915	942	837	146
18	253	244	148	0			156	796	915	949	802	150
19	251	242	168	0			182	768	920	945	787	115
20	251	243	206	0			231	748	916	945	791	99
21	252	242	205	0			277	714	916	945	794	99
22	252	220	205	0			362	696	915	947	770	91
23	253	197	204	0			402	696	918	948	734	86
24	252	205	205	0			390	698	915	942	709	76
25	254	207	205	0			393	698	926	935	679	64
26	253	209	204	0			392	696	934	927	671	63
27	253	209	204	0			391	696	934	911	649	104
28	253	206	204	0			392	674	936	894	636	139
29	252	203	205	0	---		392	647	921	879	630	137
30	253	202	205	0	---		393	646	908	883	608	138
31	252	---	205	0	---		---	646	---	885	547	---
TOTAL	7461	7087	6197	1831	0	0	4731	22989	25732	28514	24643	6397
MEAN	241	236	200	59.1	0	0	158	742	858	920	795	213
MAX	255	254	206	204	0	0	402	993	936	952	890	488
MIN	151	197	148	0	0	0	0	380	646	879	547	63
AC-FT	14800	14060	12290	3630	0	0	9380	45600	51040	56560	48880	12690
CAL YR 1978 TOTAL	114620.00			MEAN 314	MAX 1110	MIN 0	AC-FT 227300					
WTR YR 1979 TOTAL	135582.00			MEAN 371	MAX 993	MIN 0	AC-FT 268900					

SACRAMENTO RIVER BASIN

11406890 RICHVALE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'19", long 121°41'06", in SW¼NW¼ sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on right bank 500 ft (152 m) downstream from axis of Thermalito Afterbay Dam, and 7.3 mi (11.7 km) west of Oroville.

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft (30.623 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources).

REMARKS.--Canal diverts from Thermalito Afterbay; water is used for irrigation. The canal is part of the Oroville project. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--11 years, 117 ft³/s (3.313 m³/s) 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 511 ft³/s (14.5 m³/s) May 16, 1974; no flow for several months in each year.

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	0						0	135	317	430	333	234
2	0						0	134	314	432	331	238
3	0						0	167	347	413	330	237
4	0						0	267	370	404	329	218
5	0						0	295	371	400	333	206
6	0						0	320	374	393	337	190
7	0						0	358	356	390	335	179
8	0						0	370	351	392	329	180
9	0						0	366	349	392	329	185
10	0						0	407	351	389	330	185
11	0						0	428	385	381	329	135
12	0						0	429	400	377	329	79
13	0						0	428	421	378	310	77
14	0						0	450	428	376	296	56
15	0						0	452	428	375	296	41
16	0						20	466	429	378	297	45
17	0						65	465	433	370	302	28
18	0						75	452	433	368	292	25
19	0						75	410	428	368	292	25
20	0						78	392	430	366	294	25
21	0						78	394	432	367	290	25
22	0						91	352	428	368	296	25
23	0						102	328	429	368	297	25
24	0						104	328	429	361	288	25
25	0						104	320	430	346	279	9.4
26	0						105	317	433	339	275	0
27	8.1						104	315	430	333	276	0
28	15						104	312	429	333	276	0
29	15						122	313	429	332	261	0
30	4.9						128	316	430	337	252	0
31	0	---					---	319	---	338	241	---
TOTAL	43.0	0	0	0	0	0	1355	10805	12014	11594	9384	2697.4
MEAN	1.39	0	0	0	0	0	45.2	349	400	374	303	89.9
MAX	15	0	0	0	0	0	128	466	433	432	337	238
MIN	0	0	0	0	0	0	0	134	314	332	241	0
AC-FT	85	0	0	0	0	0	2690	21430	23830	23000	18610	5350
CAL YR 1978	TOTAL	46906.00		MEAN 129	MAX 486	MIN 0	AC-FT 93040					
WTR YR 1979	TOTAL	47892.40		MEAN 131	MAX 466	MIN 0	AC-FT 94990					

11406900 PACIFIC GAS AND ELECTRIC CO. LATERAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°29'22", long 121°41'12", in SE¼NW¼ sec.19, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on right bank 82 ft (25 m) downstream from axis of Thermalito Afterbay Dam, and 7.2 mi (11.6 km) west of Oroville.

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 113.47 ft (34.586 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources).

REMARKS.--Flow regulated at outlet works from Thermalito Afterbay; water is used for irrigation. Records for some years include diversions from Thermalito Afterbay into Pacific Gas and Electric Co. lateral via Duncan lateral siphon. No diversion was made during the current year to Duncan lateral siphon.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--11 years, 4.83 ft³/s (0.137 m³/s), 3,500 acre-ft/yr (4.32 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 46 ft³/s (1.30 m³/s) Apr. 24, 1977, May 16, 1978; no flow for several months in each year.

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	0						0	11	16	16	15	9.0
2	.72						0	11	15	15	14	7.9
3	0						0	6.8	13	16	15	8.1
4	0						0	9.9	17	15	15	6.2
5	0						0	13	21	16	14	5.8
6	0						0	18	20	16	14	2.2
7	0						0	22	19	16	14	.70
8	0						0	21	21	16	14	.60
9	0						0	20	22	15	14	.60
10	0						0	29	21	16	14	.60
11	0						0	30	20	15	14	2.2
12	0						0	26	17	14	14	3.1
13	0						0	29	15	15	14	3.3
14	0						0	33	15	14	14	2.2
15	0						0	28	15	14	15	.70
16	0						0	20	15	14	15	0
17	0						0	19	15	16	14	0
18	0						0	14	18	15	14	0
19	0						0	11	19	14	13	0
20	0						0	11	20	14	13	0
21	0						0	12	20	14	13	0
22	0						0	13	19	15	13	0
23	0						0	12	19	15	13	0
24	0						0	11	19	16	13	0
25	0						0	11	18	16	12	0
26	0						0	13	16	15	11	0
27	0						7.4	13	16	15	10	0
28	0						13	12	16	15	9.9	0
29	0						15	11	16	15	10	0
30	0						13	12	16	15	9.9	0
31	0	---			---	---	---	15	---	15	9.9	---
TOTAL	.72	0	0	0	0	0	48.4	517.7	529	468	407.7	53.20
MEAN	.023	0	0	0	0	0	1.61	16.7	17.6	15.1	13.2	1.77
MAX	.72	0	0	0	0	0	15	33	22	16	15	9.0
MIN	0	0	0	0	0	0	0	6.8	13	14	9.9	0
AC-FT	1.4	0	0	0	0	0	96	1030	1050	928	809	106
CAL YR 1978	TOTAL	1883.52	MEAN 5.16	MAX 46	MIN 0	AC-FT 3740						
WTR YR 1979	TOTAL	2024.72	MEAN 5.55	MAX 33	MIN 0	AC-FT 4020						

SACRAMENTO RIVER BASIN

11406910 SUTTER-BUTTE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°27'01", long 121°39'27", in NW corner of Boga Fernandez Grant, T.18 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank 675 ft (206 m) downstream from Thermalito Afterbay Dam, and 6.8 mi (10.9 km) southwest of Oroville.

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 109.97 ft (33.519 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 109.50 ft (33.376 m) lower.

REMARKS.--Water is diverted from Thermalito Afterbay and is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--11 years, 653 ft³/s (18.49 m³/s), 473,100 acre-ft/yr (5.83 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,110 ft³/s (59.8 m³/s) Apr. 22-24, 1968; no flow for several months in each year.

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	466					0	99	1260	1480	1590	1590	1260
2	469					0	98	1310	1520	1590	1580	1250
3	458					0	79	1370	1500	1560	1580	1240
4	439					0	67	1460	1520	1510	1570	1210
5	436					0	67	1530	1530	1510	1570	1180
6	435					0	68	1590	1540	1500	1550	1160
7	437					0	67	1700	1560	1490	1540	1120
8	436					0	67	1790	1560	1500	1550	1070
9	436					0	180	1780	1560	1500	1540	1040
10	411					0	372	1760	1560	1500	1510	995
11	400					0	519	1810	1570	1500	1510	931
12	397					0	592	1810	1560	1510	1520	894
13	402					0	676	1820	1570	1520	1510	847
14	398					0	799	1870	1580	1530	1490	849
15	396					0	836	1870	1580	1540	1490	835
16	396					0	1030	1840	1580	1560	1510	830
17	399					0	1130	1820	1570	1590	1500	771
18	400					0	1150	1810	1570	1620	1480	698
19	398					0	1260	1790	1570	1630	1480	666
20	398					0	1370	1770	1570	1650	1470	655
21	398					0	1510	1710	1570	1620	1470	637
22	398					0	1610	1670	1570	1590	1450	630
23	401					0	1580	1650	1580	1560	1440	629
24	399					0	1500	1590	1580	1570	1420	622
25	402					0	1480	1500	1580	1580	1410	562
26	401					67	1390	1450	1590	1620	1410	503
27	398					126	1310	1440	1600	1630	1410	463
28	397					100	1280	1430	1610	1630	1390	433
29	398				---	100	1260	1450	1610	1630	1380	417
30	399				---	100	1270	1470	1590	1610	1340	419
31	277	---			---	100	---	1460	---	1610	1300	---
TOTAL	12675	0	0	0	0	593	24716	50580	46930	48550	45960	24816
MEAN	409	0	0	0	0	19.1	824	1632	1564	1566	1483	827
MAX	469	0	0	0	0	126	1610	1870	1610	1650	1590	1260
MIN	277	0	0	0	0	0	67	1260	1480	1490	1300	417
AC-FT	25140	0	0	0	0	1180	49020	100300	93090	96300	91160	49220
CAL YR 1978	TOTAL	229133.00	MEAN	628	MAX	1870	MIN	0	AC-FT	454500		
WTR YR 1979	TOTAL	254820.00	MEAN	698	MAX	1870	MIN	0	AC-FT	505400		

11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER, NEAR OROVILLE, CA

LOCATION.--Lat 39°27'23", long 121°38'10", in NW¼SE¼ sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on left bank of outlet channel 955 ft (291 m) downstream from centerline of Thermalito Afterbay Dam, and 5.7 mi (9.2 km) southwest of Oroville.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 113.47 ft (34.586 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 13.00 ft (3.962 m) lower.

REMARKS.--Flow regulated by gates of Thermalito Afterbay outlet 955 ft (291 m) upstream. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--11 years, 3,957 ft³/s (112.1 m³/s), 2,867,000 acre-ft/yr (3.54 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,600 ft³/s (612 m³/s) Jan. 28, 1970, gage height, 23.30 ft (7.102 m) previous datum; no flow for many days in 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,170 ft³/s (430 m³/s) Feb. 24, gage height, 8.11 ft (2.472 m); minimum daily, 713 ft³/s (20.2 m³/s) Apr. 12, 13.

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	2020	1870	2150	2470	1340	3590	2140	1110	1030	4620	4160	2120
2	2050	1870	2210	2520	1340	4520	2110	1120	1020	4650	4170	2130
3	2020	1870	2190	2530	1310	6770	2020	1120	1020	4150	4160	2120
4	2020	1850	2220	2530	1300	7560	1830	1110	1330	3610	4110	2150
5	2050	1830	2240	2530	1320	7560	1620	1100	1530	3600	4660	2150
6	2030	1870	2250	2500	1320	7640	1430	1120	1710	3670	4670	2150
7	1990	1870	2230	2480	1320	6760	1220	1120	1810	3620	4670	2050
8	2010	1870	2230	2520	1320	5670	1030	2110	1800	3640	4680	1830
9	2050	1860	2190	2500	1310	5660	833	2100	2150	3640	4690	1700
10	2070	1860	2190	2530	1290	5000	716	2110	2140	3490	4680	1650
11	2040	1870	2210	2530	1310	4000	717	2120	2310	3120	4670	1470
12	2010	1850	2220	2500	1310	3000	713	2120	2610	3140	4640	1340
13	2010	1860	2230	2530	1310	2140	713	2100	2580	3150	4650	1340
14	1980	1860	2230	2490	1310	2120	716	2110	2630	3130	4510	1500
15	1970	1860	2230	2520	1310	2140	818	2110	2620	3130	3980	1810
16	1960	1860	2210	2490	1300	2830	827	2110	2610	3140	3640	1810
17	2000	1870	2190	2530	1300	4760	822	2100	2600	3300	3670	1820
18	2000	1850	2220	2510	1290	5650	801	2110	2600	3840	3650	1820
19	1980	1850	2210	2520	1290	5640	812	2110	2600	4330	3640	1810
20	1990	1850	2340	2440	1720	5060	810	2110	3330	4670	3480	1820
21	1980	1850	2500	2110	5540	4120	806	2110	3590	4630	3000	1840
22	1990	1850	2500	1950	10200	3120	1230	2100	3590	4680	2640	1830
23	2010	1860	2470	1730	13300	2380	1630	2350	3660	4680	2610	1960
24	2070	1830	2470	1710	15100	2110	1630	3060	3640	4670	2610	2350
25	2530	1830	2480	1690	15000	2120	1630	2740	3640	4190	2640	2350
26	2300	1840	2500	1680	13400	2310	1630	1900	3760	4160	2630	2340
27	2000	2040	2500	1490	8400	2610	1520	1730	4130	4150	2470	2220
28	1860	2210	2530	1490	4350	2590	1330	1530	4140	4160	2130	1860
29	1860	2220	2530	1460	---	2610	1100	1390	4270	4150	2130	1740
30	1850	2230	2480	1340	---	2600	1060	1190	4630	4170	2140	1750
31	1880	---	2460	1340	---	2610	---	1070	---	4160	2150	---
TOTAL	62580	56960	71810	68160	111910	127250	36264	56390	81080	121440	112330	56830
MEAN	2019	1899	2316	2199	3997	4105	1209	1819	2703	3917	3624	1894
MAX	2530	2230	2530	2530	15100	7640	2140	3060	4630	4680	4690	2350
MIN	1850	1830	2150	1340	1290	2110	713	1070	1020	3120	2130	1340
AC-FT	124100	113000	142400	135200	222000	252400	71930	111800	160800	240900	222800	112700
CAL YR 1978 TOTAL		1140036		MEAN 3123	MAX 16000	MIN 485	AC-FT 2261000					
WTR YR 1979 TOTAL		963004		MEAN 2638	MAX 15100	MIN 713	AC-FT 1910000					

11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1968 to current year.

INSTRUMENTATION.--Temperature recorder since May 1968.

REMARKS.--Temperature is listed only when water is released from Thermalito Afterbay. Because of the complete regulation of the Feather River below Oroville Dam, the temperature of the water released from Thermalito Afterbay affects the temperature of the Feather River downstream from the Oroville project.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C June 23, 1977; minimum recorded, 1.5°C Dec. 13, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 26.0°C June 3; minimum recorded, 5.5°C on several days during December to February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	15.5	10.5	10.0	10.5	10.0	6.0	5.5	6.0	5.5	8.5	8.0
2	18.5	16.5	11.0	10.0	10.0	9.5	6.0	5.5	6.0	5.5	8.5	8.0
3	18.0	16.5	11.0	10.5	9.5	9.0	6.0	5.5	6.5	5.5	8.5	8.0
4	18.5	16.5	11.5	10.5	9.5	9.0	6.5	6.0	6.5	6.0	8.5	8.0
5	18.0	16.5	11.5	10.5	9.0	8.0	7.0	6.5	7.0	6.5	9.0	8.0
6	17.0	16.5	12.0	11.0	8.0	7.0	7.0	6.5	8.0	7.0	9.5	8.5
7	18.0	16.0	12.0	11.5	7.0	7.0	8.0	7.0	8.5	8.0	9.5	8.5
8	17.0	16.0	12.0	11.5	7.0	6.0	8.0	8.0	9.0	8.0	10.0	9.0
9	17.0	16.0	12.0	11.5	6.5	6.5	8.5	8.0	9.5	8.5	10.0	9.5
10	16.0	15.5	11.5	9.0	6.5	6.0	9.0	8.5	10.0	9.0	10.0	9.5
11	15.5	15.0	9.0	8.5	7.0	6.0	9.5	9.0	10.0	9.5	10.0	9.5
12	16.0	14.5	8.5	8.0	7.0	7.0	10.0	9.5	10.0	9.5	12.0	9.5
13	15.5	14.5	8.0	8.0	8.0	7.0	10.0	9.5	9.5	9.5	11.5	10.0
14	15.0	14.5	8.0	8.0	8.5	8.0	9.5	9.0	10.0	9.5	11.5	11.0
15	14.5	13.5	8.5	8.0	8.5	8.0	9.0	8.5	10.0	9.5	11.0	10.5
16	15.5	14.0	8.5	8.0	8.5	8.0	8.5	8.0	9.5	9.0	10.5	10.0
17	15.5	14.0	9.0	8.5	8.0	7.0	8.5	8.0	9.5	9.5	10.5	9.5
18	15.5	15.0	9.0	8.5	8.0	7.0	8.5	8.0	9.5	9.0	10.0	9.5
19	15.5	15.0	9.0	8.5	8.0	7.0	8.5	8.0	10.0	9.0	10.5	9.5
20	15.0	14.5	9.5	9.0	7.0	7.0	8.5	8.0	10.0	9.0	10.5	9.5
21	15.5	14.5	9.5	9.5	7.0	7.0	8.5	8.0	9.5	9.0	10.5	9.5
22	15.0	14.0	10.0	9.5	7.0	6.5	8.5	8.0	9.0	7.0	11.0	10.0
23	14.5	14.0	10.0	9.5	7.0	6.5	8.5	8.0	7.0	7.0	12.0	10.0
24	14.0	13.5	10.0	9.5	7.0	6.5	8.0	8.0	7.0	7.0	13.5	11.0
25	13.5	13.0	10.0	9.5	7.0	6.5	8.0	7.0	8.0	7.0	13.5	11.5
26	13.5	13.0	10.0	9.0	6.5	6.5	7.0	6.5	8.5	7.0	12.0	11.5
27	13.5	13.0	10.0	9.5	6.5	6.5	6.5	6.0	8.0	7.0	12.0	11.0
28	13.5	13.0	10.0	9.5	6.5	6.5	6.5	6.0	8.5	8.0	12.0	11.0
29	13.5	12.0	10.5	9.5	7.0	6.5	6.0	5.5	---	---	12.0	11.0
30	12.0	10.5	10.0	10.0	7.0	6.5	6.0	5.5	---	---	13.0	11.5
31	11.0	10.5	---	---	6.5	5.5	6.0	5.5	---	---	13.0	11.5
MONTH	19.5	10.5	12.0	8.0	10.5	5.5	10.0	5.5	10.0	5.5	13.5	8.0

11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

11407000 FEATHER RIVER AT OROVILLE, CA

LOCATION.--Lat 39°31'18", long 121°32'48", in Boga Fernandez Grant, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020106, on right bank 300 ft (91 m) upstream from fish barrier dam on Feather River, and 0.8 mi (1.3 km) northeast of Oroville Post Office.
DRAINAGE AREA.--3,624 mi² (9,386 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1901 to current year. Monthly discharge only for some periods, published in WSP 1315-A. October 1934 to September 1961 published as "near Oroville." Records since October 1967 equivalent to earlier records if diversions out of Thermalito Afterbay are added to flow past station.
REVISED RECORDS.--WSP 843: 1907(M), 1909(M), 1914-15(M), 1919(M), 1927-28(M). WSP 881: 1913-28 (yearly summaries only). WSP 1515: 1906-8. WSP 1931: Drainage area. WDR CA-74-2: 1968-70, adjusted monthly discharge.
GAGE.--Water-stage recorder. Datum of gage is 148.97 ft (45.406 m) National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). See WSP 1931 for history of changes prior to Oct. 1, 1964.
REMARKS.--Flow regulated by Lake Oroville (station 11406800) and other powerplants and reservoirs above station. Several diversions above station for power and irrigation. Feather River Fish Hatchery diverts up to 120 ft³/s (3.40 m³/s) at Thermalito diversion dam 0.4 mi (0.6 km) upstream from gage. Diverted flow returns to Feather River approximately 0.3 mi (0.5 km) downstream from gage. Daily figures shown are combined figures of river flow and diversion to fish hatchery. See REMARKS for upstream stations and schematic diagrams showing diversions from Feather River at Lake Oroville and for South Fork Feather River basin.
COOPERATION.--Records collected by California Department of Water Resources under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.
AVERAGE DISCHARGE (adjusted for diversions into and out of, change in contents in, and evaporation from Lake Oroville, Thermalito diversion pool, Thermalito Forebay, and Thermalito Afterbay).--78 years, 5,864 ft³/s (166.1 m³/s), 4,248,000 acre-ft/yr (5.24 km³/yr).
EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge observed, 230,000 ft³/s (6,510 m³/s) Mar. 19, 1907, elevation, 167.5 ft (51.05 m) above mean sea level; minimum daily, 89 ft³/s (2.52 m³/s) Sept. 19, 1972. Combined flow (since construction of Oroville Dam), maximum discharge, 56,400 ft³/s (1,600 m³/s) Jan. 25, 1970; minimum daily, 222 ft³/s (6.29 m³/s) Sept. 19, 1972.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1881 reached a stage of 25 ft (7.6 m) from floodmarks, site and datum in use from Dec. 16, 1912, to Sept. 30, 1934.
EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 1,760 ft³/s (49.8 m³/s) June 14, gage height, 1.63 ft (0.497 m); minimum daily, 270 ft³/s (7.65 m³/s) June 15, 16.
Dec. 9. Combined flow, maximum discharge, 1,880 ft³/s (53.2 m³/s) June 14; minimum daily, 375 ft³/s (10.6 m³/s)

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	404	392	402	394	397	430	404	415	418	411	390	408
2	401	394	391	399	402	417	405	410	415	414	386	408
3	400	392	387	401	400	417	407	411	416	408	385	408
4	401	387	395	402	401	418	414	411	420	412	386	407
5	404	387	390	406	403	417	409	409	417	410	388	404
6	406	397	388	403	406	416	407	412	432	414	375	400
7	404	400	386	401	407	416	407	417	426	411	383	391
8	404	403	390	408	405	412	413	414	415	412	394	399
9	404	404	384	408	406	412	408	411	415	413	394	398
10	404	398	394	414	408	416	402	412	416	414	383	400
11	405	401	393	419	409	416	405	413	415	412	389	401
12	406	389	396	402	407	416	402	412	418	411	400	405
13	402	395	398	402	412	415	407	412	493	412	397	403
14	400	396	394	416	419	416	409	415	561	415	397	405
15	399	399	391	420	409	416	409	416	386	412	392	401
16	395	397	392	406	409	413	408	413	388	413	378	405
17	396	398	398	403	402	415	407	411	394	411	384	407
18	402	399	396	405	413	415	405	406	395	415	391	405
19	400	399	390	400	412	415	406	412	391	413	397	406
20	397	403	389	399	423	418	406	414	396	413	394	407
21	398	400	390	398	421	417	407	416	398	415	395	406
22	397	399	390	398	413	420	409	415	399	415	397	407
23	387	396	388	399	415	413	409	414	407	413	393	405
24	393	393	392	401	411	406	409	413	404	413	397	409
25	402	394	394	395	414	407	409	414	406	415	403	407
26	404	390	394	393	412	409	410	414	406	415	407	406
27	399	395	393	396	411	412	410	418	408	414	395	407
28	397	399	394	391	420	415	409	417	412	411	402	408
29	395	401	397	392	---	411	410	417	410	395	407	409
30	392	400	390	399	---	414	413	415	411	387	407	409
31	392	---	399	400	---	408	---	418	---	387	403	---
TOTAL	12390	11897	12165	12470	11467	12858	12235	12817	12488	12726	12189	12141
MEAN	400	397	392	402	410	415	408	413	416	411	393	405
MAX	406	404	402	420	423	430	414	418	561	415	407	409
MIN	387	387	384	391	397	406	402	406	386	387	375	391
AC-FT	24580	23600	24130	24730	22740	25500	24270	25420	24770	25240	24180	24080
MEAN ‡	2770	2304	2156	4616	6878	7047	6563	8683	3191	2766	2578	1902
AC-FT ‡	170300	137100	132600	283800	382000	433300	390500	533900	189900	170100	158500	113200

CAL YR 1978 TOTAL 120611 MEAN 330 MAX 406 MIN 270 AC-FT 239200 MEAN ‡ 6876 AC-FT ‡ 4978000
WTR YR 1979 TOTAL 147843 MEAN 405 MAX 561 MIN 375 AC-FT 293200 MEAN ‡ 4296 AC-FT ‡ 3119000

‡ Adjusted for diversion in and out of, change in contents in, and evaporation from Lake Oroville, Thermalito diversion pool, Thermalito Forebay, and Thermalito Afterbay.

11407000 FEATHER RIVER AT OROVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906-7, 1951 to current year.

CHEMICAL ANALYSES: Water years 1906-7, 1951-77.

SPECIFIC CONDUCTANCE: Water years 1972-78.

WATER TEMPERATURES: Water years 1954, 1957 to current year.

SEDIMENT RECORDS: Water years 1957 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: January to December 1906.

SPECIFIC CONDUCTANCE: March 1972 to September 1978.

WATER TEMPERATURES: October 1953 to September 1954, November 1956 to current year.

SEDIMENT DISCHARGE: November 1956 to September 1979 (discontinued).

REVISED RECORDS.--WDR CA-74-2: 1966, sediment.

INSTRUMENTATION.--Temperature recorder October 1953 to September 1954, and since November 1956.

REMARKS.--Chemical and sediment sampling point ranges from 0.2 to 1.5 mi (0.3 to 2.4 km) downstream from gaging station. Extremes affected by construction of Oroville Dam in 1967, and are given for two separate periods--
Water years 1954, 1957-67, and 1968 to current year.

COOPERATION.--Records of discharge and temperature data furnished by California Department of Water Resources and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD (water years 1954, 1957-67).--

WATER TEMPERATURES: Maximum, 27.0°C Sept. 10, 12, 1959; minimum, 1.5°C Dec. 27, 1959, Jan. 23-25, 1962.

SEDIMENT CONCENTRATIONS (water years 1957-67): Maximum daily mean, 4,100 mg/L Feb. 1, 1963; minimum daily mean, 1 mg/L on many days in 1961-62, 1964.

SEDIMENT DISCHARGE (water years 1957-67): Maximum daily, 1,500,000 tons (1,360,000 metric tons) Feb. 1, 1963; minimum daily, 3 tons (2.7 metric tons) Jan. 16, 17, 1962.

Water years 1968 to current year.--

WATER TEMPERATURES (water years 1969-79): Maximum recorded, 20.0°C on several days in 1977; minimum recorded, 6.5°C on many days in 1971-73, 1974-75, 1979.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 310 mg/L Jan. 22, 1969; minimum daily mean, 0 mg/L Sept. 22, 23, 26, 29, 30, 1979.

SEDIMENT DISCHARGE: Maximum daily, 42,100 tons (38,200 metric tons) Jan. 22, 1969; minimum daily, 0 ton (0 metric ton) Sept. 22, 23, 26, 29, 30, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 18.5°C July 13; minimum recorded, 6.5°C on many days during January to March.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 11 mg/L Oct. 13, May 21; minimum daily mean, 0 mg/L Sept. 22, 23, 26, 29, 30.

SEDIMENT DISCHARGE: Maximum daily 12 tons (11 metric tons) Oct. 13, May 21; minimum daily 0 ton (0 metric ton) Sept. 22, 23, 26, 29, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	10.0	10.0	9.0	10.5	10.0	8.0	7.0	8.0	6.5	8.0	6.5
2	11.5	10.0	10.0	9.0	10.5	9.5	8.0	7.0	8.0	6.5	7.0	6.5
3	11.5	10.0	10.5	9.5	10.5	9.5	8.0	7.0	8.0	6.5	7.0	6.5
4	12.0	10.0	11.0	10.0	10.5	9.5	9.0	8.0	8.5	6.5	8.0	6.5
5	13.0	10.5	11.5	10.0	10.0	9.5	9.0	8.5	8.5	7.0	8.0	7.0
6	12.0	10.5	11.5	10.5	10.0	9.0	9.0	8.0	8.5	7.0	8.5	7.0
7	11.5	10.0	11.5	10.0	10.0	9.0	8.5	8.5	8.5	7.0	8.5	7.0
8	11.5	10.0	11.5	10.5	10.0	9.0	8.5	8.5	8.5	7.0	8.5	7.0
9	11.5	10.0	11.5	10.5	9.5	9.0	9.0	8.5	8.5	7.0	8.5	7.0
10	11.0	9.5	11.0	10.0	9.5	9.0	8.5	8.5	8.5	8.0	8.5	7.0
11	11.0	9.5	11.0	10.0	9.0	8.5	9.0	8.5	8.5	8.0	8.5	7.0
12	11.0	9.5	10.5	10.5	9.5	8.5	9.0	8.5	8.5	8.0	8.5	7.0
13	11.0	9.5	11.0	10.5	10.0	9.0	9.0	8.0	8.0	7.0	8.5	7.0
14	11.0	9.5	11.0	10.0	10.0	9.0	8.5	8.0	8.0	7.0	8.0	7.0
15	11.0	9.5	11.0	10.0	10.0	9.0	8.0	8.0	8.0	7.0	8.0	7.0
16	11.0	9.5	10.5	10.5	9.5	9.0	8.5	7.0	8.0	7.0	7.0	7.0
17	11.5	10.0	11.0	10.0	9.0	9.0	8.5	7.0	8.0	7.0	8.5	6.5
18	11.5	10.0	11.0	10.0	9.0	8.5	8.5	8.0	8.0	7.0	8.0	7.0
19	10.5	9.5	10.5	10.5	9.5	8.5	9.0	8.0	8.5	7.0	8.5	7.0
20	10.5	9.5	10.5	10.5	9.5	8.5	8.5	8.0	8.5	8.0	9.0	7.0
21	11.0	9.5	10.5	10.0	9.5	8.5	9.0	8.0	8.0	8.0	8.5	8.0
22	11.0	9.5	10.5	10.0	9.5	8.5	9.0	8.0	8.0	6.5	8.5	8.0
23	11.0	9.5	11.0	10.5	8.5	8.5	8.5	8.0	7.0	6.5	9.0	7.0
24	10.5	9.5	11.0	10.5	8.5	8.5	8.0	8.0	7.0	6.5	9.5	8.0
25	10.5	9.5	10.5	9.5	8.5	8.0	8.5	7.0	8.0	6.5	9.5	8.0
26	10.5	9.5	10.5	9.5	8.0	8.0	8.5	7.0	8.0	6.5	9.0	8.5
27	10.5	9.5	10.5	9.5	8.0	8.0	8.5	7.0	8.0	7.0	8.5	8.5
28	11.0	9.5	10.0	9.5	8.0	8.0	8.5	7.0	8.0	7.0	9.0	8.0
29	11.0	9.5	10.5	10.0	8.5	8.0	8.0	6.5	---	---	8.5	7.0
30	10.5	9.5	10.0	10.0	8.5	7.0	8.0	7.0	---	---	9.0	7.0
31	10.0	9.5	---	---	8.5	7.0	8.0	7.0	---	---	9.5	8.0
MONTH	13.0	9.5	11.5	9.0	10.5	7.0	9.0	6.5	8.5	6.5	9.5	6.5

SACRAMENTO RIVER BASIN

11407000 FEATHER RIVER AT OROVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	404	1	1.1	392	1	1.1	402	2	2.2
2	401	1	1.1	394	1	1.1	391	2	2.1
3	400	2	2.2	392	1	1.1	387	2	2.1
4	401	2	2.2	387	2	2.1	395	2	2.1
5	404	2	2.2	387	5	5.2	390	2	2.1
6	406	2	2.2	397	8	8.6	388	2	2.1
7	404	2	2.2	400	5	5.4	386	2	2.1
8	404	2	2.2	403	2	2.2	390	2	2.1
9	404	2	2.2	404	2	2.2	384	2	2.1
10	404	2	2.2	398	2	2.1	394	2	2.1
11	405	2	2.2	401	2	2.2	393	2	2.1
12	406	6	6.6	389	2	2.1	396	2	2.1
13	402	11	12	395	2	2.1	398	2	2.1
14	400	6	6.5	396	2	2.1	394	2	2.1
15	399	5	5.4	399	3	3.2	391	2	2.1
16	395	4	4.3	397	3	3.2	392	2	2.1
17	396	3	3.2	398	3	3.2	398	2	2.1
18	402	2	2.2	399	3	3.2	396	3	3.2
19	400	2	2.2	349	2	2.2	390	2	2.1
20	397	2	2.1	403	2	2.2	389	2	2.1
21	398	2	2.1	400	3	3.2	390	2	2.1
22	397	1	1.1	399	4	4.3	390	2	2.1
23	387	1	1.0	396	3	3.2	388	2	2.1
24	393	2	2.1	393	2	2.1	392	2	2.1
25	402	4	4.3	394	2	2.1	394	2	2.1
26	404	2	2.2	390	2	2.1	394	2	2.1
27	399	1	1.1	395	2	2.1	393	3	3.2
28	397	1	1.1	399	2	2.2	394	3	3.2
29	395	1	1.1	401	2	2.2	397	3	3.2
30	392	1	1.1	400	2	2.2	390	3	3.2
31	392	1	1.1	---	---	---	399	2	2.2
TOTAL	12390	---	84.8	11897	---	82.5	12165	---	70.8

11407000 FEATHER RIVER AT OROVILLE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	394	2	2.1	397	3	3.2	430	3	3.5
2	399	7	7.5	402	3	3.3	417	3	3.4
3	401	3	3.2	400	2	2.2	417	3	3.4
4	402	3	3.3	401	2	2.2	418	3	3.4
5	406	3	3.3	403	2	2.2	417	3	3.4
6	403	3	3.3	406	2	2.2	416	2	2.2
7	401	3	3.2	407	2	2.2	416	2	2.2
8	408	3	3.3	405	2	2.2	412	3	3.3
9	408	5	5.5	406	2	2.2	412	2	2.2
10	414	8	8.9	408	2	2.2	416	1	1.1
11	419	6	6.8	409	2	2.2	416	1	1.1
12	402	5	5.4	407	2	2.2	416	1	1.1
13	402	5	5.4	412	2	2.2	415	2	2.2
14	416	4	4.5	419	2	2.3	416	2	2.2
15	420	4	4.5	409	3	3.3	416	1	1.1
16	406	6	6.6	409	3	3.3	413	1	1.1
17	403	9	9.8	402	3	3.3	415	1	1.1
18	405	6	6.6	413	3	3.3	415	2	2.2
19	400	3	3.2	412	3	3.3	415	2	2.2
20	399	3	3.2	423	5	5.7	418	2	2.3
21	398	4	4.3	421	7	8.0	417	2	2.3
22	398	4	4.3	413	4	4.5	420	2	2.3
23	399	6	6.5	415	1	1.1	413	2	2.2
24	401	8	8.7	411	1	1.1	406	2	2.2
25	395	8	8.5	414	2	2.2	407	2	2.2
26	393	9	9.5	412	2	2.2	409	2	2.2
27	396	7	7.5	411	2	2.2	412	1	1.1
28	391	5	5.3	420	2	2.3	415	1	1.1
29	392	3	3.2	---	---	---	411	2	2.2
30	399	3	3.2	---	---	---	414	2	2.2
31	400	3	3.2	---	---	---	408	2	2.2
TOTAL	12470	---	163.8	11467	---	78.8	12858	---	66.9

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	404	2	2.2	415	6	6.7	418	3	3.4
2	405	2	2.2	410	3	3.3	415	3	3.4
3	407	5	5.5	411	5	5.5	416	2	2.2
4	414	7	7.8	411	6	6.7	420	2	2.3
5	409	6	6.6	409	6	6.6	417	2	2.3
6	407	5	5.5	412	6	6.7	432	2	2.3
7	407	5	5.5	417	6	6.8	426	2	2.3
8	413	4	4.5	414	5	5.6	415	3	3.4
9	408	4	4.4	411	5	5.5	415	3	3.4
10	402	4	4.3	412	5	5.6	416	2	2.2
11	405	4	4.4	413	5	5.6	415	2	2.2
12	402	4	4.3	412	5	5.6	418	3	3.4
13	407	4	4.4	412	4	4.4	493	3	4.0
14	409	4	4.4	415	4	4.5	561	3	4.5
15	409	4	4.4	416	3	3.4	386	3	3.1
16	408	4	4.4	413	3	3.3	388	3	3.1
17	407	4	4.4	411	4	4.4	394	3	3.2
18	405	5	5.5	406	4	4.4	395	2	2.1
19	406	5	5.5	412	6	6.7	391	2	2.1
20	406	4	4.4	414	9	10	396	2	2.1
21	407	4	4.4	416	11	12	398	2	2.1
22	409	5	5.5	415	7	7.8	399	2	2.2
23	409	5	5.5	414	3	3.4	407	2	2.2
24	409	6	6.6	413	3	3.3	404	1	1.1
25	409	7	7.7	414	3	3.4	406	1	1.1
26	410	5	5.5	414	3	3.4	406	2	2.2
27	410	4	4.4	418	2	2.3	408	2	2.2
28	409	4	4.4	417	2	2.3	412	3	3.3
29	410	5	5.5	417	2	2.3	410	5	5.5
30	413	5	5.6	415	2	2.2	411	4	4.4
31	---	---	---	418	2	2.3	---	---	---
TOTAL	12235	---	149.7	12817	---	156.0	12488	---	83.3

11407000 FEATHER RIVER AT OROVILLE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	411	2	2.2	390	1	1.1	408	2	2.2
2	414	2	2.2	386	1	1.0	408	3	3.3
3	408	3	3.3	385	1	1.0	408	5	5.5
4	412	4	4.4	386	1	1.0	407	3	3.3
5	410	4	4.4	388	2	2.1	404	2	2.2
6	414	5	5.6	375	2	2.0	400	2	2.2
7	411	4	4.4	383	2	2.1	391	2	2.1
8	412	3	3.3	394	2	2.1	399	2	2.2
9	413	3	3.3	394	2	2.1	398	2	2.1
10	414	3	3.4	383	2	2.1	400	2	2.2
11	412	3	3.3	389	2	2.1	401	2	2.2
12	411	3	3.3	400	2	2.2	405	1	1.1
13	412	4	4.4	397	2	2.1	403	3	3.3
14	415	3	3.4	397	3	3.2	405	2	2.2
15	412	2	2.2	392	3	3.2	401	2	2.2
16	413	1	1.1	378	3	3.1	405	2	2.2
17	411	1	1.1	384	3	3.1	407	1	1.1
18	415	1	1.1	391	3	3.2	405	1	1.1
19	413	1	1.1	397	3	3.2	406	1	1.1
20	413	1	1.1	394	3	3.2	407	2	2.2
21	415	1	1.1	395	3	3.2	406	2	2.2
22	415	1	1.1	397	3	3.2	407	0	0
23	413	1	1.1	393	3	3.2	405	0	0
24	413	1	1.1	397	3	3.2	409	1	1.1
25	415	1	1.1	403	3	3.3	407	2	2.2
26	415	3	3.4	407	4	4.4	406	0	0
27	414	5	5.6	395	4	4.3	407	2	2.2
28	411	5	5.5	402	4	4.3	408	1	1.1
29	395	5	5.3	407	4	4.4	409	0	0
30	387	5	5.2	407	5	5.5	409	0	0
31	387	3	3.1	403	3	3.3	---	---	---
TOTAL	12726	---	92.2	12189	---	87.5	12141	---	54.80
YEAR	147843		1171.1						

DRAINAGE AREA. -- 3,676 mi² (9,521 km²).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2280	2130	2400	2680	1660	4320	2430	1470	1410	5280	4240	2190
2	2290	2140	2460	2700	1650	4860	2330	1470	1390	5330	4220	2180
3	2270	2150	2430	2730	1620	7260	2290	1480	1390	4760	4180	2190
4	2280	2140	2460	2720	1610	8390	2130	1490	1620	4100	4140	2210
5	2300	2100	2480	2730	1640	8410	1950	1480	1870	4030	4570	2210
6	2310	2130	2490	2720	1650	8490	1760	1480	1990	4080	4660	2230
7	2270	2150	2460	2700	1640	7690	1560	1480	2140	4030	4660	2180
8	2270	2150	2480	2780	1650	6280	1390	2310	2110	4030	4670	1970
9	2340	2140	2430	2750	1640	6280	1180	2440	2390	4030	4680	1800
10	2350	2110	2420	2810	1620	5670	1050	2460	2420	3910	4670	1790
11	2350	2120	2430	2930	1630	4600	1060	2470	2580	3430	4660	1630
12	2320	2140	2450	2800	1630	3570	1050	2470	2990	3450	4620	1500
13	2320	2130	2460	2760	1700	2570	1050	2470	2940	3430	4610	1500
14	2310	2130	2470	2850	1740	2470	1050	2480	3220	3420	4540	1600
15	2280	2120	2460	2910	1680	2490	1120	2480	2960	3400	4000	1940
16	2290	2110	2450	2830	1660	2980	1170	2450	2940	3420	3610	1950
17	2310	2120	2460	2830	1660	4890	1160	2460	2900	3530	3630	1950
18	2330	2110	2480	2810	1700	6140	1140	2470	2900	4100	3610	1960
19	2310	2140	2440	2800	1700	6130	1140	2460	2900	4630	3590	1950
20	2320	2200	2520	2750	2140	5640	1150	2460	3640	5000	3500	1990
21	2290	2190	2710	2420	5970	4660	1140	2460	4090	4950	3050	1990
22	2280	2200	2710	2270	10700	3580	1420	2450	4060	4950	2660	1990
23	2300	2150	2700	2070	13700	2750	1960	2650	4150	4950	2620	2060
24	2320	2110	2680	2010	15500	2390	1950	3430	4140	4910	2620	2500
25	2800	2090	2680	1980	15400	2380	1950	3250	4120	4450	2650	2510
26	2650	2090	2710	1970	13800	2520	1980	2310	4210	4330	2650	2510
27	2330	2270	2710	1820	10500	2910	1900	2120	4730	4290	2560	2440
28	2180	2440	2740	1770	5550	2870	1710	1910	4740	4280	2190	2090
29	2120	2470	2740	1780	---	2870	1500	1760	4830	4260	2190	1940
30	2120	2490	2710	1650	---	2830	1410	1580	5280	4270	2210	1960
31	2150	---	2680	1660	---	2840	---	1460	---	4250	---	---
TOTAL	71640	65160	78900	76990	124740	141730	46080	67610	93050	131280	112670	60910
MEAN	2311	2172	2545	2484	4455	4572	1536	2181	3102	4235	3635	2030
MAX	2800	2490	2740	2930	15500	8490	2430	3430	5280	5330	4680	2510
MIN	2120	2090	2400	1650	1610	2380	1050	1460	1390	3400	2190	1500
AC-FT	142100	129200	156500	152700	247400	281100	91400	134100	184600	260400	223500	120800
CAL YR 1978	TOTAL	1273418	MEAN	3489	MAX	17100	MIN	808	AC-FT	2526000		
WTR YR 1979	TOTAL	1070760	MEAN	2934	MAX	15500	MIN	1050	AC-FT	2124000		

SACRAMENTO RIVER BASIN

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD. --

WATER TEMPERATURES: Water years 1965 to current year.

SEDIMENT RECORDS: Water years 1965 to current year.

PERIOD OF DAILY RECORD. --

WATER TEMPERATURES: October 1964 to current year.

SEDIMENT RECORDS: October 1964 to current year.

REVISED RECORDS.--WDR-CA-73-2: 1966, sediment. WDR CA-74-2: 1965, 1970, 1971, 1973, sediment.

EXTREMES FOR PERIOD OF DAILY RECORD. --

WATER TEMPERATURES (water years 1965-69, 1971-78): Maximum recorded, 29.5°C June 25, 1977; minimum recorded, 4.0°C on several days in December and January of most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,340 mg/L Dec. 25, 1964; minimum daily mean, 1 mg/L Dec. 12,

1968, Dec. 4, 1969, Sept. 1, 1970, Dec. 14, 1971.

SEDIMENT DISCHARGE: Maximum, 527,000 tons (478,000 metric tons) Dec. 23, 1964; minimum daily, 1.4 tons (1.3 metric tons) Oct. 27, 1966.

EXTREMES FOR CURRENT YEAR. --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 34 mg/L June 7; minimum daily mean, 3 mg/L Dec. 9-11.

SEDIMENT DISCHARGE: Maximum daily, 665 tons (603 metric tons) Feb. 25; minimum daily, 20 tons (18 metric tons) Dec. 9-11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

[illegible]

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER				NOVEMBER				DECEMBER			
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)			
1	2280	7	43	2130	7	40	2400	9	58			
2	2290	7	43	2140	7	40	2460	7	46			
3	2270	6	37	2150	7	41	2430	6	39			
4	2280	5	31	2140	6	35	2460	8	53			
5	2300	5	31	2100	6	34	2480	10	67			
6	2310	5	31	2130	6	35	2490	6	40			
7	2270	6	37	2150	6	35	2460	4	27			
8	2270	7	43	2150	7	41	2480	4	27			
9	2340	8	51	2140	8	46	2430	3	20			
10	2350	8	51	2110	8	46	2420	3	20			
11	2350	7	44	2120	7	40	2430	3	20			
12	2320	6	38	2140	9	52	2450	4	26			
13	2320	6	38	2130	11	63	2460	5	33			
14	2310	5	31	2130	9	52	2470	6	40			
15	2280	6	37	2120	7	40	2460	6	40			
16	2290	6	37	2110	7	40	2450	6	40			
17	2310	8	50	2120	7	40	2460	5	33			
18	2330	10	63	2110	7	40	2480	5	33			
19	2310	8	50	2140	7	40	2440	5	33			
20	2320	7	44	2200	7	42	2520	5	34			
21	2290	8	49	2190	8	47	2710	5	37			
22	2280	8	49	2200	9	53	2710	5	37			
23	2300	9	56	2150	10	58	2700	6	44			
24	2320	10	63	2110	9	51	2680	6	43			
25	2800	8	60	2090	8	45	2680	7	51			
26	2650	7	50	2090	8	45	2710	5	37			
27	2330	7	44	2270	7	43	2710	4	29			
28	2180	7	41	2440	6	40	2740	4	30			
29	2120	7	40	2470	6	40	2740	4	30			
30	2120	11	63	2490	7	47	2710	4	29			
31	2150	8	46	---	---	---	2680	5	36			
TOTAL	71640	---	1391	65160	---	1311	78900	---	1132			

	JANUARY				FEBRUARY				MARCH			
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)			
1	2680	5	36	1660	6	27	4320	5	58			
2	2700	5	36	1650	6	27	4860	6	79			
3	2730	5	37	1620	7	31	7260	8	157			
4	2720	6	44	1610	7	30	8390	8	181			
5	2730	7	52	1640	7	31	8410	7	159			
6	2720	7	51	1650	8	36	8490	8	183			
7	2700	8	58	1640	8	35	7690	9	187			
8	2780	8	60	1650	7	31	6280	4	68			
9	2750	10	74	1640	8	35	6280	9	153			
10	2810	12	91	1620	8	35	5670	10	153			
11	2930	15	119	1630	7	31	4600	12	149			
12	2800	19	144	1630	8	35	3570	10	96			
13	2760	20	149	1700	8	37	2570	8	56			
14	2850	22	169	1740	8	38	2470	9	60			
15	2910	18	141	1680	9	41	2490	10	67			
16	2830	15	115	1660	10	45	2980	11	89			
17	2830	13	99	1660	10	45	4890	12	158			
18	2810	12	91	1700	11	50	6140	11	182			
19	2800	11	83	1700	12	55	6130	9	149			
20	2750	10	74	2140	12	69	5640	7	107			
21	2420	10	65	5970	10	161	4660	5	63			
22	2270	9	55	10700	9	260	3580	6	58			
23	2070	10	56	13700	8	296	2750	6	45			
24	2010	10	54	15500	12	502	2390	6	39			
25	1980	10	53	15400	16	665	2380	7	45			
26	1970	9	48	13800	11	410	2520	10	68			
27	1820	8	39	10500	7	198	2910	14	110			
28	1770	7	33	5550	6	90	2870	11	85			
29	1780	8	38	---	---	---	2870	8	62			
30	1650	9	40	---	---	---	2830	8	61			
31	1660	7	31	---	---	---	2840	9	69			
TOTAL	76990	---	2235	124740	---	3346	141730	---	3196			

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

APRIL				MAY				JUNE			
DAY	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	2430	9	59	1470	14	56	1410	16	61		
2	2330	9	57	1470	15	60	1390	13	49		
3	2290	8	49	1480	16	64	1390	11	41		
4	2130	8	46	1490	17	68	1620	15	66		
5	1950	8	42	1480	16	64	1870	19	96		
6	1760	8	38	1480	14	56	1990	26	140		
7	1560	8	34	1480	15	60	2140	34	196		
8	1390	8	30	2310	16	100	2110	28	160		
9	1180	8	25	2440	19	125	2390	22	142		
10	1050	9	26	2460	23	153	2420	19	124		
11	1060	10	29	2470	19	127	2580	17	118		
12	1050	10	28	2470	16	107	2990	18	145		
13	1050	11	31	2470	15	100	2940	19	151		
14	1050	13	37	2480	14	94	3220	17	148		
15	1120	12	36	2480	15	100	2960	16	128		
16	1170	12	38	2450	16	106	2940	19	151		
17	1160	13	41	2460	12	80	2900	24	188		
18	1140	14	43	2470	23	153	2900	17	133		
19	1140	12	37	2460	20	133	2900	12	94		
20	1150	11	34	2460	18	120	3640	16	157		
21	1140	12	37	2460	17	113	4090	22	243		
22	1420	14	54	2450	16	106	4060	21	230		
23	1960	16	85	2650	18	129	4150	20	224		
24	1950	17	90	3430	19	176	4140	20	224		
25	1950	15	79	3250	15	132	4120	19	211		
26	1980	13	69	2310	11	69	4210	17	193		
27	1900	13	67	2120	12	69	4730	15	192		
28	1710	14	65	1910	12	62	4740	14	179		
29	1500	14	57	1760	14	67	4830	14	183		
30	1410	14	53	1580	16	68	5280	16	228		
31	---	---	---	1460	16	63	---	---	---		
TOTAL	46080	---	1416	67610	---	2980	93050	---	4595		

JULY				AUGUST				SEPTEMBER			
DAY	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	5280	17	242	4240	10	114	2190	8	47		
2	5330	14	201	4220	14	160	2180	8	47		
3	4760	12	154	4180	14	158	2190	7	41		
4	4100	13	144	4140	13	145	2210	7	42		
5	4030	14	152	4570	14	173	2210	7	42		
6	4080	12	132	4660	14	176	2230	4	24		
7	4030	12	131	4660	12	151	2180	6	35		
8	4030	13	141	4670	10	126	1970	7	37		
9	4030	14	152	4680	12	152	1800	9	44		
10	3910	13	137	4670	15	189	1790	9	43		
11	3430	12	111	4660	14	176	1630	9	40		
12	3450	14	130	4620	14	175	1500	8	32		
13	3430	16	148	4610	12	149	1500	7	28		
14	3420	13	120	4540	11	135	1600	9	39		
15	3400	11	101	4000	9	97	1940	12	63		
16	3420	12	111	3610	8	78	1950	12	63		
17	3530	12	114	3630	9	88	1950	12	63		
18	4100	12	133	3610	11	107	1960	12	64		
19	4630	13	163	3590	12	116	1950	13	68		
20	5000	14	189	3500	12	113	1990	11	59		
21	4950	14	187	3050	9	74	1990	10	54		
22	4950	13	174	2660	7	50	1990	10	54		
23	4950	13	174	2620	7	50	2060	9	50		
24	4910	12	159	2620	6	42	2500	12	81		
25	4450	12	144	2650	6	43	2510	17	115		
26	4330	12	140	2650	7	50	2510	12	81		
27	4290	12	139	2560	7	48	2440	8	53		
28	4280	12	139	2190	7	41	2090	10	56		
29	4260	12	138	2190	6	35	1940	12	63		
30	4270	12	138	2210	5	30	1960	13	68		
31	4250	12	138	2210	6	36	---	---	---		
TOTAL	131280	---	4576	112670	---	3277	60910	---	1596		

YEAR	1070760		31051.0						
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11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
MAY 17...	1210	2460	16.0	12	80	90	93	95	100
JUN 13...	1030	2940	20.0	18	143	92	100	--	--

SACRAMENTO RIVER BASIN

11407300 NORTH HONCUT CREEK NEAR BANGOR, CA

LOCATION.--Lat 39°20'32", long 121°29'25", in NW¼SE¼ sec.11, T.17 N., R.4 E., Butte County, Hydrologic Unit 18020106, on left bank 0.2 mi (0.3 km) upstream from unnamed tributary, and 5.7 mi (9.2 km) southwest of Bangor.

DRAINAGE AREA.--47.1 mi² (122.0 km²).

PERIOD OF RECORD.--October 1960 to September 1962, July 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 125 ft (38 m), from topographic map. Prior to September 1962, at site 50 ft (15 m) upstream at same datum.

REMARKS.--Small diversions above station for irrigation. Slight regulation occurs from Lake Wyandotte, capacity, 1,460 acre-ft (1.80 hm³).

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--18 years, 49.1 ft³/s (1.391 m³/s), 35,570 acre-ft/yr (43.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) Dec. 26, 1964, gage height, 11.57 ft (3.527 m), from rating curve extended above 4,600 ft³/s (130 m³/s); maximum gage height, 12.03 ft (3.667 m) Feb. 27, 1973; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,970 ft³/s (84.1 m³/s) Mar. 1, gage height, 9.49 ft (2.893 m); no flow for several months.

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		0	4.0	4.5	25	1410	.20	33	2.4			
2		0	4.1	4.3	24	231	12	29	2.2			
3		0	4.6	4.5	26	163	22	26	2.5			
4		0	4.3	5.6	23	120	20	24	3.2			
5		.70	4.3	6.4	21	96	18	24	3.6			
6		.90	4.2	7.2	18	83	15	31	3.4			
7		1.0	4.2	8.9	16	73	14	29	3.3			
8		1.1	4.1	55	15	66	12	31	3.1			
9		1.1	3.9	116	13	58	11	28	1.8			
10		1.1	3.9	68	13	52	11	23	1.1			
11		.90	3.9	895	13	47	10	12	.70			
12		1.2	3.9	141	13	44	10	11	.60			
13		2.9	3.8	69	209	36	10	10	.40			
14		3.7	3.7	349	1100	27	9.8	9.1	.40			
15		3.3	3.6	704	159	34	11	8.3	.40			
16		4.7	3.6	215	356	67	14	8.2	.30			
17		4.5	5.7	92	157	66	20	8.5	.10			
18		4.5	24	70	598	47	41	7.6	.10			
19		5.5	21	56	364	40	25	7.0	.10			
20		16	12	47	699	35	29	6.6	0			
21		20	4.2	42	968	32	18	6.0	0			
22		25	7.8	38	539	30	17	5.6	0			
23		21	6.9	34	302	28	62	4.9	0			
24		12	6.3	30	143	25	128	4.1	0			
25		8.7	5.9	28	103	22	68	3.4	0			
26		6.3	5.7	25	100	21	53	3.5	0			
27		5.2	5.3	22	87	54	80	3.2	0			
28		4.6	5.2	21	725	103	55	2.8	0			
29		4.4	5.3	20	---	38	44	2.9	0			
30		4.1	5.2	19	---	4.0	38	2.9	0			
31		---	4.7	24	---	.80	---	2.7	---			---
TOTAL	0	164.40	194.3	3221.4	6829	3152.80	869.00	408.3	29.70	0	0	0
MEAN	0	5.48	6.27	104	244	102	29.0	13.2	.99	0	0	0
MAX	0	25	24	895	1100	1410	128	33	3.6	0	0	0
MIN	0	0	3.6	4.3	13	.80	.20	2.7	0	0	0	0
AC-FT	0	326	385	6390	13550	6250	1720	810	54	0	0	0
CAL YR 1978	TOTAL	31551.30	MEAN	86.4	MAX	2290	MIN	0	AC-FT	62550		
WIP YR 1979	TOTAL	14868.90	MEAN	40.7	MAX	1410	MIN	0	AC-FT	29490		

11407500 SOUTH HONCUT CREEK NEAR BANGOR, CA

LOCATION.--Lat 39°22'04", long 121°22'16", in SE¼SE¼ sec.35, T.18 N., R.5 E., Butte County, Hydrologic Unit 18020124, on right bank 2.3 mi (3.7 km) southeast of Bangor, 3.3 mi (5.3 km) upstream from Tennessee Creek, and 16.3 mi (26.2 km) southeast of Oroville.

DRAINAGE AREA.--30.6 mi² (79.3 km²).

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 620 ft (189 m), from topographic map.

REMARKS.--Records good. Some small diversions upstream for irrigation.

AVERAGE DISCHARGE.--29 years, 35.1 ft³/s (0.994 m³/s), 25,430 acre-ft/yr (31.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s (498 m³/s) Dec. 26, 1964, gage height, 19.25 ft (5.867 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of slope-area measurements at gage heights 11.15 ft (3.399 m) and 19.25 ft (5.867 m); no flow at times in most years.

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)
Jan. 11	0900	1,790 50.7	7.50 2.286
Feb. 14	0430	*1,840 52.1	7.56 2.304
Feb. 28	2330	1,830 51.8	7.54 2.298

Minimum, no flow Aug. 12.

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	1.3	5.5	4.8	2.5	5.0	726	25	22	2.5	2.2	.27	.36
2	1.2	3.4	6.0	2.4	4.9	180	22	19	2.3	2.9	.07	.23
3	1.1	1.8	3.8	2.2	4.8	134	19	17	2.2	3.4	.07	.18
4	1.1	1.1	3.4	2.2	4.8	91	18	15	2.3	4.2	.15	.17
5	1.0	.84	2.4	2.3	4.8	71	17	21	2.3	3.5	3.9	.26
6	1.1	.96	1.6	2.3	4.8	58	18	19	2.1	1.4	.27	.19
7	1.1	.85	1.3	2.7	4.8	49	18	24	1.8	1.0	.09	.15
8	1.0	.77	1.2	63	4.7	42	16	21	1.6	.93	.03	.12
9	1.2	.81	1.3	45	4.7	36	16	16	1.6	.81	.02	.08
10	1.5	.72	1.4	40	4.6	30	15	13	1.8	.84	.01	.04
11	1.5	1.0	1.4	708	4.5	27	14	12	1.7	.66	.01	.03
12	1.5	2.3	1.5	59	4.5	24	13	10	1.6	.58	0	.03
13	1.5	4.5	1.4	22	198	22	12	9.7	2.3	.46	.39	.02
14	1.4	3.7	1.4	192	669	21	13	9.3	2.0	.31	.37	.01
15	1.5	3.4	1.5	426	96	36	12	9.0	4.5	.21	.45	.01
16	1.7	3.2	1.5	112	219	88	13	8.7	2.1	1.1	.41	.01
17	2.1	2.3	14	45	89	51	21	8.3	2.0	.66	.34	.07
18	1.9	1.7	16	27	271	34	33	8.2	2.0	.26	.24	.39
19	1.8	8.1	8.6	18	193	30	18	6.8	1.9	.17	.18	.74
20	2.0	27	4.8	14	419	27	15	6.4	2.0	.18	.35	.97
21	1.9	22	3.7	12	422	25	14	6.3	1.9	.23	.95	.75
22	1.8	21	3.5	10	329	23	15	6.3	1.8	1.3	.81	.15
23	1.6	11	3.1	9.0	207	21	72	5.7	1.3	1.2	.58	.13
24	2.2	6.4	2.8	8.2	106	20	83	4.7	2.1	.59	.43	.19
25	2.7	4.7	2.6	7.5	74	19	40	4.2	2.7	.47	.22	.52
26	2.8	3.7	2.5	7.0	65	18	42	3.9	4.1	.50	.17	.37
27	3.1	3.6	2.4	6.8	48	95	50	3.8	1.1	.18	.21	.42
28	3.1	3.2	2.3	6.2	564	84	31	3.8	1.0	.19	.19	.34
29	3.1	2.9	2.2	5.8	---	51	26	3.6	1.4	.16	.38	.24
30	3.8	2.9	2.2	5.5	---	37	25	3.1	.91	.12	.51	.17
31	5.0	---	2.4	5.2	---	30	---	2.8	---	.64	.55	---
TOTAL	59.6	155.35	109.0	1870.8	4025.9	2200	746	323.6	60.91	31.35	12.62	7.34
MEAN	1.92	5.18	3.52	60.3	144	71.0	24.9	10.4	2.03	1.01	.41	.24
MAX	5.0	27	16	708	669	726	83	24	4.5	4.2	3.9	.97
MIN	1.0	.72	1.2	2.2	4.5	18	12	2.8	.91	.12	0	.01
AC-FT	118	308	216	3710	7990	4360	1480	642	121	62	25	15

CAL YR 1978	TOTAL	16891.78	MEAN	46.3	MAX	1220	MIN	.25	AC-FT	33500
WTR YR 1979	TOTAL	9602.47	MEAN	26.3	MAX	726	MIN	0	AC-FT	19050

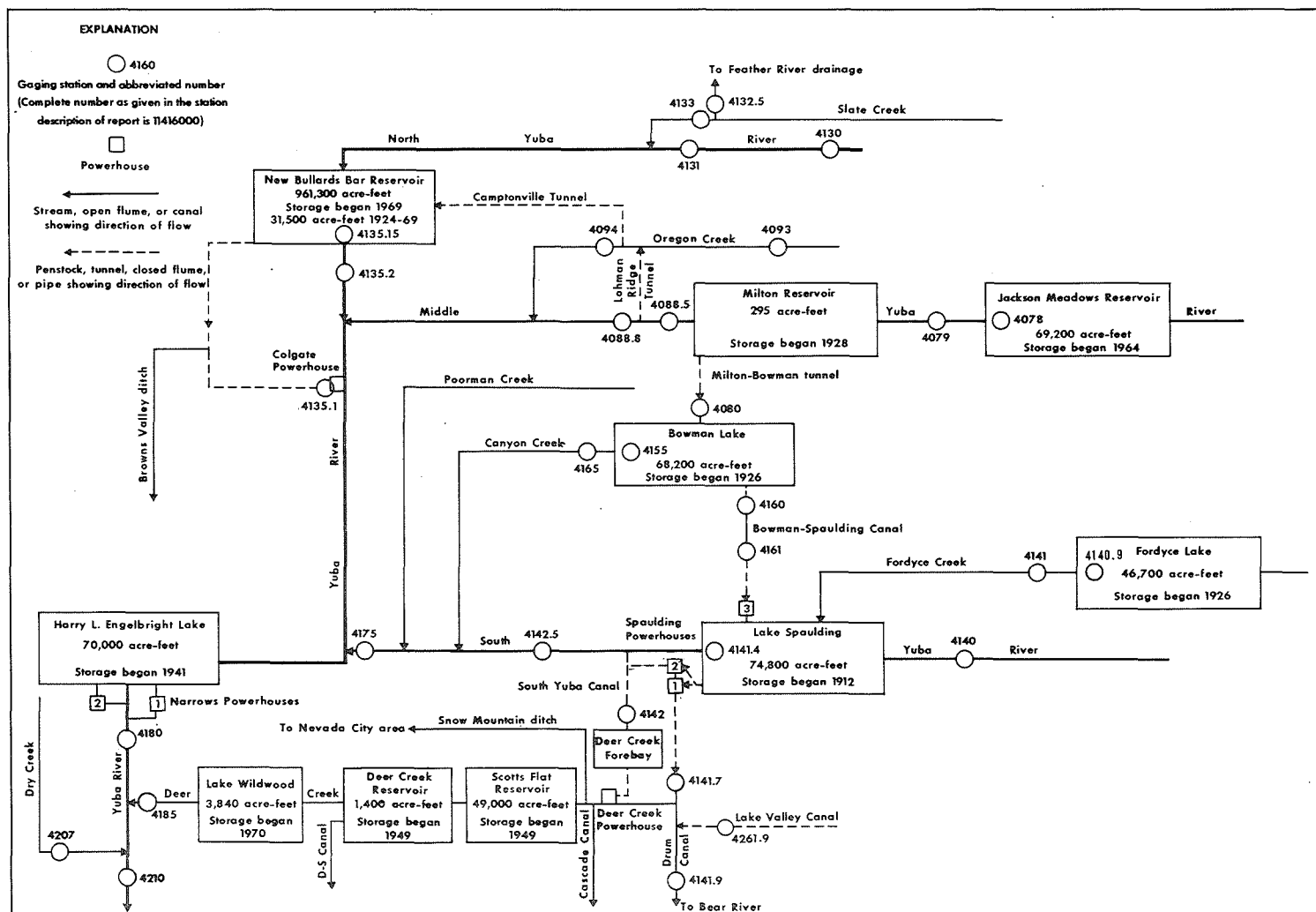


FIGURE 8.--Schematic diagram showing diversions and storage in Yuba River basin.

11407800 JACKSON MEADOWS RESERVOIR NEAR SIERRA CITY, CA

LOCATION.--Lat 39°30'40", long 120°33'15", in NW¼SE¼ sec.18, T.19 N., R.13 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank at Jackson Meadows Dam on Middle Yuba River, 0.7 mi (1.1 km) downstream from Pass Creek, and 5.7 mi (9.2 km) southeast of Sierra City.

DRAINAGE AREA.--37.6 mi² (97.4 km²).

PERIOD OF RECORD.--November 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District).

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Nov. 9, 1964. Usable capacity, 66,700 acre-ft (82.2 hm³) between elevations 5,933.0 ft (1,808.38 m), bottom of intake tower, and 6,036.0 ft (1,839.77 m), top of spillway Tainter gates. Dead storage, 2,500 acre-ft (3.08 hm³). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,000 acre-ft (87.5 hm³) on several days in 1969-71, elevation, 6,037.7 ft (1,840.29 m); minimum since reservoir first filled, 2,500 acre-ft (3.08 hm³) Sept. 27-29, 1976, elevation, 5,933.1 ft (1,808.41 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 67,900 acre-ft (83.7 hm³) June 29 to July 23, elevation, 6,034.8 ft (1,839.41 m); minimum, 26,600 acre-ft (32.8 hm³) Nov. 29 to Dec. 16, elevation, 5,988.5 ft (1,825.29 m).

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

5,930	2,000	5,990	27,600
5,940	3,920	6,000	35,300
5,950	6,760	6,010	43,900
5,960	10,600	6,020	53,200
5,970	15,400	6,030	63,000
5,980	21,000	6,040	73,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56100	39600	26600	26800	28200	29600	32000	41200	62200	67900	65000	62700
2	55600	39100	26600	26800	28200	29700	32100	41900	62700	67900	64800	62700
3	55100	38700	26600	26800	28200	29700	32200	42700	63200	67900	64500	62700
4	54600	38200	26600	26800	28300	29800	32300	43500	63700	67900	64200	62700
5	54000	37700	26600	26800	28300	29800	32400	44500	64200	67900	64000	62600
6	53600	37200	26600	26800	28300	29800	32700	45200	64600	67900	63800	62100
7	53000	36700	26600	26800	28300	29800	32800	45700	64900	67900	63600	61700
8	52400	36200	26600	26800	28300	29900	33100	45900	65200	67900	63400	61300
9	51900	35700	26600	26800	28300	30000	33200	46200	65600	67900	63200	61000
10	51400	35100	26600	26900	28300	30100	33400	46300	65800	67900	63200	60600
11	50900	34600	26600	27400	28300	30100	33600	46300	66100	67900	63100	60200
12	50300	34100	26600	27500	28300	30300	33800	46500	66300	67900	63100	59800
13	49800	33700	26600	27600	28500	30400	34000	46900	66500	67900	63000	59400
14	49200	33200	26600	27800	28600	30400	34400	47500	66600	67900	63000	59000
15	48700	32800	26600	27800	28700	30700	34800	48300	66700	67900	63000	58600
16	48100	32300	26600	27900	28800	30700	35200	49000	66900	67900	62900	58200
17	47700	31800	26800	27900	28900	30800	35600	50100	66900	67900	62900	57900
18	47100	31300	26800	28000	28900	30900	35800	51200	67100	67900	62900	57600
19	46600	30900	26800	28000	29000	31000	36100	52300	67200	67900	62800	57400
20	46000	30500	26800	28000	29100	31000	36300	53600	67300	67900	62800	57000
21	45500	30100	26800	28100	29200	31100	36600	54700	67400	67900	62800	56600
22	44900	29600	26800	28100	29300	31100	36800	55800	67500	67900	62800	56300
23	44400	29100	26800	28100	29400	31200	37200	56600	67600	67900	62800	55900
24	43900	28600	26800	28100	29400	31300	37300	57400	67700	67800	62800	55500
25	43300	28200	26800	28100	29400	31300	37600	58200	67700	67500	62800	55100
26	42800	27700	26800	28100	29500	31500	38000	59100	67800	67100	62800	54700
27	42300	27200	26800	28100	29500	31700	38700	59900	67800	66700	62800	54500
28	41800	26800	26800	28100	29600	31700	39400	60400	67800	66400	62700	54400
29	41200	26600	26800	28100	---	31800	39900	60800	67900	66100	62700	54300
30	40700	26600	26800	28100	---	31900	40600	61200	67900	65800	62700	54300
31	40200	---	26800	28200	---	32000	---	61700	---	65500	62700	---
MAX	56100	39600	26800	28200	29600	32000	40600	61700	67900	67900	65000	62700
MIN	40200	26600	26600	26800	28200	29600	32000	41200	62200	65500	62700	54300
†	6005.7	5988.5	5988.8	5990.8	5992.7	5995.8	6006.2	6028.7	6034.8	6032.4	6029.7	6021.2
‡	-16400	-13600	+200	+1400	+1400	+2400	+8600	+21100	+6200	-2400	-2800	-8400

CAL YR 1978 † +21120
WTR YR 1979 † -2300

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

‡ Change in contents, in acre-feet.

11407900 MIDDLE YUBA RIVER BELOW JACKSON MEADOWS DAM, NEAR SIERRA CITY, CA

LOCATION.--Lat 39°30'58", long 120°33'40", in SE4NW4 sec.18, T.19 N., R.13 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 0.6 mi (1.0 km) downstream from Jackson Meadows Dam, and 5.2 mi (8.4 km) southeast of Sierra City.

DRAINAGE AREA.--38.3 mi² (99.2 km²).

PERIOD OF RECORD.--October 1964 to current year. If record for Milton-Bowman tunnel near Graniteville is added to record published as Middle Yuba River at Milton, a record equivalent to this site can be obtained for the period 1928-64.

GAGE.--Water-stage recorder. Datum of gage is 5,717.20 ft (1,742.603 m) National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District).

REMARKS.--Records good. Flow regulated by Jackson Meadows Reservoir since November 1964 (station 11407800). See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE (adjusted for change in contents in Jackson Meadows Reservoir).--15 years, 107 ft³/s (3.030 m³/s), 77,520 acre-ft/yr (95.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s (65.1 m³/s) Sept. 1, 1965, gage height, 6.60 ft (2.012 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of computation of flow over Milton Dam at gage height, 10.57 ft (3.222 m); no flow many days in 1976-77.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1925, 10.57 ft (3.222 m) Jan. 31, 1963, from floodmarks, discharge, 10,000 ft³/s (283 m³/s) by computation of flow over Milton Dam, adjusted for diversion and inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 293 ft³/s (8.30 m³/s) Sept. 25, gage height, 4.75 ft (1.448 m); minimum daily, 4.1 ft³/s (0.12 m³/s) Dec. 17.

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	249	256	5.4	4.4	4.7	5.0	7.0	13	7.2	4.9	149	4.9
2	250	253	4.7	4.4	4.7	4.4	7.0	47	7.0	4.9	142	4.9
3	246	253	4.4	4.4	4.7	4.4	7.0	88	7.0	4.9	134	4.9
4	246	253	4.4	4.4	4.7	4.4	7.3	88	6.8	4.9	121	54
5	253	253	4.4	4.4	4.7	4.5	8.8	92	6.5	4.9	112	89
6	263	253	4.4	4.4	4.7	4.8	10	90	6.5	4.9	106	142
7	263	253	4.4	4.4	4.7	5.4	10	88	6.5	4.9	98	208
8	263	249	4.4	4.4	4.7	6.3	10	88	6.5	4.9	97	188
9	263	249	4.4	4.4	4.7	6.6	10	88	6.4	4.9	93	176
10	263	246	4.4	4.9	4.7	6.7	9.7	172	6.1	4.9	42	169
11	263	246	4.4	17	4.7	7.3	9.7	228	6.1	4.9	4.8	201
12	266	246	4.4	7.3	4.7	8.0	10	228	6.1	4.9	4.6	222
13	266	246	4.4	6.1	6.6	8.0	12	228	5.6	4.9	4.6	202
14	266	246	4.4	5.0	9.0	7.6	12	228	5.3	4.9	4.6	189
15	263	246	4.4	5.4	7.0	7.5	13	228	5.3	4.9	4.6	180
16	263	242	4.4	5.1	6.6	7.5	14	228	5.3	4.9	4.6	172
17	263	242	4.1	5.0	5.8	7.1	12	177	5.3	4.9	4.6	165
18	263	242	4.4	5.0	5.4	7.0	10	146	5.3	4.9	4.6	130
19	260	242	4.4	5.0	5.4	6.7	9.7	146	5.3	4.9	4.6	106
20	260	242	4.4	5.0	5.2	6.6	9.7	146	5.3	4.9	4.6	162
21	260	242	4.4	5.0	5.0	6.6	9.9	146	5.1	4.9	4.6	214
22	260	239	4.4	5.0	5.0	6.5	10	146	4.9	4.9	4.6	193
23	260	239	4.4	5.0	5.0	6.5	9.7	148	4.9	4.9	4.6	172
24	260	239	4.4	5.0	5.0	6.5	9.7	148	4.9	72	4.6	153
25	260	235	4.4	5.0	5.0	6.6	9.7	148	4.9	154	4.6	216
26	260	235	4.4	4.7	5.0	7.0	12	148	4.9	194	4.6	169
27	260	232	4.4	4.7	5.0	7.4	15	148	4.9	182	4.6	88
28	260	232	4.4	4.7	5.0	7.4	14	148	5.0	176	4.8	51
29	256	125	4.4	4.7	---	7.0	14	148	4.9	166	4.9	33
30	256	5.0	4.4	4.7	---	7.0	14	88	4.9	158	4.9	23
31	256	---	4.4	4.7	---	7.0	---	7.9	---	156	4.9	---
TOTAL	8040	6981.0	137.4	163.6	147.4	201.3	316.9	4260.9	170.7	1370.7	1191.9	4081.7
MEAN	259	233	4.43	5.28	5.26	6.49	10.6	137	5.69	44.2	38.4	136
MAX	266	256	5.4	17	9.0	8.0	15	228	7.2	194	149	222
MIN	246	5.0	4.1	4.4	4.7	4.4	7.0	7.9	4.9	4.9	4.6	4.9
AC-FT	15950	13850	273	325	292	399	629	8450	339	2720	2360	8100

CAL YR 1978 TOTAL 35707.3 MEAN 97.8 MAX 578 MIN 4.1 AC-FT 70830 MEAN ‡ 127 AC-FT ‡ 91950
WTR YR 1979 TOTAL 27063.5 MEAN 74.1 MAX 266 MIN 4.1 AC-FT 53680 MEAN ‡ 71.0 AC-FT ‡ 51380

‡ Adjusted for change in contents in Jackson Meadows Reservoir.

11408000 MILTON-BOWMAN TUNNEL OUTLET NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°27'36", long 120°36'40", in NW¼NE¼ sec.3, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank 100 ft (30 m) downstream from tunnel outlet near upper end of Bowman Lake, and 6.9 mi (11.1 km) east of Graniteville.

PERIOD OF RECORD.--May 1928 to September 1930, February 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1962, published as "Milton-Bowman tunnel at outlet."

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 5,592.51 ft (1,704.597 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1964, at datum 0.56 ft (0.171 m) higher.

REMARKS.--Records good. Tunnel diverts from Middle Yuba River at Milton, in sec.12, T.19 N., R.12 E., and discharges into Bowman Lake. Practically the entire flow of Middle Yuba River is diverted during low and medium flows. Middle Yuba River is regulated by Jackson Meadows Reservoir (station 11407800) since November 1964. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--51 years, 72.6 ft³/s (2.056 m³/s), 52,600 acre-ft/yr (64.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 492 ft³/s (13.9 m³/s) Feb. 11, 1941; minimum daily, 0.4 ft³/s (0.011 m³/s) Oct. 7, 1944.

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	248	255	8.9	3.7	5.7	7.9	13	44	25	6.0	146	4.9
2	247	255	6.9	3.9	5.6	6.8	13	64	23	6.0	138	4.7
3	246	253	5.6	3.9	5.5	6.7	14	132	22	6.0	132	4.7
4	245	252	5.2	4.0	5.3	6.7	15	135	21	5.9	122	26
5	247	251	5.1	4.1	5.2	6.9	18	146	20	5.7	112	89
6	253	250	4.6	4.1	5.2	7.8	22	140	19	5.7	107	114
7	254	250	4.4	4.1	5.2	9.3	21	127	17	5.5	97	204
8	253	249	4.2	4.8	5.1	10	22	119	16	5.5	94	186
9	252	248	4.1	5.1	5.0	11	24	116	15	5.5	91	170
10	252	247	4.1	5.1	5.0	13	21	167	14	5.5	64	166
11	254	246	4.1	4.5	5.0	15	21	249	11	5.5	11	182
12	265	246	4.1	24	5.0	16	22	261	10	5.6	7.6	231
13	266	245	4.1	13	7.9	17	27	269	9.9	5.6	6.9	203
14	265	244	4.0	11	19	16	30	275	9.0	5.5	6.5	187
15	265	243	3.9	10	12	18	32	278	8.6	5.5	6.4	178
16	264	242	3.8	8.4	11	17	34	280	8.2	5.5	6.2	169
17	264	241	4.5	7.9	9.8	16	31	280	8.5	5.4	6.0	160
18	263	240	5.3	7.5	9.7	15	26	200	8.8	5.2	5.7	135
19	262	241	4.0	7.0	9.7	14	24	195	8.2	5.2	5.7	103
20	262	242	3.8	6.9	9.0	14	23	193	8.2	5.2	5.7	144
21	261	240	3.7	6.7	9.3	13	24	194	8.1	5.5	5.7	218
22	260	237	3.7	6.5	8.8	13	26	194	7.8	5.7	5.3	195
23	258	236	3.7	6.5	8.4	13	25	190	7.5	5.5	4.9	172
24	259	235	3.7	6.5	7.4	13	23	187	7.0	46	4.7	151
25	258	234	3.7	6.4	7.2	14	23	185	6.9	135	4.7	197
26	258	232	3.7	6.0	7.4	15	33	185	6.7	193	4.5	201
27	257	231	3.7	6.2	7.1	18	52	182	6.3	182	4.5	98
28	256	230	3.7	6.1	7.4	16	47	178	6.0	176	4.6	56
29	255	164	3.7	5.8	---	15	44	175	6.0	167	5.7	33
30	254	13	3.7	5.7	---	14	45	143	6.0	156	5.3	22
31	255	---	3.7	5.7	---	14	---	30	---	151	5.3	---
TOTAL	7958	6992	135.4	251.6	213.9	402.1	795	5513	350.7	1334.2	1225.9	4004.3
MEAN	257	233	4.37	8.12	7.64	13.0	26.5	178	11.7	43.0	39.5	133
MAX	266	255	8.9	45	19	18	52	280	25	193	146	231
MIN	245	13	3.7	3.7	5.0	6.7	13	30	6.0	5.2	4.5	4.7
AC-FT	15780	13870	269	499	424	798	1580	10940	696	2650	2430	7940
CAL YR 1978	TOTAL	32685.3	MEAN 89.5	MAX 302	MIN 3.7	AC-FT 64830						
WTR YR 1979	TOTAL	29176.1	MEAN 79.9	MAX 280	MIN 3.7	AC-FT 57870						

SACRAMENTO RIVER BASIN

11408850 MIDDLE YUBA RIVER NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°25'01", long 120°57'06", in SW¼SE¼ sec.15, T.18 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 0.6 mi (1.0 km) downstream from Kanaka Creek, and 5.8 mi (9.3 km) southeast of Camptonville.

DRAINAGE AREA.--136 mi² (352 km²).

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,170 ft (661 m), from topographic map.

REMARKS.--Records excellent. Natural flow of stream affected by Jackson Meadows Reservoir since November 1964 (station 11407800), Milton-Bowman tunnel (station 11408000) which diverts above station to Bowman Lake (station 11415500), and other small diversions above station. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--12 years, 302 ft³/s (8.553 m³/s), 218,800 acre-ft/yr (270 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s (348 m³/s) Jan. 21, 1970, gage height, 14.80 ft (4.511 m); minimum daily, 11 ft³/s (0.31 m³/s) July 29, Aug. 17, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,980 ft³/s (84.4 m³/s) Jan. 11, gage height, 9.96 ft (3.036 m); minimum daily, 27 ft³/s (0.76 m³/s) Sept. 18, 19.

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	33	30	102	45	78	321	425	657	290	70	38	35
2	33	32	85	45	78	254	395	603	272	69	37	34
3	32	34	61	42	73	248	373	665	264	68	37	33
4	32	34	52	42	73	256	370	704	260	67	37	33
5	32	32	49	42	73	301	413	888	251	66	37	33
6	32	31	48	43	72	442	544	980	240	65	37	32
7	32	31	44	46	71	576	492	955	219	63	36	31
8	32	30	43	99	71	641	478	800	196	62	36	31
9	32	30	43	124	71	641	502	691	179	60	35	30
10	32	30	43	107	75	638	462	622	167	59	35	30
11	31	31	43	1580	77	680	442	600	159	60	35	29
12	31	33	42	622	78	658	430	618	151	58	35	29
13	30	39	41	303	235	624	458	650	144	56	35	29
14	30	38	40	269	846	603	494	705	137	54	35	29
15	29	35	40	320	425	702	513	744	129	53	35	29
16	30	34	39	235	335	692	542	764	122	51	35	28
17	30	35	63	180	263	559	526	748	120	50	34	28
18	30	35	71	151	271	489	457	773	122	48	33	27
19	30	46	58	132	310	430	400	782	114	47	34	27
20	30	140	50	123	310	389	372	770	108	46	33	28
21	30	131	48	117	359	356	360	755	100	51	34	28
22	30	92	48	112	307	335	372	735	96	53	34	28
23	29	62	48	107	263	314	405	658	93	51	34	28
24	29	51	48	105	228	309	430	597	89	48	34	28
25	29	44	48	103	212	329	404	555	85	46	33	30
26	29	42	49	93	250	355	504	554	83	44	32	31
27	29	40	49	89	245	787	825	546	80	43	32	30
28	29	38	48	85	284	833	750	487	78	42	32	29
29	29	38	46	79	---	642	692	418	75	42	39	29
30	29	42	45	81	---	533	658	357	74	40	38	28
31	29	---	45	82	---	466	---	316	---	39	37	---
TOTAL	944	1360	1579	5603	6033	15403	14488	20697	4497	1671	1088	894
MEAN	30.5	45.3	50.9	181	215	497	483	668	150	53.9	35.1	29.8
MAX	33	140	102	1580	846	833	825	980	290	70	39	35
MIN	29	30	39	42	71	248	360	316	74	39	32	27
AC-FT	1870	2700	3130	11110	11970	30550	28740	41050	8920	3310	2160	1770
CAL YR 1978	TOTAL	127259	MEAN 349	MAX 2590	MIN 29	AC-FT 252400						
WTR YR 1979	TOTAL	74257	MEAN 203	MAX 1580	MIN 27	AC-FT 147300						

11408880 MIDDLE YUBA RIVER BELOW OUR HOUSE DAM, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°24'42", long 120°59'49", in SW¼NW¼ sec.20, T.18 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 400 ft (122 m) downstream from Our House Dam, and 4.0 mi (6.4 km) southeast of Camptonville.

DRAINAGE AREA.--145 mi² (376 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,957.51 ft (596.649 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 4, 1970, at datum 10.0 ft (3.05 m) higher.

REMARKS.--Records excellent. Natural flow of stream affected by Jackson Meadows Reservoir since November 1964 (station 11407800), Milton-Bowman tunnel (station 11408000) which diverts above station to Bowman Lake (station 11415500), Lohman Ridge tunnel since October 1968 which diverts up to 400 ft (122 m) upstream to Oregon Creek and then to Bullards Bar Reservoir via Camptonville tunnel. Other small diversions above station. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--11 years, 121 ft³/s (3,427 m³/s), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (354 m³/s) Jan. 21, 1970, gage height, 20.70 ft (6.309 m) present datum; minimum daily, 3.2 ft³/s (0.091 m³/s) Oct. 21 to Nov. 4, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft³/s (63.7 m³/s) Jan. 11, gage height, 15.33 ft (4.673 m); minimum daily, 28 ft³/s (0.79 m³/s) Sept. 18-24.

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	30	32	35	33	33	31	30	50	47	32	33	30
2	30	32	35	33	33	30	30	49	48	31	33	30
3	30	32	34	33	34	30	30	50	49	31	33	30
4	30	32	34	33	34	30	30	50	49	31	33	30
5	30	32	34	33	34	30	30	115	49	32	33	30
6	30	32	34	33	34	31	31	172	49	32	33	30
7	30	32	34	33	32	31	31	153	49	32	32	30
8	31	32	33	35	32	32	31	56	48	33	32	30
9	31	32	33	36	32	32	31	51	48	33	32	30
10	31	32	33	36	31	32	31	50	48	33	32	29
11	31	32	33	878	31	32	31	49	48	33	32	29
12	31	32	33	60	31	32	31	50	48	33	32	29
13	31	33	33	40	32	32	31	51	48	33	32	29
14	31	33	33	39	122	32	43	52	48	33	32	29
15	32	33	33	40	33	33	55	53	48	33	33	29
16	32	33	33	38	30	33	50	53	40	33	33	29
17	32	33	34	36	29	32	50	52	32	33	33	29
18	32	33	35	36	30	31	49	51	32	33	32	28
19	32	33	35	35	31	30	49	52	32	33	32	28
20	32	35	34	35	30	30	48	51	32	33	32	28
21	32	36	34	34	31	30	48	49	32	33	32	28
22	32	35	34	34	30	30	48	49	32	33	32	28
23	32	35	34	34	30	30	49	48	32	33	32	28
24	32	34	34	34	29	29	50	48	32	33	32	28
25	32	34	34	34	29	30	49	48	32	33	31	29
26	32	34	34	33	29	29	50	50	32	33	31	29
27	32	34	34	33	30	135	55	50	32	33	31	29
28	32	34	34	33	30	105	53	49	32	33	31	29
29	32	34	34	33	---	33	50	49	32	33	31	29
30	32	34	34	33	---	31	49	48	32	33	30	29
31	32	---	33	33	---	31	---	47	---	33	30	---
TOTAL	971	994	1048	1943	966	1139	1243	1845	1212	1013	992	872
MEAN	31.3	33.1	33.8	62.7	34.5	36.7	41.4	59.5	40.4	32.7	32.0	29.1
MAX	32	36	35	878	122	135	55	172	49	33	33	30
MIN	30	32	33	33	29	29	30	47	32	31	30	28
AC-FT	1930	1970	2080	3850	1920	2260	2470	3660	2400	2010	1970	1730
†	120	980	1340	8300	11180	31160	28970	41250	7360	1610	390	210
CAL YR 1978	TOTAL	27713	MEAN 75.9	MAX 1770	MIN 22	AC-FT 54970						
WTR YR 1979	TOTAL	14238	MEAN 39.0	MAX 878	MIN 28	AC-FT 28240						

† Diversion, in acre-feet, to Lohman Ridge tunnel.

SACRAMENTO RIVER BASIN

11409300 OREGON CREEK AT CAMPTONVILLE, CA

LOCATION.--Lat 39°26'46", long 121°02'43", in SE¼NE¼ sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 25 ft (8 m) downstream from county bridge, 0.5 mi (0.8 km) southeast of Camptonville, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--23.0 mi² (59.6 km²).

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,230 ft (680 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--12 years, 66.5 ft³/s (1.883 m³/s), 48,180 acre-ft/yr (59.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,130 ft³/s (88.6 m³/s) Jan. 21, 1970, gage height, 10.07 ft (3.069 m); minimum daily, 0.53 ft³/s (0.015 m³/s) Aug. 14-16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 955 ft³/s (27.0 m³/s) Jan. 11, gage height, 6.76 ft (2.060 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 1.3 ft³/s (0.037 m³/s) Sept. 19.

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	2.7	2.3	20	5.0	15	128	164	141	31	8.2	2.7	2.6
2	2.7	2.5	14	4.9	15	87	150	130	28	8.0	2.6	2.5
3	2.6	2.5	8.9	4.7	14	83	138	124	27	7.9	2.5	2.4
4	2.6	2.4	6.9	5.0	14	88	130	121	25	7.8	2.4	2.3
5	2.6	2.4	6.5	5.2	14	106	131	176	24	7.6	2.4	2.2
6	2.6	2.2	5.4	5.5	14	154	166	202	22	7.2	2.4	2.1
7	2.6	2.2	4.6	6.6	14	196	162	271	21	6.9	2.4	2.0
8	2.6	2.2	4.8	31	14	227	151	238	20	6.5	2.4	1.9
9	2.6	2.2	4.6	42	14	239	148	199	19	6.3	2.3	1.9
10	2.6	2.1	4.6	31	15	245	139	169	18	6.2	2.3	1.8
11	2.7	2.3	4.4	482	16	263	131	150	17	6.2	2.3	1.8
12	2.6	2.9	4.5	158	17	259	123	138	16	5.9	2.3	1.7
13	2.4	4.4	4.2	86	81	254	121	133	15	5.5	2.4	1.6
14	2.4	4.0	4.0	71	227	249	121	130	15	5.1	2.5	1.6
15	2.4	3.1	3.7	75	126	334	122	125	14	4.8	2.5	1.5
16	2.4	3.5	3.5	58	102	333	128	119	14	4.7	2.4	1.5
17	2.3	3.5	8.5	46	80	255	132	110	14	4.5	2.3	1.4
18	2.4	3.4	9.6	37	85	217	123	103	14	4.1	2.3	1.4
19	2.4	6.2	6.7	31	99	187	111	98	13	4.0	2.2	1.3
20	2.4	31	5.8	28	94	168	100	91	13	3.9	2.2	1.4
21	2.5	29	5.5	27	114	150	93	83	12	4.8	2.4	1.5
22	2.4	18	5.4	25	88	142	90	76	11	5.4	2.6	1.5
23	2.2	11	5.4	24	75	134	100	68	11	4.5	2.4	1.5
24	2.1	7.4	5.5	23	62	130	126	62	11	4.0	2.3	1.5
25	2.1	6.1	5.8	23	58	130	116	56	10	3.8	2.2	1.9
26	2.1	5.3	5.9	20	89	136	135	52	9.6	3.5	2.1	2.1
27	2.1	4.7	6.0	19	88	320	197	48	9.1	3.3	2.0	2.1
28	2.1	4.4	5.9	18	110	348	182	45	9.0	3.2	2.1	2.0
29	2.1	4.3	5.2	16	---	264	164	41	8.6	3.2	2.6	1.8
30	2.2	4.5	5.0	18	---	214	149	37	8.3	3.1	3.0	1.7
31	2.1	---	5.0	17	---	183	---	33	---	3.0	2.9	---
TOTAL	74.6	182.0	195.8	1442.9	1754	6223	4043	3569	479.6	163.1	74.4	54.5
MEAN	2.41	6.07	6.32	46.5	62.6	201	135	115	16.0	5.26	2.40	1.82
MAX	2.7	31	20	482	227	348	197	271	31	8.2	3.0	2.6
MIN	2.1	2.1	3.5	4.7	14	83	90	33	8.3	3.0	2.0	1.3
AC-FT	148	361	388	2860	3480	12340	8020	7080	951	324	148	108
CAL YR 1978 TOTAL	28519.3			MEAN 78.1	MAX 848	MIN 1.6	AC-FT 56570					
WTR YR 1979 TOTAL	18255.9			MEAN 50.0	MAX 482	MIN 1.3	AC-FT 36210					

11409400 OREGON CREEK BELOW LOG CABIN DAM, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°26'22", long 121°03'29", in SW¼SW¼ sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 500 ft (152 m) downstream from Log Cabin Dam, 670 ft (204 m) upstream from High Point Ravine, and 1.1 mi (1.8 km) southwest of Camptonville.

DRAINAGE AREA.--29.1 mi² (75.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,919.96 ft (585.204 m) National Geodetic Vertical Datum of 1929 (levels by Yuba County Water Agency). Prior to July 24, 1973, at site 470 ft (143 m) downstream at datum 8.40 ft (2.560 m) lower.

REMARKS.--Records good. Camptonville tunnel, maximum capacity, about 830 ft³/s (23.5 m³/s), 520 ft (158 m) upstream, diverts to New Bullards Bar Reservoir (station 11413515); diversion began October 1968. See schematic diagram showing diversions and storage in Yuba River basin.

AVERAGE DISCHARGE.--11 years, 34.1 ft³/s (0.966 m³/s), 24,710 acre-ft/yr (30.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft³/s (118 m³/s) Jan. 21, 1970, gage height, 7.02 ft (2.140 m) previous site and datum; maximum gage height, 7.51 ft (2.289 m) Jan. 16, 1970; minimum daily discharge, 0.34 ft³/s (0.010 m³/s) Sept. 18, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 895 ft³/s (25.3 m³/s) Jan. 11, gage height, 6.13 ft (1.868 m); minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 16-19.

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	7.9	4.9	6.7	4.9	6.8	8.4	8.6	14	11	6.5	10	7.9
2	7.9	5.8	7.0	5.0	6.8	7.7	8.4	14	11	6.5	9.7	7.9
3	7.9	6.0	6.6	4.9	6.8	7.4	8.3	14	11	6.5	9.4	7.6
4	8.1	5.9	6.3	4.9	6.8	7.5	8.1	14	11	6.3	9.1	7.4
5	8.1	5.4	6.3	4.9	6.8	7.7	8.4	15	11	6.3	9.0	7.1
6	8.1	4.7	6.3	5.1	6.8	8.5	8.8	15	11	6.3	8.8	6.6
7	7.4	4.2	6.1	5.2	6.8	9.1	8.7	16	11	6.3	8.7	5.9
8	6.9	4.0	5.5	6.2	6.8	9.5	8.6	15	11	6.3	8.6	5.3
9	5.9	3.8	7.7	9.3	7.3	9.7	8.6	15	10	6.1	8.5	5.5
10	5.9	3.5	9.7	8.3	7.9	9.0	8.5	14	10	6.1	8.4	5.2
11	5.9	3.9	9.7	281	7.9	8.4	8.4	14	9.8	5.9	8.0	4.5
12	5.9	5.4	9.7	7.1	7.9	8.3	8.4	14	9.4	8.7	8.0	4.2
13	5.7	5.8	9.6	5.6	9.4	8.2	8.4	14	9.3	23	7.7	3.7
14	5.4	7.3	9.4	5.5	12	8.1	10	14	9.4	21	7.9	3.4
15	5.0	6.3	9.4	5.7	8.2	8.8	13	14	9.4	9.9	7.4	3.2
16	5.2	5.3	9.1	5.2	7.9	8.9	13	14	9.3	9.7	7.1	3.1
17	5.3	4.9	8.4	4.8	7.5	8.1	13	14	9.4	9.2	6.7	3.1
18	5.3	4.8	7.9	4.5	7.7	7.8	13	14	9.4	8.6	6.2	3.1
19	5.1	5.2	7.4	4.4	8.0	7.6	12	14	9.3	8.5	5.8	3.1
20	5.3	6.7	8.3	4.4	7.9	7.4	12	14	9.2	8.4	5.7	3.2
21	5.3	6.4	11	4.4	8.2	7.2	12	14	9.0	8.6	7.1	3.2
22	5.1	5.6	11	5.4	7.9	7.1	12	14	8.9	8.7	7.6	3.3
23	4.6	4.9	10	7.2	7.7	7.0	12	14	8.9	8.6	7.0	3.2
24	3.8	4.5	10	7.2	7.3	7.7	13	13	8.4	8.5	6.7	3.3
25	3.9	4.4	10	7.2	7.2	8.2	12	13	7.3	8.4	7.4	4.1
26	4.1	4.3	10	7.0	7.6	8.4	13	13	6.5	8.3	7.0	6.4
27	4.2	4.2	10	7.0	7.5	22	15	13	6.5	8.1	6.6	6.1
28	4.2	4.6	9.6	7.0	8.1	10	15	13	6.8	8.1	6.6	5.1
29	3.8	4.4	8.9	6.8	---	8.5	14	12	6.7	8.1	8.1	4.3
30	3.6	4.8	7.1	7.0	---	8.0	14	12	6.5	7.0	8.1	3.7
31	3.2	---	5.4	7.0	---	8.1	---	12	---	8.5	8.1	---
TOTAL	174.0	151.9	260.1	460.1	215.5	268.3	328.2	429	277.4	267.0	241.0	143.7
MEAN	5.61	5.06	8.39	14.8	7.70	8.65	10.9	13.8	9.25	8.61	7.77	4.79
MAX	8.1	7.3	11	281	12	22	15	16	11	23	10	7.9
MIN	3.2	3.5	5.4	4.4	6.8	7.0	8.1	12	6.5	5.9	5.7	3.1
AC-FT	345	301	516	913	427	532	651	851	550	530	478	285
†	0	1140	1320	11010	15150	46240	38470	49360	8010	1490	99	62

CAL YR 1978 TOTAL 6454.2 MEAN 17.7 MAX 657 MIN 3.2 AC-FT 12800
WTR YR 1979 TOTAL 3216.2 MEAN 8.81 MAX 281 MIN 3.1 AC-FT 6380

† Camptonville tunnel diversion, in acre-feet, to New Bullards Bar Reservoir.

11409400 OREGON CREEK BELOW LOG CABIN DAM, NEAR CAMPTONVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1971 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder from Aug. 17, 1971 to Jan. 31, 1979.

REMARKS.--Prior to July 24, 1973, at site 470 ft (143 m) downstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C July 16-18, 1972, Aug. 8, 1978; minimum recorded, 0.0°C Dec. 31, Jan 29, 30.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 17.5°C Oct. 1-6; minimum recorded, 0.0°C Dec. 31, Jan. 29, 30.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.5	16.5	---	---	7.5	6.0	1.5	0.5				
2	17.5	16.5	---	---	6.0	4.5	1.5	1.0				
3	17.5	16.5	---	---	4.5	4.0	1.5	1.0				
4	17.5	16.5	---	---	4.5	4.0	2.5	1.5				
5	17.5	16.5	---	---	4.5	3.5	3.0	2.5				
6	17.5	16.5	---	---	3.5	2.5	3.5	3.0				
7	17.0	16.0	10.5	9.0	2.5	2.0	4.0	3.5				
8	16.5	15.5	10.0	9.5	2.5	1.5	4.5	4.0				
9	16.5	15.5	9.5	9.0	2.0	1.5	5.0	4.0				
10	16.5	15.5	9.5	8.0	2.0	1.5	5.5	5.0				
11	16.5	15.5	8.5	7.5	3.0	2.0	6.5	5.5				
12	16.5	15.5	8.0	6.5	4.0	3.0	6.5	5.5				
13	16.0	15.0	7.0	5.5	4.0	3.5	5.5	4.5				
14	16.0	15.0	5.5	5.0	3.5	3.0	4.5	3.5				
15	16.0	14.5	5.5	5.0	3.5	3.0	4.0	3.5				
16	16.0	14.5	6.5	5.5	3.0	2.5	4.0	4.0				
17	15.5	14.5	6.5	6.0	3.0	2.0	4.0	3.5				
18	15.5	14.0	6.0	5.5	2.0	1.5	4.0	3.5				
19	15.5	14.0	6.5	6.0	2.5	1.5	3.5	3.0				
20	---	---	7.0	6.0	2.0	1.0	3.5	3.0				
21	---	---	6.5	6.5	1.5	1.0	3.5	3.0				
22	---	---	6.5	6.5	1.5	1.5	3.5	3.0				
23	---	---	6.5	5.5	1.5	1.5	3.0	3.0				
24	---	---	5.5	5.5	2.0	1.5	3.5	3.0				
25	---	---	5.5	4.5	2.0	1.5	3.5	2.5				
26	---	---	5.0	4.5	1.5	1.5	2.5	1.5				
27	---	---	4.5	4.0	2.0	1.5	1.5	1.0				
28	---	---	5.0	4.0	2.0	1.5	1.5	0.5				
29	---	---	6.5	5.0	1.5	1.0	0.5	0.0				
30	---	---	7.0	6.5	1.5	1.0	0.5	0.0				
31	---	---	---	---	1.5	0.0	1.5	0.5				
MONTH	---	---	10.5	4.0	7.5	0.0	6.5	0.0				

11413000 NORTH YUBA RIVER BELOW GOODYEARS BAR, CA

LOCATION.--Lat 39°31'30", long 120°56'13", in NE4SW4 sec.11, T.19 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 200 ft (61 m) downstream from St. Catherine Creek, 3.1 mi (5.0 km) southwest of Goodyears Bar, and 6.4 mi (10.3 km) southwest of Downieville.

DRAINAGE AREA.--250 mi² (648 km²).

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1949, published as North Fork Yuba River below Goodyears Bar. Monthly and yearly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1041: 1944. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,453 ft (747.7 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records excellent. Several small diversions above station for irrigation and mining. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--49 years, 742 ft³/s (21.01 m³/s), 537,600 acre-ft/yr (663 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Feb. 1, 1963, gage height, 25.8 ft (7.25 m) from floodmarks, from rating curve extended above 8,500 ft³/s (241 m³/s) on basis of one float measurement at 17,900 ft³/s (507 m³/s) and slope-area measurements at gage heights 19.15 ft (5.837 m) and 23.8 ft (7.25 m); minimum daily, 60 ft³/s (1.70 m³/s) Sept. 7-14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (90.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 11	1400	3,430 97.1	8.00 2.438
May 21	2100	*3,500 99.1	8.07 2.460

Minimum daily, 126 ft³/s (3.57 m³/s) Sept. 30.

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	167	143	273	139	200	499	769	1760	1370	344	193	163
2	165	151	212	142	200	431	735	1710	1320	336	191	159
3	162	153	174	141	189	415	715	1970	1330	329	189	156
4	161	147	170	145	191	425	729	2210	1330	324	186	155
5	161	144	181	149	189	490	839	2520	1300	314	183	152
6	159	142	158	147	189	683	1160	2330	1240	305	181	148
7	157	140	145	155	187	913	999	2260	1100	298	180	145
8	157	139	145	303	186	1060	1010	1880	952	292	181	143
9	157	138	159	271	189	1120	1080	1640	869	286	177	141
10	155	137	154	253	196	1140	970	1520	816	281	175	139
11	154	137	150	2140	200	1230	927	1540	782	279	173	137
12	152	145	150	1430	199	1230	908	1690	756	270	173	135
13	149	164	147	708	630	1210	1070	1940	721	261	172	134
14	147	158	145	610	1540	1130	1220	2190	677	254	172	132
15	146	148	144	627	756	1300	1310	2420	636	247	171	131
16	147	155	141	585	608	1270	1400	2530	606	241	169	130
17	148	157	233	419	505	1050	1250	2600	602	236	167	129
18	146	152	211	315	478	925	1090	2740	588	232	164	128
19	145	195	172	284	491	830	956	2830	551	227	162	128
20	147	408	149	268	505	768	912	2810	527	225	162	129
21	146	324	156	257	554	726	924	2870	502	246	167	128
22	145	234	153	246	518	695	983	2830	479	251	166	127
23	142	180	151	238	472	669	997	2570	462	233	162	127
24	139	168	151	236	415	672	1010	2410	445	224	159	128
25	140	160	156	232	397	710	975	2370	427	218	157	137
26	140	156	154	213	454	761	1340	2440	412	213	155	136
27	140	152	153	215	449	1340	2060	2380	394	209	153	132
28	139	151	151	207	472	1330	1860	2160	381	206	154	129
29	139	160	147	191	---	1060	1760	1840	368	203	178	127
30	138	181	134	209	---	909	1760	1590	355	200	188	126
31	139	---	133	208	---	818	---	1450	---	196	177	---
TOTAL	4629	5119	5052	11683	11559	27809	33718	68000	22298	7980	5337	4111
MEAN	149	171	163	377	413	897	1124	2194	743	257	172	137
MAX	167	408	273	2140	1540	1340	2060	2870	1370	344	193	163
MIN	138	137	133	139	186	415	715	1450	355	196	153	126
AC-FT	9180	10150	10020	23170	22930	55160	66880	134900	44230	15830	10590	8150
CAL YR 1978 TOTAL	334554			MEAN 917	MAX 3840	MIN 133	AC-FT 663600					
WTR YR 1979 TOTAL	207295			MEAN 568	MAX 2870	MIN 126	AC-FT 411200					

SACRAMENTO RIVER BASIN

11413100 NORTH YUBA RIVER ABOVE SLATE CREEK, NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°31'29", long 121°05'26", in NE1SW4 sec.9, T.19 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 500 ft (152 m) upstream from Slate Creek, and 2.8 mi (4.5 km) southeast of Strawberry Valley.

DRAINAGE AREA.--351 mi² (909 km²).

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,923.44 ft (595.409 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several small diversions above station for irrigation and mining. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--11 years, 1,147 ft³/s (32.48 m³/s), 331,000 acre-ft/yr (1.02 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,800 ft³/s (1,610 m³/s) Jan. 22, 1970, gage height, 19.91 ft (6.069 m), recorded; 20.7 ft (6.31 m), from floodmarks; minimum daily, 71 ft³/s (2.01 m³/s) Sept. 7-15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 29.8 ft (9.08 m) from floodmarks, discharge, 63,400 ft³/s (1,800 m³/s) from slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 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	1230	*6,780 192	11.29 3.441	May 5	2230	4,540 129	10.18 3.103
Feb. 14	0500	4,910 139	10.38 3.164	May 18	2400	4,530 128	10.17 3.010

Minimum daily, 145 ft³/s (4.11 m³/s) Nov. 11.

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	187	151	368	204	274	945	1450	2740	1770	418	219	192
2	187	157	312	197	274	789	1360	2530	1710	410	215	185
3	182	164	233	181	251	733	1300	2880	1700	401	214	181
4	182	162	212	180	261	735	1310	3150	1730	394	210	176
5	192	157	219	182	256	840	1490	3690	1700	386	208	174
6	179	154	203	184	256	1220	2120	3790	1660	374	202	171
7	177	154	179	190	255	1680	1860	3940	1520	366	201	171
8	176	152	197	376	253	1940	1800	3190	1310	354	201	166
9	176	151	202	499	255	2030	1890	2730	1200	346	201	164
10	174	146	196	382	267	2040	1740	2460	1130	339	197	162
11	174	145	190	4320	278	2210	1650	2460	1030	338	193	161
12	171	154	190	2620	280	2210	1590	2620	978	326	192	159
13	166	176	189	1170	1350	2160	1790	2890	921	315	192	156
14	164	170	182	894	3620	2080	2020	3300	851	304	192	154
15	163	161	181	875	1590	2470	2110	3540	792	297	192	152
16	163	161	177	727	1180	2620	2280	3680	750	291	190	151
17	162	166	247	577	923	2000	2120	3670	733	283	190	149
18	159	166	259	494	855	1760	1850	3840	726	275	187	149
19	156	193	220	431	894	1550	1620	3960	677	269	184	149
20	156	467	191	401	940	1420	1540	3830	642	261	182	149
21	156	407	200	383	1100	1310	1530	3840	610	279	187	149
22	156	304	197	367	964	1250	1610	3790	582	300	190	149
23	154	236	195	351	835	1190	1680	3450	559	276	189	149
24	152	208	195	345	735	1190	1840	3190	540	260	184	149
25	151	197	202	338	689	1260	1740	3100	517	252	179	158
26	151	188	203	302	780	1370	2190	3160	495	244	177	161
27	151	185	201	302	791	2710	3460	3180	474	240	176	161
28	151	181	198	289	847	2730	3040	2880	458	237	175	154
29	151	185	190	255	---	2110	2790	2480	445	233	198	152
30	148	217	184	286	---	1770	2720	2100	431	228	213	149
31	147	---	218	290	---	1570	---	1890	---	222	218	---
TOTAL	5104	5815	6530	18592	21253	51892	57490	97930	28641	9518	6044	4802
MEAN	165	194	211	600	759	1674	1916	3159	955	307	195	160
MAX	187	467	368	4320	3620	2730	3460	3960	1770	418	219	192
MIN	147	145	177	180	251	733	1300	1890	431	222	175	149
AC-FT	10120	11530	12950	36880	42160	102900	114000	194200	56810	18880	11990	9520
CAL YR 1978 TOTAL	502297			MEAN 1376	MAX 7450	MIN 145	AC-FT 996300					
WTR YR 1979 TOTAL	313611			MEAN 859	MAX 4320	MIN 145	AC-FT 622000					

11413250 SLATE CREEK TUNNEL NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°36'57", long 121°03'03", in SE¼SW¼ sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 30 ft (9 m) upstream from diversion dam on Slate Creek, 0.3 mi (0.5 km) upstream from Feney Ravine, and 4.5 mi (7.2 km) northeast of town of Strawberry Valley.

PERIOD OF RECORD.--October 1966 to current year. Records of daily discharge for December 1961 to September 1966 are in files of Geological Survey. Monthly diversion used to adjust Slate Creek below diversion dam near Strawberry Valley since February 1962.

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

REMARKS.--Records good. Tunnel diverts water from Slate Creek to Sly Creek Reservoir (station 11395400) for power development. See schematic diagrams of South Fork Feather and Yuba River basins.

AVERAGE DISCHARGE.--13 years, 99.1 ft³/s (2.807 m³/s), 71,800 acre-ft/yr (88.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 863 ft³/s (24.4 m³/s) Apr. 6, 1963; no flow many days in each year.

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	1.4	0	78	4.3	27	72	314	647	230	26	2.1	
2	1.4	0	29	4.8	26	71	296	634	215	24	1.6	
3	.90	0	17	5.1	24	66	282	690	206	23	1.1	
4	.70	0	14	5.7	26	67	300	742	197	23	.70	
5	.50	0	14	6.6	26	80	373	804	183	22	.23	
6	.35	0	3.0	6.9	25	141	556	844	169	20	.18	
7	.28	0	3.6	9.2	26	231	478	846	142	19	.12	
8	.23	0	4.5	38	26	291	461	841	119	18	.28	
9	.18	0	8.9	63	28	341	483	825	107	17	1.4	
10	.12	0	8.2	78	33	348	436	771	98	17	1.1	
11	.10	0	6.6	635	35	396	408	739	91	17	.90	
12	.08	0	7.8	455	36	418	404	803	85	15	.90	
13	.03	1.8	6.9	209	286	426	485	843	78	14	.90	
14	0	1.0	4.6	136	674	434	531	664	70	13	.70	
15	0	.50	3.9	100	352	576	551	350	63	12	.90	
16	0	2.4	2.2	83	231	545	588	350	60	11	.35	
17	0	1.6	8.2	65	161	400	530	480	68	10	.28	
18	0	.87	7.5	55	136	338	424	206	58	8.9	.15	
19	0	8.2	7.5	48	123	296	371	0	53	8.2	.09	
20	0	46	8.9	44	104	270	356	0	49	8.2	.10	
21	0	28	6.6	42	97	250	351	0	40	10	2.1	
22	0	19	6.9	40	85	242	358	0	43	11	1.8	
23	0	13	6.9	39	75	240	372	0	40	9.2	.23	
24	0	11	7.5	40	80	258	410	230	38	8.6	.07	
25	0	8.6	9.2	36	76	286	404	250	36	7.8	0	
26	0	7.2	9.6	28	75	342	584	0	34	6.6	0	
27	0	7.2	9.6	32	70	733	756	0	32	5.7	0	
28	0	6.6	8.9	28	71	676	714	0	30	4.8	0	
29	0	10	6.8	22	---	474	668	0	28	4.2	0	
30	0	18	6.3	32	---	383	662	0	27	3.9	0	
31	0	---	5.3	31	---	343	---	130	---	3.1	0	---
TOTAL	6.27	190.97	327.9	2421.6	3034	10034	13906	12689	2689	401.2	18.28	0
MEAN	.20	6.37	10.6	78.1	108	324	464	409	89.6	12.9	.59	0
MAX	1.4	46	78	635	674	733	756	846	230	26	2.1	0
MIN	0	0	2.2	4.3	24	66	282	0	27	3.1	0	0
AC-FT	12	379	650	4800	6020	19900	27580	25170	5330	796	36	0
CAL YR 1978	TOTAL	25244.77	MEAN	69.2	MAX	772	MIN	0	AC-FT	50070		
WTR YR 1979	TOTAL	45718.22	MEAN	125	MAX	846	MIN	0	AC-FT	90680		

11413300 SLATE CREEK BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°36'52", long 121°03'04", in SE¼SW¼ sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 300 ft (91 m) downstream from diversion dam, 0.2 mi (0.3 km) upstream from Fenev Ravine, and 4.5 mi (7.2 km) northeast of town of Strawberry Valley.

DRAINAGE AREA.--49.4 mi² (127.9 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 3,570 ft (1,088 m), from topographic map.

REMARKS.--Records good. Slate Creek tunnel (station 11413250) diverts at diversion dam, 300 ft (91 m) upstream, up to 900 ft³/s (25.5 m³/s) from Slate Creek Reservoir, capacity, 223 acre-ft (275,000 m³) to Sly Creek Reservoir (station 11395400). Diversion began in February 1962. See schematic diagrams of South Fork Feather and Yuba River basins. Daily records represent flow in Slate Creek below the diversion dam.

AVERAGE DISCHARGE (adjusted for diversion to Slate Creek tunnel).--19 years, 203 ft³/s (5.749 m³/s), 147,100 acre-ft/yr (181 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only, maximum discharge, 13,100 ft³/s (371 m³/s) Dec. 22, 1964, gage height, 16.42 ft (5.005 m), from rating curve extended above 5,500 ft³/s (156 m³/s) on basis of computed flow over dam at gage heights 12.75 ft (3.886 m) and 15.90 ft (4.846 m); minimum, 0.3 ft³/s (0.008 m³/s) Mar. 4, 5, 1962.
Combined flow, maximum discharge, 13,900 ft³/s (394 m³/s) Dec. 22, 1964; minimum daily, 2.3 ft³/s (0.065 m³/s) Nov. 23, 1961.

EXTREMES FOR CURRENT YEAR.--Creek only, maximum discharge, 1,520 ft³/s (43.0 m³/s) Jan. 11, gage height, 7.03 ft (2.143 m); minimum daily, 6.0 ft³/s (0.170 m³/s) Nov. 26.
Combined flow, maximum discharge, 1,520 ft³/s (43.0 m³/s) Jan. 11; minimum daily, 6.6 ft³/s (0.187 m³/s) Sept. 18.

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	9.4	9.9	11	10	8.4	8.4	8.7	7.1	11	12	11	13
2	9.4	9.8	11	10	8.4	8.4	8.5	7.1	11	12	11	12
3	9.4	9.8	11	10	8.4	8.4	8.4	7.1	11	12	11	7.7
4	9.4	9.8	10	10	8.4	8.4	8.4	6.9	12	12	11	10
5	9.4	9.8	11	10	8.4	8.4	8.4	208	12	12	11	9.9
6	9.4	9.8	11	10	8.4	8.5	8.7	254	12	12	11	9.4
7	9.4	9.8	11	10	8.4	8.7	8.7	250	12	12	11	9.0
8	9.4	9.8	10	10	8.4	8.7	8.5	64	12	12	11	8.5
9	9.4	9.8	10	10	8.4	8.7	8.4	11	12	12	9.4	8.3
10	9.4	9.8	10	10	8.4	8.7	8.4	6.9	12	12	9.4	8.0
11	9.4	9.8	10	436	8.4	8.7	8.4	9.8	12	12	9.4	7.7
12	9.4	10	10	39	8.7	8.9	8.4	18	12	12	9.4	7.4
13	9.4	10	10	8.7	45	9.0	8.4	63	12	12	9.4	7.2
14	9.4	10	10	8.7	315	9.1	8.4	116	12	12	9.2	7.0
15	9.4	10	10	8.8	8.7	9.3	8.4	229	12	12	9.1	6.9
16	9.4	10	10	8.7	8.5	9.3	8.4	276	12	12	9.1	6.8
17	9.4	10	10	8.7	8.4	9.1	8.4	219	12	12	9.1	6.8
18	9.7	10	10	8.7	8.4	9.1	8.4	508	12	12	9.1	6.6
19	9.8	10	10	8.9	8.4	9.1	8.4	709	11	12	9.1	6.8
20	9.8	11	10	8.7	8.4	8.8	8.4	684	11	12	9.1	6.8
21	9.8	11	10	8.7	8.4	8.7	8.4	670	11	12	9.1	6.8
22	9.8	11	10	8.7	8.4	8.7	8.4	621	11	12	9.1	6.7
23	9.8	11	10	8.7	8.4	8.7	8.4	555	11	12	9.1	6.8
24	9.8	10	10	8.7	8.4	8.7	8.4	340	11	12	9.1	6.9
25	9.8	8.0	10	8.7	8.4	8.7	8.4	237	12	12	9.4	9.1
26	9.8	6.0	10	8.6	8.4	8.9	55	468	12	12	9.3	9.0
27	9.8	10	10	8.4	8.4	28	170	441	12	12	8.9	8.5
28	9.8	10	10	8.4	8.4	11	31	392	12	12	9.2	7.7
29	9.8	10	10	8.5	---	8.7	10	329	12	11	12	7.4
30	10	10	10	8.4	---	8.7	23	277	12	11	14	7.3
31	10	---	10	8.4	---	8.6	---	110	---	11	13	---
TOTAL	297.3	295.9	316	739.1	579.1	293.1	500.1	8093.9	351	369	311.0	242.0
MEAN	9.59	9.86	10.2	23.8	20.7	9.45	16.7	261	11.7	11.9	10.0	8.07
MAX	10	11	11	436	315	28	170	709	12	12	14	13
MIN	9.4	6.0	10	8.4	8.4	8.4	8.4	6.9	11	11	8.9	6.6
AC-FT ‡	590	587	627	1470	1150	581	992	16050	696	732	617	480
MEAN ‡	9.79	16.2	20.8	102	129	333	480	670	101	24.9	10.6	8.07
AC-FT ‡	602	966	1280	6270	7170	28480	28570	41220	6030	1530	653	480

CAL YR 1978 TOTAL 74311.2 MEAN 204 MAX 2460 MIN 6.0 AC-FT 147400 MEAN ‡ 272 AC-FT ‡ 197100
WTR YR 1979 TOTAL 12387.5 MEAN 33.9 MAX 709 MIN 6.0 AC-FT 24570 MEAN ‡ 159 AC-FT ‡ 115300

‡ Adjusted for diversions to Slate Creek tunnel.

11413510 NEW COLGATE POWERPLANT NEAR FRENCH CORRAL, CA

LOCATION.--Lat 39°19'51", long 121°11'23", in NE¼SE¼ sec.16, T.17 N., R.7 E., Yuba County, Hydrologic Unit 18020125, at powerplant on right bank of Yuba River, 0.3 mi (0.5 km) upstream from Dobbins Creek, and 2.3 mi (3.7 km) northwest of French Corral.

PERIOD OF RECORD.--October 1966 to current year. Records of daily discharge for October 1960 to September 1966 are available in files of Geological Survey. Prior to October 1969, published as "Colgate powerplant."

GAGE.--Recorded output from powerplant turbines.

REMARKS.--Water is diverted from North Yuba River at New Bullards Bar Dam (station 11413515). Colgate powerplant was rebuilt during the 1970 water year with an increased capacity. Browns Valley ditch diverted up to 10 ft³/s (0.28 m³/s) at times from the head of the penstock for use in irrigation. This diversion discontinued Oct. 31, 1973. See schematic diagram of Yuba River basin.

COOPERATION.--Records collected by Yuba County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Regulatory Commission Project.

AVERAGE DISCHARGE.--13 years, 1,219 ft³/s (34.52 m³/s) 883,200 acre-ft/yr (1.09 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,200 ft³/s (119 m³/s) June 2, 1971; no flow for several days in each year.

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	2670	1120	1160	1060	1740	60	0	178	1320	1030	2500	1930
2	2200	930	1160	1200	1360	264	0	69	1420	1200	2090	2040
3	1550	1110	641	601	921	409	0	225	1540	1670	2470	1510
4	1090	797	542	572	1300	1200	0	80	1920	1430	2500	2910
5	1600	1020	1180	1090	1740	479	0	0	2070	1440	2370	2870
6	1780	1210	1330	709	1810	245	0	0	1460	1780	2140	2230
7	1280	1040	983	625	1620	0	0	123	875	1110	1960	2200
8	1170	956	1250	819	1730	119	0	73	1330	1600	2990	1930
9	1490	1060	369	540	1860	0	0	955	1170	1570	2070	1950
10	1070	1500	676	782	2030	0	681	454	1120	2320	2630	2100
11	1650	694	1470	40	1280	0	305	643	1230	2060	2350	2420
12	1150	912	726	0	1230	0	483	1160	1540	2170	2050	2090
13	1730	953	1130	543	327	0	72	758	1370	1310	2460	2630
14	1130	662	1020	1460	21	0	73	1310	1220	1760	2060	1430
15	967	611	671	828	156	0	20	1060	959	1980	2150	1720
16	1840	1570	616	363	1470	0	211	1060	1110	1950	2030	1720
17	1230	979	719	987	642	0	274	2620	536	1820	2730	2260
18	1450	708	915	1190	811	0	144	1390	1410	1630	2550	2330
19	506	910	1020	1630	29	364	74	1640	1060	2070	1620	2800
20	465	664	782	1910	0	215	301	1750	1330	1350	2590	1820
21	72	597	1080	1310	0	988	0	2460	823	2170	2110	1910
22	602	776	600	1560	60	744	0	3610	1550	2290	2650	2120
23	883	507	1010	1910	0	479	301	3640	832	1810	2270	2040
24	1370	735	1140	1230	0	69	3.0	3620	506	859	2060	937
25	630	892	930	1610	1300	0	14	3640	682	1940	2270	856
26	788	1410	865	1740	1370	532	54	2450	652	2180	2210	1510
27	574	518	1020	1650	1610	0	0	1990	1550	2490	2300	1200
28	1040	401	1120	1900	923	0	0	2110	1660	1930	2150	1440
29	1090	1060	1040	1860	---	0	0	2230	1840	1560	2230	2520
30	789	1270	417	1570	---	0	67	1700	1680	1990	2490	2380
31	1110	---	1290	1700	---	0	---	1880	---	1920	2770	---
TOTAL	36966	27572	28872	34989	27340	6167	3077.0	44878	37765	54389	71820	59803
MEAN	1192	919	931	1129	976	199	103	1448	1259	1754	2317	1993
MAX	2670	1570	1470	1910	2030	1200	681	3640	2070	2490	2990	2910
MIN	72	401	369	0	0	0	0	0	506	859	1620	856
AC-FT	73320	54690	57270	69400	54230	12230	6100	89020	74910	107900	142500	118600
CAL YR 1978	TOTAL	709345.00	MEAN	1943	MAX	3700	MIN	0	AC-FT	1407000		
WTR YR 1979	TOTAL	433638.00	MEAN	1188	MAX	3640	MIN	0	AC-FT	860100		

11413515 NEW BULLARDS BAR RESERVOIR NEAR NORTH SAN JUAN, CA

LOCATION.--Lat 39°23'34", long 121°08'25", in SE¼NW¼ sec.25, T.18 N., R.7 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, in center of dam on North Yuba River, 2.2 mi (3.5 km) upstream from Middle Yuba River, and 2.4 mi (3.9 km) northwest of North San Juan.

DRAINAGE AREA.--489 mi² (1,267 km²).

PERIOD OF RECORD.--January 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Yuba County Water Agency).

REMARKS.--Reservoir is formed by concrete-arch dam with a concrete-sidehill spillway. Spill controlled by three 30-ft (9.1 m) by 53-ft (16.2-m) radial gates. Storage began in January 1969. Usable capacity, 727,380 acre-ft (897 hm³) between elevations 1,732.0 ft (527.91 m) minimum power pool, and 1,955.0 ft (595.88 m) normal gross pool. Dead storage, 233,920 acre-ft (288 hm³). Total capacity at normal gross pool, 961,300 acre-ft (1.19 km³), elevation, 1,955.0 ft (595.88 m). Water is released to Colgate powerplant through a tunnel at the dam. Water is diverted into the reservoir from Middle Yuba River via Lohman Ridge tunnel to Oregon Creek then via Camptonville tunnel. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Yuba River basin.

COOPERATION.--Records collected by Yuba County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 964,757 acre-ft (1.19 km³) June 30, 1975, elevation, 1,955.72 ft (596.103 m); minimum since reservoir first filled, 228,289 acre-ft (281 hm³) Nov. 20, 1977, elevation, 1,729.03 ft (527.008 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 941,552 acre-ft (1.16 km³) June 10, elevation, 1,950.85 ft (594.619 m); minimum, 408,576 acre-ft (504 hm³) Feb. 12, elevation, 1,806.80 ft (550.713 m).

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

1,600	64,900	1,750	270,110
1,630	90,570	1,800	389,980
1,660	122,990	1,850	539,750
1,690	162,980	1,900	721,130
1,720	211,770	1,960	985,471

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	577053	519937	484196	442844	433473	464693	618188	770965	935187	927777	846060	725181
2	573205	518391	482685	441240	431603	467708	622692	777274	937070	926281	842328	721645
3	570671	516783	481977	440424	430596	470129	626491	783951	937541	924413	838388	719149
4	568895	515659	481300	439842	428590	471038	630486	791421	937588	922781	834242	713936
5	566236	513929	479642	438099	426020	472101	635046	800971	938012	920919	830327	708982
6	563178	511818	477589	437172	422891	476611	640912	812219	938719	918826	826424	705145
7	561146	510383	475908	436506	420342	482193	646072	823572	940276	917433	823397	701087
8	558949	508950	473774	436650	418085	488218	651256	832065	940843	915347	818139	697898
9	556757	507361	473469	437288	414993	494445	656282	837513	940985	913263	814789	694409
10	554907	504825	472861	437375	411749	500688	659833	843205	941552	909844	810081	690738
11	552558	503654	470280	451572	409827	506885	663773	848481	941315	906802	806242	686004
12	550215	502422	469432	458462	408576	513746	667351	852452	940607	903125	802839	682936
13	547445	501035	467799	461391	413313	520163	671888	858299	939898	901748	798598	678159
14	545548	500248	465968	461991	425165	526315	676826	861721	939804	899458	795174	675494
15	543721	499335	465084	464092	429449	534153	682170	865332	939898	897158	791421	672267
16	540409	496666	464363	465988	430596	542395	687926	874962	939804	893338	788058	669239
17	538692	495383	464092	466049	432608	548045	693210	881722	940370	891244	783449	665466
18	536452	494445	463041	465295	434338	554067	697588	888971	939427	888290	778857	661558
19	535893	493601	461691	463491	437809	557431	701866	896943	939333	885116	776234	656468
20	535071	494445	460553	461092	441606	562161	705380	903813	938248	883305	771794	653115
21	535367	495383	458999	459746	447211	564196	709689	909567	938012	879916	768277	649772
22	534481	494445	458253	457626	451276	566746	714015	913263	936458	877887	763743	645998
23	533169	494132	456763	454741	454919	569646	718358	915578	936599	873614	759841	642383
24	531042	493195	454830	453347	457085	572725	723114	916969	936835	872716	756319	640912
25	530029	491948	453347	450981	458104	576502	727610	918592	936835	869578	752482	639626
26	528594	489459	452281	449093	458402	579604	733286	920686	936835	866001	748617	637022
27	528105	489149	450804	447152	458104	588205	742743	925347	935187	861988	744684	635485
28	526510	488838	449075	443926	460194	596465	750690	928619	933307	858876	741127	633403
29	524530	487195	447446	441590	---	603508	757588	930783	930961	856435	737301	628196
30	523395	485431	446858	438680	---	609419	764149	932838	928619	853336	733286	623920
31	521778	---	445391	436071	---	613704	---	933777	---	850024	728368	---
MAX	577053	519937	484196	466049	460194	613704	764149	933777	941552	927777	846060	725181
MIN	521778	485431	445391	436071	408576	464693	618188	770965	928619	850024	728368	623920
†	1844.50	1833.00	1819.70	1816.50	1824.70	1871.50	1910.65	1949.20	1948.10	1930.80	1901.82	1874.34
‡	-60350	-36347	-40040	-9320	-24123	+153510	+150445	+169628	-5158	-78595	-121656	-104448

CAL YR 1978 † +128516
WTR YR 1979 † +41792

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

‡ Change in contents, in acre-feet.

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CA

LOCATION.--Lat 39°22'48", long 121°08'19", in SW¼NE¼ sec.36, T.18 N., R.7 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 1.1 mi (1.8 km) downstream from New Bullards Bar Dam, and 2 mi (3 km) northwest of North San Juan.

DRAINAGE AREA.--490 mi² (1,269 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,280 ft (390 m), from topographic map.

REMARKS.--Records good. Flow regulated by New Bullards Bar Reservoir since 1969 (station 11413515). Colgate powerplant (station 11413510) diverts from New Bullards Bar Dam 1.1 mi (1.8 km) upstream. Water is diverted out of basin through Slate Creek tunnel (station 11413250). See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE (since construction of Bullards Bar Dam, unadjusted).--10 years (water years 1970-79), 153 ft³/s (4.33 m³/s), 110,800 acre-ft/yr (137 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,200 ft³/s (1,590 m³/s) Jan. 22, 1970, gage height, 35.29 ft (10.756 m), from rating curve extended above 40,000 ft³/s (1,130 m³/s) on basis of computation of flow over old Colgate Dam; minimum daily, 0.42 ft³/s (0.012 m³/s) Nov. 5, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 49.8 ft (15.18 m) from floodmarks, discharge, 91,600 ft³/s (2,590 m³/s), corrected, from computation of flow over old Colgate Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31 ft³/s (0.88 m³/s) Jan. 11, gage height, 6.03 ft (1.838 m); minimum daily, 3.2 ft³/s (0.091 m³/s) Dec. 8.

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	5.0	4.1	6.8	6.0	6.3	17	7.0	7.2	8.8	7.8	6.4	5.9
2	5.0	4.1	6.2	6.0	6.4	11	6.9	7.2	8.8	7.7	6.4	5.9
3	4.9	4.1	6.0	6.1	6.3	9.3	6.8	7.2	8.8	7.7	6.4	5.9
4	5.1	4.1	5.9	6.1	6.2	8.5	6.8	7.2	8.8	7.7	6.2	5.9
5	5.1	4.1	5.6	6.1	6.1	7.9	6.8	8.3	8.6	7.7	6.2	5.9
6	4.8	4.1	4.1	6.1	6.0	7.5	6.9	8.4	8.5	7.7	6.2	5.9
7	4.8	4.1	3.4	6.2	5.9	7.3	6.9	8.5	8.5	7.7	6.1	5.9
8	4.8	4.6	3.2	7.7	5.9	7.2	6.8	8.4	8.6	7.7	6.1	5.9
9	4.8	4.9	3.9	7.8	5.9	7.1	6.6	8.2	8.7	7.7	6.1	5.9
10	4.8	4.4	4.9	7.7	5.9	7.0	6.6	8.2	8.7	7.8	5.9	5.9
11	4.8	3.5	5.1	19	6.0	7.0	6.6	8.2	8.7	7.9	5.9	5.9
12	4.8	3.4	6.1	9.5	6.3	6.9	6.6	8.2	8.7	7.9	5.9	5.7
13	4.7	3.5	6.6	7.4	8.2	6.8	6.6	8.2	8.5	7.6	5.9	5.7
14	4.7	3.3	6.7	8.2	9.9	6.8	6.6	8.2	8.5	7.5	5.9	5.7
15	4.7	3.3	6.6	9.1	8.0	7.3	6.6	13	8.5	7.5	5.9	5.7
16	4.7	4.9	6.5	8.2	9.5	8.2	6.8	11	8.6	7.5	5.9	5.7
17	4.6	5.9	7.2	7.3	8.1	7.7	7.3	8.7	8.7	7.5	5.9	5.7
18	4.5	6.3	7.3	6.9	9.1	7.3	7.4	8.4	8.7	7.5	5.9	5.7
19	4.2	7.8	6.9	6.6	11	7.1	7.2	8.4	8.7	7.5	5.9	5.7
20	4.2	9.8	6.6	6.5	9.5	7.0	7.0	8.5	8.7	7.3	5.9	5.7
21	4.2	9.3	6.6	6.5	12	7.0	7.0	8.6	8.7	7.3	5.9	5.7
22	4.2	8.1	6.6	6.5	11	6.9	7.0	8.7	8.9	7.3	5.9	5.7
23	4.2	7.3	6.6	6.5	11	6.8	7.1	8.8	8.4	7.2	5.9	5.7
24	4.2	7.0	6.4	6.5	9.0	6.8	7.3	8.8	8.1	7.1	5.9	5.7
25	4.2	6.9	6.4	6.3	8.0	6.8	7.2	8.8	7.9	7.0	5.9	5.7
26	4.2	6.8	6.1	6.3	7.7	6.8	7.4	8.8	7.9	6.8	5.9	5.7
27	4.2	6.8	6.0	6.3	7.3	7.9	7.4	8.8	7.9	6.8	5.9	5.7
28	4.2	6.8	6.0	6.3	11	7.8	7.4	8.8	7.9	6.8	5.9	5.7
29	4.2	6.7	6.0	6.3	---	7.4	7.4	8.8	7.9	6.8	5.9	5.7
30	4.1	6.4	6.0	6.3	---	7.1	7.2	8.8	7.9	6.6	5.9	5.7
31	4.1	---	6.0	6.3	---	7.0	---	8.8	---	6.5	5.9	---
TOTAL	141.0	166.4	184.3	224.6	223.5	240.2	209.2	266.1	254.6	229.1	185.9	173.2
MEAN	4.55	5.55	5.95	7.25	7.98	7.75	6.97	8.58	8.49	7.39	6.00	5.77
MAX	5.1	9.8	7.3	19	12	17	7.4	13	8.9	7.9	6.4	5.9
MIN	4.1	3.3	3.2	6.0	5.9	6.8	6.6	7.2	7.9	6.5	5.9	5.7
AC-FT	280	330	366	445	443	476	415	528	505	454	369	344

CAL YR 1978 TOTAL 2242.8 MEAN 6.14 MAX 14 MIN 3.2 AC-FT 4450
WTR YR 1979 TOTAL 2498.1 MEAN 6.84 MAX 19 MIN 3.2 AC-FT 4950

SACRAMENTO RIVER BASIN

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1966 to September 1969, July 1971 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder October 1966 to September 1969, and from July 1971 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C July 7, 9, 21, 1968; minimum recorded, 2.0°C on many days in 1967 and 1968.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 16.0°C Oct. 7; minimum recorded, 4.5°C on Dec. 30, 31, Jan. 1, 2, 29.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	11.0	9.5	9.0	7.5	5.5	4.5				
2	---	---	12.0	10.0	8.0	7.0	5.5	4.5				
3	---	---	12.0	9.5	8.0	6.5	5.5	5.0				
4	---	---	11.5	9.5	8.0	6.5	6.5	5.5				
5	---	---	11.5	9.5	7.5	6.5	6.5	5.5				
6	---	---	11.5	9.5	6.5	5.5	6.5	5.5				
7	16.0	13.0	11.5	9.5	6.0	5.0	6.5	6.0				
8	15.5	13.0	11.5	9.5	5.5	4.5	7.0	6.5				
9	15.5	13.0	11.0	9.5	6.0	4.5	7.5	7.0				
10	15.5	13.0	9.5	8.5	6.5	5.5	7.5	7.0				
11	15.5	13.0	9.5	8.0	6.5	5.5	8.5	7.5				
12	15.5	13.0	8.0	7.0	7.0	6.0	8.5	8.0				
13	15.5	12.5	8.0	7.5	7.0	6.0	8.0	7.5				
14	15.5	13.0	9.0	7.0	7.0	6.0	8.0	7.5				
15	15.0	13.0	8.5	6.5	7.0	6.0	8.0	7.5				
16	14.5	12.5	8.5	7.5	6.5	5.5	8.5	7.0				
17	14.5	12.5	9.0	7.5	6.5	6.0	8.0	7.0				
18	15.0	12.5	8.5	7.0	6.5	6.0	8.0	7.0				
19	13.5	12.5	8.0	7.5	7.0	6.0	8.0	6.5				
20	14.5	12.0	8.0	8.0	6.5	5.0	7.5	6.5				
21	14.5	12.0	8.0	8.0	6.5	5.0	8.0	6.5				
22	14.0	11.5	8.5	8.0	6.5	5.5	7.5	6.0				
23	14.0	11.5	8.5	7.5	6.0	5.0	7.5	6.0				
24	13.5	11.5	9.0	7.5	6.5	5.5	7.0	6.5				
25	13.5	11.5	8.0	7.0	6.5	5.0	7.5	6.0				
26	13.5	11.0	8.0	7.0	6.0	5.0	7.0	5.5				
27	13.5	11.0	8.0	6.5	6.0	5.5	7.0	5.5				
28	13.0	11.0	8.0	6.5	6.0	5.0	6.5	5.5				
29	12.5	10.5	8.0	7.5	6.0	5.0	6.0	4.5				
30	12.0	10.0	8.0	7.5	5.5	4.5	6.0	5.0				
31	11.0	10.0	---	---	5.5	4.5	6.5	5.5				
MONTH	16.0	10.0	12.0	6.5	9.0	4.5	8.5	4.5				

11414000 SOUTH YUBA RIVER NEAR CISCO, CA

LOCATION.--Lat 39°19'12", long 120°33'38", in SE¼SW¼ sec.19, T.17 N., R.13 E., Nevada County, Hydrologic Unit 18020126, on right bank 0.7 mi (1.1 km) downstream from Rattlesnake Creek, 1.3 mi (2.1 km) west of Cisco Grove, and 1.5 mi (2.4 km) northwest of Cisco.

DRAINAGE AREA.--51.8 mi² (134.2 km²).

PERIOD OF RECORD.--April 1942 to current year. Prior to October 1949, published as South Fork Yuba River near Cisco.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,520 ft (1,682 m), from river-profile map. Prior to October 1945, water-stage recorder at site 200 ft (61 m) upstream at same datum.

REMARKS.--Records good except those for January to March and July, which are fair. Low flow regulated by several small lakes operated by Pacific Gas and Electric Co.

AVERAGE DISCHARGE.--37 years, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) Jan. 31, 1963, gage height, 19.6 ft (5.97 m) from floodmarks in gage house, 20.6 ft (6.28 m) from outside floodmarks, from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of slope-area measurement at gage height 15.8 ft (4.81 m); minimum daily, 0.1 ft³/s (0.003 m³/s) Nov. 5-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 4	2130	1,520 43.0	6.46 1.969
May 21	2030	*1,990 56.4	7.21 2.198

Minimum daily, 2.3 ft³/s (0.065 m³/s) Aug. 1.

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	51	14	16	5.6	24	36	114	710	550	28	2.3	6.7
2	48	14	11	5.4	23	35	121	787	561	25	4.1	6.3
3	46	11	7.7	5.7	22	34	131	1060	598	23	5.8	6.1
4	43	8.7	6.4	5.8	21	45	182	1140	591	21	7.1	6.1
5	41	8.3	6.2	5.9	21	130	297	1130	564	19	6.7	5.8
6	38	7.9	5.8	5.9	21	208	383	725	522	17	6.7	7.3
7	34	7.8	5.4	6.2	22	264	248	431	400	16	6.7	12
8	31	7.5	5.1	8.3	23	272	297	317	272	15	6.8	11
9	28	7.3	4.9	9.8	23	275	319	278	247	13	6.7	10
10	26	7.0	5.2	12	24	275	223	309	245	13	6.4	10
11	26	6.5	5.2	537	25	305	212	448	249	12	6.2	9.8
12	24	5.8	5.3	248	25	317	243	670	241	11	6.3	9.6
13	23	5.2	5.1	110	45	317	417	914	214	10	6.4	9.7
14	21	4.4	5.0	72	90	284	526	1090	172	9.4	6.4	9.6
15	18	3.9	4.8	51	80	269	575	1200	139	8.7	6.5	9.5
16	16	3.9	4.6	48	68	213	558	1210	121	8.2	6.3	9.6
17	15	3.9	4.8	41	57	166	393	1250	122	7.5	6.1	9.4
18	15	3.9	5.0	37	50	146	260	1350	116	6.7	6.0	9.3
19	15	4.2	5.0	34	49	130	209	1370	98	6.0	5.9	9.3
20	14	6.1	5.0	31	44	123	211	1320	94	5.9	6.1	9.3
21	14	7.1	5.1	29	43	123	252	1380	90	5.9	6.7	9.4
22	14	6.0	5.6	28	42	121	299	1300	80	6.3	6.5	9.4
23	13	5.2	5.8	28	40	117	237	1100	73	6.5	6.1	9.5
24	13	5.1	6.0	27	40	139	203	1020	68	5.9	5.9	9.4
25	13	4.9	6.4	27	38	185	220	1110	61	5.3	5.8	9.8
26	13	4.8	6.7	26	37	201	579	1210	53	4.1	5.7	9.6
27	13	4.8	6.9	25	37	194	991	1090	47	3.7	5.7	9.4
28	13	4.9	6.7	25	36	152	766	842	41	3.3	6.4	9.4
29	12	5.9	6.5	25	---	124	669	661	36	3.8	8.7	9.2
30	13	7.8	6.1	24	---	112	732	561	31	3.1	7.8	9.3
31	13	---	5.8	24	---	109	---	536	---	2.6	7.5	---
TOTAL	717	197.8	191.1	1567.6	1070	5421	10867	28519	6696	325.9	194.3	270.8
MEAN	23.1	6.59	6.16	50.6	38.2	175	362	920	223	10.5	6.27	9.03
MAX	51	14	16	537	90	317	991	1380	598	28	8.7	12
MIN	12	3.9	4.6	5.4	21	34	114	278	31	2.6	2.3	5.8
AC-FT	1420	392	379	3110	2120	10750	21550	56570	13280	646	385	537
CAL YR 1978	TOTAL	87742.4	MEAN 240	MAX 1460	MIN 3.4	AC-FT 174000						
WTR YR 1979	TOTAL	56037.5	MEAN 154	MAX 1380	MIN 2.3	AC-FT 111200						

SACRAMENTO RIVER BASIN

11414090 FORDYCE LAKE NEAR CISCO, CA

LOCATION.--Lat 39°22'43", long 120°29'39", in NE¼SE¼ sec.34, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, near left abutment of Fordyce Dam on Fordyce Creek, 5.3 mi (8.5 km) northeast of Cisco.

DRAINAGE AREA.--31.7 mi² (82.1 km²).

PERIOD OF RECORD.--October 1977 to current year. Periodic elevations only for October 1965 to September 1976 and daily contents for water year 1977 are in the files of the Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 6,290.5 ft (1,917.34 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.). Prior to November 29, 1976, nonrecording gage on upstream side of dam at same datum.

REMARKS.--Lake is formed by a rockfill dam; storage began in 1926. Capacity, 46,662 acre-ft (57.5 hm³) between gage heights 0.85 ft (0.259 m), bottom of outlet valve and 111.6 ft (34.02 m), top of flashboards in spillway. Released water flows down Fordyce Creek (station 11414100) to Lake Spaulding (station 11414140) for use in a power and irrigation system. See schematic diagram of Yuba 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. Contents not rounded to Geological Survey standards.

EXTREMES FOR WATER YEARS 1978-79.--Maximum contents, 46,762 acre-ft (57.7 hm³) July 1, 2, 1978, gage height, 111.76 ft (34.064 m); minimum, 1,295 acre-ft (1.60 hm³) Sept. 16, 1979, gage height, 12.96 ft (3.950 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 46,599 acre-ft (57.5 hm³) June 14, gage height, 111.50 ft (33.985 m); minimum, 1,295 acre-ft (1.60 hm³) Sept. 16, gage height, 12.96 ft (3.950 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

10	831	60	16,196
20	2,447	70	21,298
30	4,862	80	26,863
40	8,001	100	39,106
50	11,836	113	47,529

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5971	2582	4795	2936	4879	5662	4568	13766	43166	36055	12758	1557
2	6060	2582	4801	2929	4882	5662	3081	14536	44249	35334	11890	1557
3	6141	2582	4804	2938	4514	5662	3081	15527	45032	34223	11165	1557
4	6206	2582	4815	2938	4514	5662	3081	16486	45265	33167	10408	1557
5	6262	2582	4829	2938	5068	5662	3081	17533	46033	32111	9686	1505
6	6008	2582	4829	2938	5068	5662	3081	18150	46537	31491	8946	1522
7	5498	2582	4826	2945	5068	5662	3081	18511	46474	30625	8429	1522
8	5011	2582	2839	2972	5068	6116	3081	18741	46266	29738	7911	1522
9	4504	2872	2839	2972	5068	6240	3081	18952	46178	29241	7153	1522
10	4017	2872	2841	3012	5068	6381	3081	19128	46304	28441	6287	1488
11	3529	2872	2841	3818	5068	6545	3081	19445	46443	27644	6287	1454
12	3030	2872	2848	4119	5068	6736	3229	20039	46581	26975	5874	1454
13	2868	2872	2848	4244	5068	6933	6378	20847	46568	25829	5348	1447
14	2868	2872	2848	4346	5068	7084	6810	22023	46599	25755	4820	1413
15	2865	2872	2848	4429	5290	7272	7453	23164	46474	25704	4239	1309
16	2865	2872	2843	4479	5290	7392	8093	24414	46474	25208	3773	1295
17	2861	2787	2876	4525	5290	7490	8644	25927	46537	24348	3502	1437
18	2854	2787	2903	4568	5290	7574	8994	27228	46474	23493	2880	1437
19	2854	2787	2907	4590	5290	7649	9095	28788	46222	22638	2380	1403
20	2848	2787	2907	4617	5290	7625	8644	30183	45523	22246	2224	1403
21	2843	2787	2914	4661	5290	7349	8644	31827	44779	21498	1624	1403
22	2843	2787	2914	4683	5290	7100	8684	33475	44026	20745	1508	1403
23	2843	2787	2916	4702	5290	7020	8704	34639	42502	19996	1591	1403
24	2820	2787	2916	4735	5290	6612	9594	35825	41972	18562	1576	1369
25	2817	2787	2916	4762	5290	6416	9614	37274	41164	17773	1562	1369
26	2813	2787	2923	4782	5290	6218	9634	38783	40335	16968	1550	1369
27	2804	2787	2923	4793	5662	6069	9664	39992	39506	16210	1437	1318
28	2800	2787	2923	4804	5662	5858	9684	40967	38616	15454	1420	1318
29	2796	2787	2927	4831	---	5617	9705	41445	37754	14764	1541	1318
30	2857	2787	2927	4848	---	5269	9725	42104	36904	13976	1557	1318
31	2857	---	2936	4873	---	4918	---	42568	---	13315	1557	---
MAX	6262	2872	4829	4873	5662	7649	9725	42568	46599	36055	12758	1557
MIN	2796	2582	2839	2929	4514	4918	3081	13766	36904	13315	1420	1295
†	21.97	21.65	22.33	30.04	32.76	30.20	44.67	105.30	96.57	53.50	14.50	13.10
‡	-3004	-70	+149	+1937	+789	-744	+4807	+32843	-5664	-23589	-11758	-239
CAL YR 1978	†	-3845										
WTR YR 1979	‡	-4543										

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

11414100 FORDYCE CREEK BELOW FORDYCE DAM, NEAR CISCO, CA

LOCATION.--Lat 39°22'45", long 120°29'52", in NW¼SE¼ sec.34, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 850 ft (259 m) downstream from Fordyce Dam, and 5.3 mi (8.5 km) northeast of Cisco.

DRAINAGE AREA.--31.7 mi² (82.1 km²).

PERIOD OF RECORD.--June 1966 to current year.

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

REMARKS.--Flow regulated by Fordyce Lake, usable capacity, 46,662 acre-ft (57.5 hm³). See schematic diagram of Yuba 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.--13 years, 125 ft³/s (3,540 m³/s), 90,560 acre-ft/yr (112 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,660 ft³/s (132 m³/s) July 9, 1974, gage height, 7.90 ft (2.408 m) in gage well, 6.82 ft (2.079 m) from high-water marks, from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 3.5 ft³/s (0.099 m³/s) Jan. 2-9, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 690 ft³/s (19.5 m³/s) June 7, gage height, 4.05 ft (1.234 m); minimum daily, 3.5 ft³/s (0.099 m³/s) Jan. 2-9.

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	8.3	4.0	4.1	3.6	5.6	7.0	299	22	58	571	409	5.6
2	8.5	4.0	4.0	3.5	5.6	7.0	188	24	62	562	402	5.6
3	8.8	4.0	4.0	3.5	5.6	7.0	4.4	26	64	555	396	5.6
4	8.8	4.0	4.0	3.5	5.6	7.0	4.9	28	68	551	389	5.5
5	9.0	4.0	4.0	3.5	5.6	7.3	5.5	30	99	545	381	5.1
6	174	4.0	4.0	3.5	5.6	8.3	5.4	30	386	539	375	5.1
7	310	4.0	4.0	3.5	5.6	8.5	5.3	30	586	533	367	5.3
8	305	4.0	3.8	3.5	5.6	8.7	6.0	30	431	528	357	5.3
9	299	4.0	3.8	3.5	5.6	8.9	6.1	30	339	526	352	5.3
10	292	4.0	3.8	3.7	5.6	9.6	6.1	31	213	517	344	5.3
11	287	4.0	3.8	15	5.6	10	6.3	32	214	513	318	5.3
12	280	4.0	3.8	5.2	5.6	11	7.2	33	216	507	14	5.1
13	101	4.0	3.8	4.9	5.9	11	8.4	33	221	505	137	5.1
14	4.3	4.0	3.8	4.9	7.4	11	9.3	34	244	112	312	5.1
15	4.2	4.0	3.8	4.9	6.6	11	11	36	191	38	305	5.0
16	4.1	3.9	3.7	4.9	6.5	11	11	38	90	38	298	4.7
17	4.1	3.8	3.6	4.9	6.5	11	12	40	105	455	258	5.3
18	4.1	3.8	3.6	4.9	6.5	12	12	42	200	492	246	6.4
19	4.1	3.8	3.6	4.9	6.5	12	12	44	465	488	239	6.0
20	4.1	3.8	3.6	4.9	6.5	71	13	46	625	479	234	9.4
21	4.1	3.8	3.6	5.0	6.5	164	14	47	623	474	225	8.5
22	4.1	3.8	3.6	5.1	6.7	161	14	50	617	470	51	7.8
23	4.1	3.8	3.6	5.1	6.8	161	14	52	629	465	15	7.2
24	4.0	3.8	3.6	5.1	6.8	158	14	53	608	458	14	7.2
25	4.0	3.8	3.6	5.1	6.8	155	14	55	602	452	12	6.1
26	4.0	3.8	3.6	5.1	6.8	155	17	57	599	446	10	5.9
27	4.0	3.8	3.6	5.1	6.8	155	18	59	565	439	9.3	5.8
28	4.0	3.8	3.6	5.2	6.8	153	18	61	592	433	6.5	5.8
29	4.0	3.8	3.6	5.3	---	150	20	60	578	428	5.8	5.8
30	4.0	3.8	3.6	5.3	---	240	22	57	578	422	5.9	5.8
31	4.0	---	3.6	5.4	---	303	---	57	---	415	5.8	---
TOTAL	2164.7	117.1	116.2	151.5	173.6	2205.3	797.9	1267	10868	13956	6493.3	177.0
MEAN	69.8	3.90	3.75	4.89	6.20	71.1	26.6	40.9	362	450	209	5.90
MAX	310	4.0	4.1	15	7.4	303	299	61	629	571	409	9.4
MIN	4.0	3.8	3.6	3.5	5.6	7.0	4.4	22	58	38	5.8	4.7
AC-FT	4290	232	230	301	344	4370	1580	2510	21560	27680	12880	351
CAL YR 1978 TOTAL	63914.5			MEAN 175	MAX 830	MIN 3.6	AC-FT 126800					
WTR YR 1979 TOTAL	38487.6			MEAN 105	MAX 629	MIN 3.5	AC-FT 76340					

SACRAMENTO RIVER BASIN

11414140 LAKE SPAULDING NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'35", long 120°38'32", in SE¼NE¼ sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, near center of Spaulding Dam on South Yuba River, 2.5 mi (4.0 km) northeast of Emigrant Gap.

DRAINAGE AREA.--118 mi² (306 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,809.6 ft (1,465.97 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.). Prior to July 1968, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by three concrete-arch dams with spillway on the middle arch. Storage began in 1913. Capacity, 74,773 acre-ft (92.20 hm³) between gage heights 0.6 ft (0.18 m), bottom of outlet and 205.0 ft (62.48 m), top of radial gates. Released water flows through Spaulding powerhouses Nos. 1 and 2. Flow through powerhouse No. 1 is transported out of Yuba River basin by Drum Canal to Bear River basin. See schematic diagrams of Yuba River and Bear River basins.

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. Contents not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 75,100 acre-ft (92.6 hm³) July 13, 1967, gage height, 205.5 ft (62.64 m); minimum, 914 acre-ft (1.13 hm³) Feb. 28, 1976, gage height, 25.5 ft (7.77 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,208 acre-ft (91.5 hm³) July 9, gage height, 204.19 ft (62.237 m); minimum, 4,437 acre-ft (5.47 hm³) Mar. 5, gage height, 49.3 ft (15.03 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

20	566	70	9,632
25	874	100	19,541
30	1,352	150	41,545
40	2,742	200	71,329
50	4,578	206	75,473

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47754	37403	29355	26742	9134	4974	7954	15422	57839	72118	68491	56877
2	47093	37070	29663	26617	8563	4784	7792	16705	58271	72461	67935	56829
3	47312	36133	30104	26408	8704	4619	7313	18795	58760	72625	67578	56769
4	46853	36912	30193	26450	8961	4517	6823	21142	59232	72866	67737	56871
5	46490	37453	29927	26450	8535	4437	6747	23903	59584	73114	67882	56949
6	45946	37403	29443	26450	7471	5367	7261	25484	60059	73238	67585	57197
7	45892	36230	28789	26450	6423	6497	7131	26080	60661	73597	67059	57475
8	45892	35699	28529	24607	6349	7313	7028	26180	61298	73972	66450	57778
9	46000	34980	28572	23650	5893	7846	7105	25903	62588	74208	65864	57930
10	45946	34694	28659	22828	5941	8146	6874	25738	63598	73895	65274	57263
11	45892	34742	28659	27121	5964	8990	6547	25816	63879	73556	65113	56444
12	45892	35747	28406	27714	5753	10257	6398	26763	64007	73369	65171	55393
13	45458	35028	27970	26748	5893	11168	6773	28163	63955	73045	64887	54282
14	44866	34363	27671	25623	7028	11943	7445	29994	64064	72666	64224	53345
15	44384	33564	27247	24486	7105	12892	8228	32172	64745	72296	63591	52973
16	43640	33191	27586	23218	7028	13699	8990	34221	65494	71716	62917	52446
17	42953	32636	27885	22171	6849	12892	9250	36279	66144	71356	62434	51508
18	42325	32498	28184	20878	6647	12225	8990	38744	66535	70990	62765	50476
19	41597	31902	27757	19762	6497	11600	8507	41183	67263	70611	63082	49487
20	41080	31448	27374	18596	6349	10197	8009	43481	67915	70295	62885	48558
21	40464	30997	27036	17350	6252	9780	7657	45891	68358	70611	62461	47588
22	39802	30326	26701	16068	6107	9250	7524	48086	68677	71003	61982	47478
23	39196	30505	26952	14685	5988	8990	7261	49426	69250	70773	61141	47478
24	38594	30907	27247	13633	5823	8732	6849	50879	69812	70349	60382	47164
25	37848	31358	27629	12764	5615	8619	6547	52498	70100	69919	60419	47511
26	38295	31675	27671	12068	5412	8563	7711	54347	70416	69484	60487	47814
27	37789	31539	27205	12383	5278	8990	10227	55882	70618	69243	59973	48091
28	38145	30952	26826	12478	5103	8932	11849	56811	70922	69477	59207	48213
29	38644	30371	26450	12099	---	8591	12956	57100	71220	69704	58369	47909
30	38544	29707	26492	11137	---	8091	14255	57191	71621	69444	57487	47748
31	37996	---	26492	9958	---	8118	---	57463	---	69083	56937	---
MAX	47754	37453	30193	27714	9134	13699	14255	57463	71621	74208	68491	57930
MIN	37789	29707	26450	9958	5103	4437	6398	15422	57839	69083	56937	47164
†	143.0	125.3	117.8	71.1	52.5	64.7	84.8	178.38	200.43	196.66	177.51	161.59
‡	-10423	-8289	-3215	-16534	-4855	+3015	+6137	+43208	+14158	-2538	-12146	-9189

CAL YR 1978 † -10127

WTR YR 1979 ‡ -671

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

11414170 DRUM CANAL AT TUNNEL OUTLET, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'03", long 120°39'08", in SE¼SW¼ sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, 100 ft (30 m) downstream from tunnel outlet, 1.0 mi (1.6 km) downstream from Spaulding No. 1 powerhouse, and 1.7 mi (2.7 km) northeast of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1972, published as "Drum Canal at intake."

GAGE.--Water-stage recorder. Altitude of gage is 4,880 ft (1,487 m), from topographic map. Prior to Oct. 1, 1968, in powerhouse 0.7 mi (1.1 km) upstream at different datum.

REMARKS.--Canal diverts from Spaulding No. 1 powerhouse at Lake Spaulding Dam. Water is used for irrigation and power in the Bear River basin. See schematic diagrams of Yuba River and Bear River basins.

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.--15 years, 511 ft³/s (14.47 m³/s), 370,200 acre-ft/yr (456 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 858 ft³/s (24.3 m³/s) July 4, 1978; no flow for several days in most years.

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	596	515	229	147	188	353	782	766	770	436	714	109
2	655	520	8.2	369	60	351	735	756	782	537	711	108
3	528	510	201	338	93	350	770	756	792	557	608	106
4	536	9.7	167	341	672	349	772	761	799	468	333	0
5	542	9.7	323	101	657	372	771	735	807	540	332	0
6	547	416	386	42	561	111	735	736	805	548	581	0
7	527	525	305	318	377	197	773	717	793	420	710	0
8	531	540	476	563	179	366	767	793	543	421	710	0
9	531	541	99	554	66	478	767	820	138	532	712	53
10	531	390	101	581	98	648	759	808	174	732	713	486
11	533	44	247	697	344	431	746	810	538	733	373	554
12	547	79	378	728	367	387	735	818	599	627	164	701
13	584	477	378	728	369	453	748	815	650	622	603	694
14	533	530	374	722	370	459	774	819	510	331	724	620
15	532	629	279	719	375	365	773	841	140	337	725	303
16	531	535	8.5	734	374	465	776	845	25	585	726	434
17	545	382	112	740	374	801	772	844	25	727	599	681
18	541	453	349	736	373	793	769	837	314	716	169	679
19	538	534	375	747	371	789	786	840	267	727	171	677
20	537	530	372	763	371	793	780	815	435	685	447	675
21	532	529	380	771	370	793	779	841	543	493	554	675
22	532	391	199	773	366	792	778	837	741	493	546	429
23	536	9.7	40	758	367	791	768	832	558	692	591	298
24	546	9.7	40	748	365	805	761	840	428	728	543	58
25	543	9.7	39	174	364	807	751	838	560	726	103	0
26	539	9.7	356	139	361	800	749	838	548	719	104	0
27	347	484	376	102	356	780	766	838	593	580	428	0
28	8.8	540	374	612	357	781	738	838	583	344	540	94
29	8.8	536	108	668	---	783	758	842	561	344	536	270
30	407	534	97	667	---	756	764	838	461	604	527	270
31	527	---	52	577	---	779	---	769	---	718	383	---
TOTAL	15471.6	11222.2	7228.7	16657	9545	17978	22902	25083	15482	17722	15680	8974
MEAN	499	374	233	537	341	580	763	809	516	572	506	299
MAX	655	629	476	773	672	807	786	845	807	733	726	701
MIN	8.8	9.7	8.2	42	60	111	735	717	25	331	103	0
AC-FT	30690	22260	14340	33040	18930	35660	45430	49750	30710	35150	31100	17800
CAL YR 1978	TOTAL	238905.5	MEAN	655	MAX	858	MIN	5.8	AC-FT	473900		
WTR YR 1979	TOTAL	183945.5	MEAN	504	MAX	845	MIN	0	AC-FT	364900		

11414190 DRUM CANAL ABOVE DRUM FOREBAY, NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'50", long 120°43'47", in NE¼SW¼ sec.10, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on right bank 1.2 mi (1.9 km) west of Blue Canyon, and 1.5 mi (2.4 km) upstream from Drum Forebay.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft (1,463 m), from topographic map.

REMARKS.--Flow represents water diverted from South Yuba River through Spaulding No. 1 powerplant plus diversion from North Fork American River basin by way of Lake Valley Canal (station 11426190). Water from Drum Canal enters the Bear River at Drum Forebay. See schematic diagrams of Yuba River and Bear River basins.

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.--15 years, 515 ft³/s (14.58 m³/s), 373,100 acre-ft/yr (460 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 818 ft³/s (23.2 m³/s) Jan. 12, 1978; no flow at times in most years.

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	575	525	464	46	595	356	768	781	793	387	754	103
2	638	531	30	304	433	351	727	771	796	418	751	102
3	518	520	28	353	72	351	759	777	803	501	680	100
4	526	23	182	323	61	342	761	777	808	480	384	30
5	531	17	338	312	379	367	761	766	808	426	384	42
6	536	268	401	62	629	150	741	775	810	492	579	23
7	525	517	460	52	587	196	769	750	800	424	725	6.1
8	531	522	491	332	440	371	761	774	566	369	728	6.0
9	531	529	117	542	296	472	767	775	142	408	726	53
10	531	464	119	531	83	651	758	774	175	725	724	458
11	532	94	265	650	67	475	744	774	443	735	269	529
12	542	62	359	729	223	400	740	780	553	611	168	680
13	572	362	365	742	359	479	749	777	605	665	504	677
14	529	529	359	750	399	485	773	778	518	371	719	641
15	528	605	323	758	379	413	775	783	121	378	706	302
16	525	542	32	748	370	432	777	786	21	574	703	396
17	535	522	98	745	367	772	775	786	21	722	633	597
18	530	301	289	755	369	761	768	790	284	732	155	667
19	535	518	372	751	371	762	778	785	249	753	155	663
20	535	522	357	757	372	769	777	790	389	725	409	659
21	532	519	362	771	371	770	778	778	443	390	549	583
22	531	518	319	780	370	770	772	795	520	397	539	293
23	533	75	54	783	371	763	773	792	430	673	572	300
24	544	20	54	772	366	777	769	795	383	759	550	71
25	545	28	52	770	367	783	758	737	497	758	103	6.0
26	544	28	225	508	361	783	770	789	447	757	100	6.3
27	478	290	358	81	358	772	786	798	537	658	372	6.4
28	42	515	358	109	358	768	755	798	528	419	515	88
29	43	503	325	364	---	768	773	798	510	420	516	269
30	295	503	44	612	---	747	779	798	476	628	507	277
31	532	---	123	639	---	765	---	790	---	755	403	---
TOTAL	15424	10972	7723	16431	9773	17821	22941	24217	14476	17510	15582	8633.8
MEAN	498	366	249	530	349	575	765	781	483	565	503	288
MAX	638	605	491	783	629	783	786	798	810	759	754	680
MIN	42	17	28	46	61	150	727	737	21	369	100	6.0
AC-FT	30590	21760	15320	32590	19380	35350	45500	48030	28710	34730	30910	17130
CAL YR 1978	TOTAL	236076.5	MEAN	647	MAX	818	MIN	2.5	AC-FT	468300		
WTR YR 1979	TOTAL	181503.8	MEAN	497	MAX	810	MIN	6.0	AC-FT	360000		

11414200 SOUTH YUBA CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°18'45", long 120°39'45", in SE¼NE¼ sec.30, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank of concrete flume 400 ft (122 m) downstream from Bowman Lake Road, and 2.5 mi (4.0 km) northeast of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,640 ft (1,414 m), from topographic map.

REMARKS.--Canal diverts from Spaulding No. 2 powerhouse at Lake Spaulding Dam. Water is diverted to Deer Creek powerhouse where it enters Deer Creek and about 30 ft³/s (0.85 m³/s) to Boardman Canal (station 11421720) via the Bear River. See schematic diagrams of Yuba River and Bear River basins.

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.--15 years, 94.9 ft³/s (2.688 m³/s), 68,180 acre-ft/yr (84.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 165 ft³/s (4.67 m³/s) Aug. 3, 1965; no flow Apr. 20-22, 1966 and Apr. 6-11, 1971.

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	70	84	64	52	59	55	25	11	66	86	92	88
2	76	84	63	68	59	54	8.6	11	64	89	94	89
3	77	86	64	79	60	54	1.2	11	63	88	93	90
4	79	87	63	83	60	44	.55	11	62	87	90	92
5	77	87	60	83	60	31	1.3	11	58	86	89	96
6	78	90	59	83	55	31	8.7	12	62	88	94	86
7	79	90	54	84	50	31	14	13	67	87	96	86
8	78	88	52	86	49	33	14	63	68	88	94	86
9	81	87	53	85	49	36	14	112	71	89	92	84
10	81	85	49	85	49	42	13	137	71	88	92	86
11	82	86	46	61	49	41	14	137	78	86	91	88
12	83	86	38	60	47	35	13	139	85	87	92	88
13	82	86	37	65	43	31	13	140	83	87	92	88
14	82	86	53	86	38	28	13	143	81	84	95	87
15	82	86	60	91	40	38	13	144	74	85	94	87
16	82	86	53	85	47	58	13	136	74	89	92	88
17	82	85	54	74	45	37	13	138	75	92	91	76
18	82	85	55	70	57	26	12	138	75	92	87	69
19	82	85	55	70	54	26	12	134	81	89	86	63
20	82	87	53	70	22	26	11	136	86	86	87	64
21	82	86	53	70	22	26	11	137	90	85	88	65
22	81	75	53	74	32	25	11	135	86	87	88	81
23	81	63	52	77	49	25	12	136	81	89	89	90
24	82	63	52	76	49	25	11	137	83	86	90	91
25	82	63	52	75	49	24	11	140	87	84	87	56
26	81	64	53	51	53	25	11	140	84	84	89	86
27	81	64	54	47	46	27	11	143	78	82	90	86
28	80	65	54	58	50	25	11	140	43	84	90	86
29	80	65	53	51	---	24	11	138	79	88	90	88
30	83	64	53	54	---	23	11	120	90	87	89	87
31	86	---	52	56	---	25	---	68	---	87	88	---
TOTAL	2496	2398	1666	2209	1342	1031	338.35	3211	2245	2696	2811	2497
MEAN	80.5	79.9	53.7	71.3	47.9	33.3	11.3	104	74.8	87.0	90.7	83.2
MAX	86	90	64	91	60	58	25	144	90	92	96	96
MIN	70	63	37	47	22	23	.55	11	43	82	86	56
AC-FT	4950	4760	3300	4380	2660	2040	671	6370	4450	5350	5580	4950
CAL YR 1978	TOTAL	36527.00	MEAN	100	MAX	140	MIN	3.0	AC-FT	72450		
WTR YR 1979	TOTAL	24940.35	MEAN	68.3	MAX	144	MIN	.55	AC-FT	49470		

SACRAMENTO RIVER BASIN

. 11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'07", long 120°39'27", in SW¼SW¼ sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank 150 ft (46 m) downstream from road bridge, 0.8 mi (1.3 km) downstream from Spaulding Nos. 1 and 2 powerplants, and 1.6 mi (2.6 km) northeast of Emigrant Gap.

DRAINAGE AREA.--120 mi² (311 km²).

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,432.44 ft (1,351.008 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow regulated by Lake Spaulding (station 11414140). See schematic diagrams of Yuba River and Bear River basins.

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.--13 years (water years 1967-79), 67.6 ft³/s (1.914 m³/s), 48,980 acre-ft/yr (60.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s (275 m³/s) Jan. 22, 1970, gage height, 14.45 ft (4.404 m); minimum daily, 2.1 ft³/s (0.060 m³/s) on several days during July and September 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 220 ft³/s (6.23 m³/s) Jan. 11, gage height, 4.07 ft (1.241 m); minimum daily, 3.7 ft³/s (0.10 m³/s) June 4.

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	5.4	5.6	11	6.0	5.0	9.0	15	12	4.6	6.8	5.9	6.5
2	5.4	5.6	7.8	5.9	4.8	8.4	14	14	4.5	8.2	5.9	6.8
3	5.7	5.6	6.8	5.9	4.5	8.0	12	14	4.1	8.8	5.6	6.2
4	5.7	5.6	6.3	6.6	4.7	8.2	12	18	3.7	9.1	6.0	6.6
5	5.6	5.6	6.2	7.1	5.0	10	13	6.4	5.6	9.6	6.2	7.0
6	4.2	5.6	5.7	7.1	5.1	20	15	60	7.0	10	6.2	6.2
7	5.7	5.4	5.3	7.1	5.1	36	18	18	6.2	10	6.2	6.5
8	6.9	5.0	4.9	13	5.1	38	14	14	5.0	11	5.6	6.6
9	6.3	4.9	4.9	13	5.2	34	13	14	4.5	12	5.6	6.2
10	6.5	5.6	4.9	15	5.7	34	13	14	4.7	12	5.4	5.6
11	6.3	7.0	5.1	115	5.9	40	11	23	5.3	9.8	5.3	5.6
12	6.2	7.0	5.1	42	5.9	39	14	21	5.7	8.8	5.1	5.6
13	6.2	7.1	5.7	21	30	32	14	20	5.6	8.0	6.2	5.6
14	6.2	7.1	5.3	15	89	30	13	19	5.0	7.1	6.2	5.6
15	6.2	7.1	5.1	13	27	30	12	19	5.6	6.5	5.1	5.6
16	6.2	7.1	6.0	10	18	45	11	19	5.9	6.0	5.0	5.6
17	6.2	6.9	6.5	9.2	14	25	11	19	5.9	5.4	5.1	4.2
18	6.0	6.6	6.5	8.3	12	19	13	23	5.9	5.0	5.7	4.3
19	5.7	7.1	6.0	7.7	11	16	13	25	5.9	5.6	6.2	5.0
20	5.7	12	5.7	7.7	9.8	14	11	25	5.7	5.9	6.2	5.9
21	5.4	13	5.6	7.5	9.3	14	11	23	5.9	5.9	6.2	6.2
22	5.7	10	5.6	7.1	8.9	13	9.9	34	5.9	5.7	6.3	5.6
23	5.9	8.2	5.6	6.9	9.2	13	9.5	34	5.9	5.6	6.2	5.6
24	6.0	7.3	5.7	6.8	8.3	13	16	34	5.9	5.4	6.0	5.6
25	6.9	6.8	5.9	6.7	8.0	15	18	35	5.9	5.1	6.0	5.0
26	5.7	6.3	5.9	6.2	8.8	15	14	37	5.9	5.1	6.0	5.7
27	5.7	6.2	5.7	5.7	8.8	28	23	40	5.9	5.9	5.9	5.7
28	5.7	6.2	5.7	5.5	8.6	47	26	46	6.8	6.2	5.7	5.3
29	5.7	6.5	5.6	5.1	---	28	17	46	8.0	6.2	6.0	4.5
30	5.6	6.6	5.0	5.0	---	20	14	47	6.3	6.0	5.7	4.7
31	5.6	---	5.6	5.0	---	16	---	23	---	6.0	5.6	---
TOTAL	182.2	206.6	182.7	403.1	342.7	717.6	420.4	854	168.8	228.7	180.3	171.1
MEAN	5.88	6.89	5.89	13.0	12.2	23.1	14.0	27.5	5.63	7.38	5.82	5.70
MAX	6.9	13	11	115	89	47	26	64	8.0	12	6.3	7.0
MIN	4.2	4.9	4.9	5.0	4.5	8.0	9.5	12	3.7	5.0	5.0	4.2
AC-FT	361	410	362	800	680	1420	834	1690	335	454	358	339
CAL YR 1978	TOTAL	24632.2	MEAN	67.5	1600	MIN	4.2	AC-FT	48860			
WTR YR 1979	TOTAL	4058.2	MEAN	11.1	MAX	115	MIN	3.7	AC-FT	8050		

11415500 BOWMAN LAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°27'01", long 120°39'10", in SE¼SW¼ sec.5, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank near rockfill portion of Bowman Dam on Canyon Creek, 4.5 mi (7.2 km) east of Graniteville, and 8 mi (13 km) south of Sierra City.

DRAINAGE AREA.--27.1 mi² (70.2 km²).

PERIOD OF RECORD.--December 1926 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District). Prior to Oct. 8, 1964, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by one rockfill and one concrete-arch dam; storage began in November 1926. Total capacity, 68,200 acre-ft (84.1 hm³) between elevations, 5,400 ft (1,645.9 m), bottom of outlet tunnel and 5,563 ft (1,695.6 m), crest of concrete-arch dam. Flashboards are occasionally added, increasing elevation to 5,565.8 ft (1,696.46 m) and capacity to 70,400 acre-ft (86.8 hm³), all of which is available for release. Lake receives water from Middle Yuba River through Milton-Bowman tunnel (station 11408000), and releases it through Bowman-Spaulling Canal (station 11416000) which conveys it to reservoirs of Pacific Gas and Electric Co. Water is eventually used for irrigation by Nevada Irrigation District. See schematic diagram of Yuba River basin. Lake completely drained for inspection and repair Nov. 25 to Dec. 9, 1949, Oct. 1-20, 1966, Oct. 4-29, 1972.

COOPERATION.--Thirty-eight gage-height readings furnished by Nevada Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,000 acre-ft (87.5 hm³) May 30, 1965, elevation, 5,566.5 ft (1,696.67 m); minimum observed under normal operating conditions since reservoir first filled, 1,000 acre-ft (1.23 hm³) Mar. 4, 1931, elevation, 5,430.1 ft (1,655.09 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 61,700 acre-ft (76.1 hm³) June 8, 9, elevation, 5,554.9 ft (1,693.13 m); minimum, 15,000 acre-ft (18.5 hm³) Apr. 2-4, elevation, 5,481.9 ft (1,670.88 m).

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

5,419.6	0	5,460	6,900
5,425	500	5,470	10,200
5,430	900	5,480	14,200
5,435	1,400	5,510	30,000
5,440	2,100	5,540	49,800
5,450	4,100	5,570	73,800

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43500	41900	39600	28300	22700	19200	15100	27100	60300	56200	47600	39300
2	43400	41800	39200	28000	22400	18800	15000	28100	60400	55800	47600	39100
3	43400	41800	38800	27700	22200	18500	15000	29300	60500	55400	47600	39000
4	43300	41700	38400	27400	22000	18200	15000	30200	60800	55200	47500	38900
5	43200	41600	37900	27200	21800	17900	15200	32200	61200	54800	47500	38700
6	43200	41500	37500	27000	21600	17600	15600	33700	61600	54500	47400	38600
7	43200	41500	37100	26800	21600	17500	16000	34400	61600	54200	47400	38700
8	43100	41400	36700	26600	21500	17400	16400	35000	61700	53900	47300	38600
9	43100	41300	36300	26500	21400	17300	16700	35400	61700	53300	47100	38700
10	43000	41100	36000	26300	21400	17200	17000	35800	61600	52900	46900	38700
11	43000	41000	35600	26900	21400	17200	17200	36400	61600	52500	46500	38800
12	42900	41000	35200	26900	21300	17200	17400	37200	61600	52100	46100	39000
13	42900	41000	34900	26800	21400	17200	17800	38400	61500	51600	45600	39000
14	42900	40800	34500	26900	21700	17200	18400	39800	61300	51200	45200	39100
15	42900	40800	34100	26800	21800	17200	18900	41300	61100	50800	44800	39200
16	42800	40700	33800	26600	21800	17200	19400	43000	60900	50400	44300	39200
17	42800	40600	33400	26300	21600	17000	19800	44600	60800	49900	43900	39200
18	42700	40600	33100	26200	21600	17000	20200	46100	60600	49500	43500	39100
19	42700	40500	32700	25900	21400	16800	20400	47600	60400	49100	43100	39000
20	42700	40500	32300	25700	21200	16600	20600	49000	60100	48700	42600	39000
21	42600	40600	31900	25400	21200	16400	20800	50500	59900	48200	42200	39000
22	42500	40600	31500	25100	21000	16200	21000	52100	59600	47800	41800	39100
23	42400	40600	31100	24900	20800	16000	21400	53400	59200	47400	41400	39100
24	42400	40600	30800	24600	20400	15800	21600	54600	59000	47200	41000	39100
25	42400	40600	30400	24400	20200	15700	21800	55700	58700	47200	40800	39100
26	42300	40600	30000	24100	19900	15600	22500	56900	58400	47300	40500	39200
27	42200	40600	29700	23800	19600	15800	23800	58000	58000	47400	40200	39200
28	42200	40600	29400	23600	19400	15800	24800	59000	57800	47400	40000	39000
29	42100	40400	29100	23300	---	15600	25600	59600	57600	47500	39800	38700
30	42000	40000	28900	23100	---	15400	26300	60000	57100	47600	39600	38400
31	42000	---	28600	22900	---	15300	---	60200	---	47600	39400	---
MAX	43500	41900	39600	28300	22700	19200	26300	60200	61700	56200	47600	39300
MIN	42000	40000	28600	22900	19400	15300	15000	27100	57100	47200	39400	38400
†	5528.8	5526.0	5507.6	5498.0	5491.0	5482.7	5503.9	5553.0	5549.1	5536.8	5525.2	5523.7
‡	-1600	-2000	-11400	-5700	-3500	-4100	+11000	+33900	-3100	-9500	-8200	-1000

CAL YR 1978 † +10400

WTR YR 1979 † -5200

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

‡ Change in contents, in acre-feet.

11416000 BOWMAN-SPAULDING CANAL INTAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°26'26", long 120°39'30", in NW¼SW¼ sec.8, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 0.6 mi (1.0 km) downstream from Bowman Dam, 4.5 mi (7.2 km) east of Graniteville, and 8.5 mi (13.7 km) south of Sierra City.

PERIOD OF RECORD.--October 1927 to current year. Prior to October 1970, published as Bowman-Spauldung Canal at intake or Bowman-Spauldung Canal intake, near Sierra City.

REVISED RECORDS.--WSP 1395: 1935-36, 1940.

GAGE.--Water-stage recorder. Datum of gage is 5,390.39 ft (1,642.991 m) National Geodetic Vertical Datum of 1929. Prior to July 1965 at site 0.3 mi (0.5 km) upstream at different datum.

REMARKS.--Records good. Canal diverts from left bank of Canyon Creek at diversion dam 500 ft (152 m) downstream from Bowman Dam. Water is diverted to Lake Spaulding and after passing through several powerhouses is used for irrigation by Nevada Irrigation District. See diagram of Yuba River basin.

AVERAGE DISCHARGE.--52 years, 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 339 ft³/s (9.60 m³/s) July 24, 1973; no flow at times in most years.

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	294	294	223	158	160	202	164	20	197	239	224	157
2	294	294	221	157	160	201	163	5.1	196	238	224	157
3	285	294	220	157	159	201	114	5.1	196	215	224	157
4	282	295	219	138	159	201	64	5.0	168	203	223	157
5	282	294	221	122	158	206	49	8.0	115	200	223	195
6	282	295	220	122	104	211	42	6.0	75	207	224	221
7	280	294	219	122	67	194	40	5.5	147	213	225	219
8	280	294	218	123	67	182	41	40	155	213	225	219
9	281	294	218	116	67	181	41	100	159	212	223	220
10	281	294	218	112	67	182	40	139	160	212	231	219
11	279	293	217	91	67	182	41	148	170	212	234	219
12	279	294	217	85	67	182	42	121	180	211	221	220
13	279	294	216	106	70	181	42	103	179	209	220	220
14	278	293	215	130	71	181	42	89	178	213	218	220
15	278	294	215	164	68	182	42	58	177	217	216	220
16	278	293	214	163	130	181	43	46	177	217	215	221
17	282	293	214	163	167	180	43	48	177	217	214	221
18	291	292	213	162	167	180	42	48	177	216	213	221
19	290	292	213	162	167	180	42	48	177	219	212	221
20	295	293	212	162	166	179	43	49	177	222	211	221
21	296	257	211	162	166	179	43	51	183	223	211	221
22	295	234	210	161	187	179	43	60	190	223	210	221
23	298	232	210	161	205	179	44	86	188	222	209	221
24	296	232	210	161	204	178	44	114	188	221	210	221
25	297	232	210	161	203	178	44	122	188	221	209	221
26	297	232	182	161	203	179	47	123	187	222	211	221
27	295	232	159	160	203	148	47	124	220	223	211	221
28	295	232	158	160	202	147	46	125	241	222	176	220
29	295	234	159	160	---	165	46	155	240	223	157	220
30	296	228	159	159	---	165	46	189	239	223	157	218
31	294	---	158	160	---	164	---	197	---	223	158	---
TOTAL	8924	8218	6369	4481	3881	5630	1630	2437.7	5401	6751	6539	6330
MEAN	288	274	205	145	139	182	54.3	78.6	180	218	211	211
MAX	298	295	223	164	205	211	164	197	241	239	234	221
MIN	278	228	158	85	67	147	40	5.0	75	200	157	157
AC-FT	17700	16300	12630	8890	7700	11170	3230	4840	10710	13390	12970	12560
CAL YR 1978 TOTAL	69344.70			MEAN 190	MAX 298	MIN 5.0	AC-FT 137500					
WTR YR 1979 TOTAL	66591.70			MEAN 182	MAX 298	MIN 5.0	AC-FT 132100					

11416100 BOWMAN-SPAULDING CANAL AT JORDAN CREEK SIPHON VENTURI, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°20'32", long 120°38'26", in SW¼NW¼ sec.16, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, at outlet of Jordan Creek siphon 0.6 mi (1.0 km) downstream from Fuller Lake, and 3.5 mi (5.6 km) northeast of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,440 ft (1,658 m), from topographic map.

REMARKS.--Records show water diverted from Bowman Lake (station 11415500) plus numerous small tributaries before it enters Lake Spaulding (station 11414140). See schematic diagram of Yuba 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.--15 years, 218 ft³/s (6.174 m³/s), 157,900 acre-ft/yr (195 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 330 ft³/s (9.35 m³/s) Dec. 22, 1964; no flow at times in most years.

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	299	285	237	155	162	212	199	222	284	261	214	161
2	288	285	232	155	163	208	192	190	278	261	214	159
3	285	285	226	155	162	207	157	206	274	245	213	159
4	285	285	223	139	160	206	114	223	266	232	213	156
5	290	285	223	119	159	206	117	244	225	227	213	179
6	294	285	220	115	106	215	137	278	136	209	213	214
7	293	284	217	112	75	218	136	242	181	219	212	215
8	294	284	216	120	75	213	129	198	209	217	212	217
9	290	285	216	120	75	211	130	217	206	218	212	222
10	292	286	216	118	75	210	125	252	203	217	212	223
11	298	285	216	230	75	215	115	278	202	216	223	223
12	298	280	216	181	75	222	114	296	209	215	216	224
13	297	288	216	125	90	234	127	293	211	215	216	224
14	297	285	214	125	142	235	151	303	210	214	216	224
15	297	286	213	164	105	234	161	306	207	215	216	224
16	296	285	212	175	137	237	163	295	204	216	215	224
17	296	285	215	174	175	228	164	284	201	215	213	223
18	292	284	217	174	177	225	152	285	199	214	213	223
19	286	284	214	172	178	218	137	291	194	213	213	223
20	285	288	212	170	178	205	119	291	200	215	212	223
21	285	272	212	170	178	218	119	288	200	217	213	223
22	283	243	210	168	199	210	134	284	197	219	213	223
23	284	237	210	168	216	208	133	279	204	217	214	223
24	284	236	210	168	211	208	130	287	204	216	213	222
25	284	236	209	167	210	214	129	293	204	215	213	222
26	284	236	205	166	210	219	164	295	203	214	213	222
27	284	235	172	165	209	234	255	294	206	214	212	219
28	285	235	161	164	209	203	249	283	235	214	184	217
29	283	237	158	164	---	204	234	258	247	214	162	216
30	281	237	157	163	---	187	227	290	245	214	155	216
31	285	---	156	163	---	207	---	290	---	214	166	---
TOTAL	8974	8103	6431	4824	4186	6671	4613	8335	6444	6822	6439	6343
MEAN	289	270	207	156	150	215	154	269	215	220	208	211
MAX	299	288	237	230	216	237	255	306	284	261	223	224
MIN	281	235	156	112	75	187	114	190	136	209	155	156
AC-FT	17800	16070	12760	9570	8300	13230	9150	16530	12780	13530	12770	12580

CAL YR 1978 TOTAL 90563.00 MEAN 248 MAX 318 MIN .00 AC-FT 179600
WTR YR 1979 TOTAL 78185.00 MEAN 214 MAX 306 MIN 75 AC-FT 155100

SACRAMENTO RIVER BASIN

11416500 CANYON CREEK BELOW BOWMAN LAKE, CA

LOCATION.--Lat 39°26'23", long 120°39'39", in NE¼SE¼ sec.7, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank 1 mi (2 km) downstream from Bowman Dam, 3 mi (5 km) upstream from Texas Creek, and 9 mi (14 km) south of Sierra City.

DRAINAGE AREA, --28.3 mi² (73.3 km²).

PERIOD OF RECORD.--January 1927 to current year.

REVISED RECORDS.--WSP 1315-A: 1930 (M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder and concrete control. Concrete control covered with rocks Jan. 22, 1970. Altitude of gage is 5,100 ft (1,554 m), from topographic map.

REMARKS.--Records good. Flow regulated by French Lake, usable capacity, 13,840 acre-ft (17.1 hm³), Bowman Lake (station 11415500), several smaller reservoirs, and diversion into Bowman-Spaulding Canal (station 11416000). See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--52 years, 35.6 ft³/s (1.008 m³/s), 25,790 acre-ft/yr (31.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 3,740 ft³/s (106 m³/s) Jan. 22, 1970, gage height, 9.42 ft (2.871 m) in gage well, 10.32 ft (3.146 m) from floodmarks, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement of maximum flow; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72 ft³/s (2.04 m³/s) Jan. 11, gage height, 4.21 ft (1.283 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Nov. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.6	7.2	1.8	2.1	2.7	3.6	4.4	2.5	2.4	3.3	2.2
2	1.7	2.6	4.4	1.8	2.1	2.5	3.5	4.9	2.5	2.4	3.3	2.2
3	1.7	2.3	4.0	1.8	2.1	2.5	3.7	4.9	2.4	2.4	3.3	2.2
4	1.7	1.5	3.9	1.8	2.1	2.6	4.4	4.6	2.3	2.3	3.3	2.0
5	1.7	1.4	4.0	1.8	2.1	3.4	5.7	8.3	2.2	2.3	3.3	2.1
6	1.7	1.4	3.8	1.8	2.1	6.1	6.8	6.1	2.8	2.3	3.3	2.2
7	1.7	1.4	3.4	1.9	2.1	5.6	5.0	7.0	2.0	2.3	3.3	3.0
8	1.7	1.4	2.6	2.5	2.1	5.5	5.1	5.6	2.0	2.3	3.3	3.0
9	1.7	1.4	2.5	2.6	2.1	5.1	5.1	5.8	2.0	2.4	3.3	3.0
10	1.7	1.4	2.5	4.2	2.2	5.4	4.2	5.6	1.9	2.3	3.4	3.0
11	1.7	1.5	2.5	30	2.2	6.0	4.5	5.1	1.9	2.3	3.4	2.9
12	1.6	1.5	2.5	6.7	2.2	5.6	5.4	4.6	2.0	2.5	3.4	2.9
13	1.6	1.6	2.5	3.8	7.4	5.4	6.0	4.4	2.0	3.1	3.5	2.9
14	1.6	1.6	2.5	3.2	10	5.1	5.8	4.2	2.6	3.1	3.5	2.8
15	1.6	1.6	2.4	3.2	3.8	6.4	5.6	3.9	3.4	3.1	3.5	2.8
16	1.6	1.5	2.4	2.8	3.3	4.6	5.5	3.7	3.4	3.1	3.2	2.7
17	1.7	1.3	2.7	2.7	2.9	3.7	4.7	3.5	3.5	3.1	2.5	2.6
18	1.7	1.1	2.5	2.6	2.9	3.6	3.9	3.4	3.5	3.1	2.5	2.5
19	2.1	1.1	2.4	2.5	2.8	3.3	3.7	3.2	3.5	3.1	2.5	2.5
20	2.6	1.7	2.3	2.5	2.6	3.3	3.8	3.1	3.4	3.2	2.5	2.4
21	2.6	1.4	2.4	2.5	2.8	3.5	4.0	3.0	3.3	3.3	2.5	2.5
22	2.6	1.6	2.4	2.5	2.9	3.5	4.1	3.0	2.5	3.3	2.5	2.5
23	2.6	4.0	2.4	2.5	2.8	3.5	4.6	2.7	2.4	3.3	2.5	2.5
24	2.6	3.7	2.4	2.5	2.6	3.9	4.9	2.7	2.4	3.3	2.5	2.5
25	2.6	3.7	1.8	2.4	2.6	4.2	4.6	2.7	2.4	3.3	2.4	2.6
26	2.6	3.6	1.9	2.3	2.7	5.1	9.4	2.6	2.4	3.3	2.3	2.6
27	2.5	3.5	1.9	2.3	2.6	6.8	8.0	2.6	2.4	3.3	2.3	2.6
28	2.5	3.6	1.9	2.2	2.6	4.7	5.8	2.6	2.4	3.3	2.5	2.6
29	2.5	4.0	1.9	2.3	---	3.9	5.1	2.6	2.4	3.3	2.3	2.4
30	2.6	4.3	1.8	2.2	---	3.6	4.9	2.7	2.4	3.3	2.3	2.3
31	2.6	---	1.8	2.2	---	3.5	---	2.6	---	3.3	2.3	---
TOTAL	63.1	65.3	85.6	107.9	82.8	134.6	151.4	126.1	76.8	89.4	90.0	77.0
MEAN	2.04	2.18	2.76	3.48	2.96	4.34	5.05	4.07	2.56	2.88	2.90	2.57
MAX	2.6	4.3	7.2	30	10	6.8	9.4	8.3	3.5	3.3	3.5	3.0
MIN	1.6	1.1	1.8	1.8	2.1	2.5	3.5	2.6	1.9	2.3	2.3	2.0
AC-FT	125	130	170	214	164	267	300	250	152	177	179	153
CAL YR 1978	TOTAL	1138.2	MEAN	3.12	MAX	16	MIN	1.1	AC-FT	2260		
WTR YR 1979	TOTAL	1150.0	MEAN	3.15	MAX	30	MIN	1.1	AC-FT	2280		

LOCATION.--Lat 39°17'32", long 121°06'13", in NW¼SE¼ sec.32, T.17 N., R.8 E., Nevada County, Hydrologic Unit 18020125, on left bank at Jones Bar, 100 ft (30 m) upstream from Rush Creek, 0.9 mi (1.4 km) downstream from bridge on State Highway 49, and 5 mi (8 km) northwest of Grass Valley.

WATER-DISCHARGE RECORDS

REMARKS.--Records good. Flow regulated by Lake Spaulding, Fordyce Lake, Bowman Lake (stations 11414040, 11414090, 11415500), and many smaller reservoirs. Diversions into and out of basin for several powerhouses and for irrigation of about 20,000 acres (81 km²) by the Nevada Irrigation District. See schematic diagram of Yuba River basin.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,780 ft³/s (164 m³/s) Jan. 11, gage height, 11.40 ft (3.475 m); minimum daily, 36 ft³/s (1.02 m³/s) Sept. 19, 20.

CAL YR 1978	TOTAL	163806	MEAN	449	MAX	4750	MIN	47	AC-FT	324900
WTR YR 1979	TOTAL	90134	MEAN	247	MAX	2970	MIN	36	AC-FT	178800

11418000 YUBA RIVER BELOW ENGLEBRIGHT DAM, NEAR SMARTVILLE, CA

LOCATION.--Lat 39°14'07", Long 121°16'23", in NW¼NW¼ sec.23, T.16 N., R.6 E., Yuba County, Hydrologic Unit 18020125, on right bank 2,000 ft (610 m) downstream from Englebright Dam, 0.5 mi (0.8 km) upstream from Deer Creek, and 2.3 mi (3.7 km) northeast of Smartville.

DRAINAGE AREA.--1,108 mi² (2,870 km²).

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1953, published as "at Narrows Dam." October 1953 to Sept. 30, 1969, published as "at Englebright Dam." If records for Deer Creek near Smartville (station 11418500) since 1941 are added to records at this station, records equivalent to those published from 1903 to 1941 as Yuba River at Smartville (station 11419000) can be obtained.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 278.68 ft (84.942 m) National Geodetic Vertical Datum of 1929 (levels by International Engineering Co.). Prior to Sept. 19, 1958, at site 2,000 ft (610 m) upstream at datum 248.31 ft (75.685 m) higher and Sept. 19, 1958, to Sept. 30, 1969, at datum 278.68 ft (84.942 m) lower. Supplementary gage 2,000 ft (610 m) upstream since Oct. 1, 1969, at Englebright Dam at datum 248.31 ft (75.685 m) higher.

REMARKS.--Records good. Diversions out of basin for power and irrigation above station up to 1,800 ft³/s (51.0 m³/s), stations 11413250, 11414190, 11414200. Flow regulation by Lake Spaulding beginning in 1912 (station 11414140), Jackson Meadows Reservoir (station 11407800) since November 1964, New Bullards Bar Reservoir (station 11413515) since January 1969, Englebright Reservoir beginning in 1941, capacity, 70,000 acre-ft (86.3 hm³), Bowman Lake (station 11415500), Fordyce Lake beginning in 1926, capacity, 46,700 acre-ft (57.6 hm³), and many smaller reservoirs. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--38 years, 2,450 ft³/s (69.38 m³/s), 1,775,000 acre-ft/yr (2.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 171,000 ft³/s (4,840 m³/s) Dec. 22, 1964, gage height, 546.14 ft (166.463 m) site and datum then in use; no flow through powerplant, from rating curve extended above 25,000 ft³/s (708 m³/s) on basis of computation of peak flow over spillway of dam at gage heights 544.72 ft (166.031 m) and 546.14 ft (166.463 m); no flow at times in 1942, 1949, 1956, 1958-61, 1968-69.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,300 ft³/s (292 m³/s) Jan. 11, gage height, 12.70 ft (3.871 m); minimum daily, 552 ft³/s (15.6 m³/s) Apr. 6.

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	2860	1070	1060	1050	1790	4160	664	968	1800	1440	2240	2220
2	2590	1070	1020	1050	1810	2850	604	706	1790	1440	2220	2220
3	1510	1070	1020	1060	1800	2040	604	706	1810	1440	2270	2210
4	1470	1040	1060	1050	1790	2020	604	608	1570	1450	2230	2230
5	1470	1040	1060	1050	1790	1630	604	701	1470	1460	2180	2220
6	1470	1040	1050	1050	1800	1040	552	701	1420	1430	2210	2220
7	1480	1040	1060	1050	1800	1040	604	971	1440	1410	2210	2220
8	1470	1040	1070	1050	1800	1040	604	1030	1300	1440	2210	2220
9	1470	1040	1060	1050	1800	1040	604	1310	1040	1610	2210	2210
10	1470	1040	1060	1050	1800	1020	604	1450	1040	1810	2220	2230
11	1470	1040	1060	5470	1810	1000	588	1450	1340	1800	2240	2280
12	1470	1040	1040	4440	1800	882	584	1450	1450	1810	2240	2250
13	1470	1040	1070	1870	1830	791	583	1450	1450	1800	2240	2200
14	1470	1040	1080	1820	3750	704	583	1450	1430	1800	2230	2220
15	1470	1040	1080	1830	2090	709	583	1450	1250	1810	2180	2230
16	1280	1040	1040	1830	1860	985	583	1920	1040	1810	2180	2280
17	1070	1040	1050	1820	1870	709	583	2190	1040	1680	2210	2320
18	1060	1040	1060	1820	1910	722	583	2220	1050	1800	2220	2280
19	1020	1040	1060	1780	2280	636	583	2200	1050	1800	2220	2280
20	939	1040	1060	1800	2140	604	582	2200	1040	1800	2220	2280
21	892	1040	1060	1800	2770	604	569	2970	1050	1800	2220	2250
22	889	1040	1060	1810	1990	604	569	4280	1050	1800	2220	2260
23	890	1040	1060	1820	3000	648	567	4280	1040	1820	2230	2290
24	764	1060	1050	1810	3030	604	563	4270	1040	1770	2220	1080
25	672	1040	1050	1770	1940	604	564	3670	1050	1810	2230	674
26	671	1040	1050	1770	1930	675	569	2190	1270	1830	2220	674
27	828	1040	1070	1770	1890	1720	1000	2200	1460	1850	2230	677
28	1070	876	1080	1770	2120	3150	1150	2210	1460	1760	2220	1190
29	1070	1050	1070	1770	---	978	701	2220	1430	1780	2210	2140
30	1070	1060	1050	1780	---	706	875	2210	1430	2020	2210	2150
31	1070	---	1040	1790	---	706	---	1940	---	2220	2220	---
TOTAL	39865	31176	32760	54650	57990	36621	19010	59571	39100	53300	68810	60205
MEAN	1286	1039	1057	1763	2071	1181	634	1922	1303	1719	2220	2007
MAX	2860	1070	1080	5470	3750	4160	1150	4280	1810	2220	2270	2320
MIN	671	876	1020	1050	1790	604	552	608	1040	1410	2180	674
AC-FT	79070	61840	64980	108400	115000	72640	37710	118200	77550	105700	136500	119400
CAL YR 1978 TOTAL	930978			2551	MAX 9480	MIN 535	AC-FT 1847000					
WTR YR 1979 TOTAL	553058			1515	MAX 5470	MIN 552	AC-FT 1097000					

SACRAMENTO RIVER BASIN

11418500 DEER CREEK NEAR SMARTVILLE, CA

LOCATION.--Lat 39°13'28", long 121°16'03", in SW¼SE¼ sec.23, T.16 N., R.6 E., Nevada County, Hydrologic Unit 18020125, on left bank 400 ft (122 m) upstream from county road bridge, 0.9 mi (1.4 km) upstream from mouth, and 2 mi (3 km) northeast of Smartville.

DRAINAGE AREA.--84.6 mi² (219.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1935 to current year.

REVISED RECORDS.--WSP 1395: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 630 ft (192 m), from river-profile map. June 21, 1935, to Nov. 30, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good. Natural flow of stream is affected by Scotts Flat Reservoir beginning in 1949, usable capacity, 26,300 acre-ft (32.4 hm³), increased to 49,000 acre-ft (60.4 hm³) in July 1964, Deer Creek Reservoir, capacity, 1,400 acre-ft (1.73 hm³), Lake Wildwood, capacity, 3,840 acre-ft (4.73 hm³) beginning in 1970, power developments, and diversion for irrigation. At times water from South Yuba River is diverted to Deer Creek and water from Deer Creek is diverted to Bear River. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--44 years, 127 ft³/s (3.597 m³/s), 92,010 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Oct. 13, 1962, gage height, 13.77 ft (4.197 m), from rating curve extended above 5,200 ft³/s (147 m³/s); minimum daily, 0.06 ft³/s (0.002 m³/s) Aug. 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1928 reached a stage of 14.5 ft (4.42 m) from floodmarks, discharge, 14,000 ft³/s (396 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,230 ft³/s (120 m³/s) Mar. 1, gage height, 9.06 ft (2.762 m); minimum daily, 2.2 ft³/s (0.062 m³/s) Oct. 5, 15.

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	2.6	9.3	18	11	32	1700	232	41	5.5	5.3	4.5	8.5
2	2.7	8.5	20	11	32	465	212	40	2.9	4.7	5.5	7.1
3	3.0	8.7	16	11	26	358	191	35	3.6	4.5	4.6	6.6
4	2.3	7.7	14	12	24	263	170	29	4.7	5.6	4.4	4.8
5	2.2	7.3	15	12	22	210	158	46	3.4	4.9	5.5	4.7
6	2.4	7.2	14	11	22	188	166	99	3.7	4.5	5.6	5.4
7	2.5	7.3	11	13	21	185	166	138	11	5.9	6.1	6.2
8	2.5	7.1	11	142	21	195	156	221	16	5.2	6.5	6.2
9	2.7	7.3	12	177	20	209	155	181	2.7	4.0	7.5	6.6
10	2.7	7.5	12	69	19	227	149	146	2.9	3.8	7.5	5.5
11	143	7.5	13	1800	19	235	144	93	3.2	4.0	8.4	5.6
12	86	7.9	11	265	19	234	151	85	3.1	4.4	8.3	5.9
13	2.7	10	11	94	475	234	143	125	3.0	3.7	7.3	5.6
14	2.4	11	11	470	1000	222	142	101	2.7	4.6	7.8	4.8
15	2.2	8.0	11	995	208	335	93	54	2.8	4.3	8.3	3.7
16	2.4	7.1	11	250	639	495	72	37	3.7	3.4	7.7	4.6
17	2.6	5.9	44	110	216	397	113	36	3.9	2.9	7.5	3.6
18	2.6	6.1	101	75	862	312	118	22	3.9	3.1	7.0	2.8
19	2.7	16	57	55	830	266	100	15	4.7	3.2	5.9	3.1
20	3.2	66	27	45	712	232	91	13	5.2	2.9	5.1	3.4
21	3.1	146	20	40	1270	214	87	11	4.1	4.6	5.2	3.6
22	3.0	199	18	36	926	232	89	12	4.0	11	6.6	3.9
23	2.7	77	16	32	699	218	84	11	4.3	8.9	6.1	3.9
24	2.6	33	15	30	321	187	72	11	4.7	7.8	6.4	3.7
25	2.8	22	14	29	216	174	45	9.3	3.9	6.7	6.9	3.5
26	3.0	18	13	25	210	143	54	9.1	4.0	5.8	6.6	5.2
27	3.3	16	13	23	195	708	101	11	4.2	4.9	5.8	4.7
28	3.6	14	13	22	896	617	58	9.8	4.5	5.6	6.0	4.0
29	3.6	14	12	19	---	383	49	11	3.9	7.2	6.1	3.9
30	3.4	14	12	21	---	301	44	12	4.6	5.5	7.8	3.6
31	3.5	---	11	35	---	261	---	9.7	---	5.6	8.7	---
TOTAL	310.0	776.4	597	4940	9952	10400	3605	1673.9	134.8	158.5	203.2	144.7
MEAN	10.0	25.9	19.3	159	355	335	120	54.0	4.49	5.11	6.55	4.82
MAX	143	199	101	1800	1270	1700	232	221	16	11	8.7	8.5
MIN	2.2	5.9	11	11	19	143	44	9.1	2.7	2.9	4.4	2.8
AC-FT	615	1540	1180	9800	19740	20630	7150	3320	267	314	403	287
‡	40470	41534	42754	45070	48547	48547	48402	47388	43794	39340	34637	30402
CAL YR 1978	TOTAL	49892.3	MEAN	137	MAX	3100	MIN	1.2	AC-FT	98960		
WTR YR 1979	TOTAL	32895.5	MEAN	90.1	MAX	1800	MIN	2.2	AC-FT	65250		

‡ Contents, in acre-feet, at end of month for Scotts Flat Reservoir, furnished by Nevada Irrigation District.

11418500 DEER CREEK NEAR SMARTVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1974 to June 1979.

CHEMICAL ANALYSES: Water year 1959.

WATER TEMPERATURES: Water years 1974 to June 1979 (discontinued).

SEDIMENT RECORDS: Water years 1974 to June 1979 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1973 to June 1979 (discontinued).

SEDIMENT RECORDS: October 1973 to June 1979 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 638 mg/L Jan. 5, 1978; minimum daily mean, 1 mg/L on many days each year.

SEDIMENT DISCHARGE: Maximum daily, 5,860 tons (5,320 metric tons) Jan. 5, 1978; minimum daily, 0 ton (0 metric ton) on many days in 1976-77.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 66 mg/L Jan. 11; minimum daily mean, 1 mg/L on several days during October and November.

SEDIMENT DISCHARGE: Maximum daily, 382 tons (346 metric tons) Jan. 11; minimum daily, 0.01 ton (0.01 metric ton) on several days during October.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JUNE 1979

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	11.0	10.5	2.5	6.5	8.5	11.0	16.0	20.0			
2	---	10.5	8.5	4.0	6.5	9.0	11.0	18.5	---			
3	23.0	12.0	7.5	5.5	6.0	9.5	12.5	19.0	25.0			
4	---	---	7.5	7.0	7.0	9.0	13.0	---	---			
5	22.0	11.5	7.0	8.0	6.0	11.0	---	---	---			
6	---	13.0	5.0	7.5	8.0	11.0	13.5	19.0	---			
7	---	---	2.5	7.5	8.0	11.0	12.5	14.5	---			
8	19.5	12.0	3.5	8.5	8.5	13.0	13.5	---	25.0			
9	---	10.0	5.0	8.0	9.0	14.0	11.0	14.0	---			
10	20.0	---	5.0	9.0	---	13.0	12.0	15.0	25.0			
11	15.0	---	7.0	9.5	---	12.5	14.0	15.0	---			
12	---	6.5	8.0	8.5	9.0	12.0	---	18.5	---			
13	---	7.5	7.0	8.5	9.0	13.5	14.0	21.0	---			
14	18.0	7.0	7.0	8.0	9.0	12.5	---	21.5	---			
15	---	7.0	7.0	8.5	9.0	12.5	15.5	21.5	---			
16	---	9.0	6.0	7.5	9.0	11.0	13.0	21.5	24.5			
17	---	9.0	7.0	7.5	9.0	---	12.5	23.5	---			
18	18.0	---	6.5	7.0	8.0	11.0	12.0	---	25.0			
19	---	9.0	6.0	7.0	8.5	11.0	13.0	---	---			
20	16.0	9.5	4.5	---	8.5	11.0	13.0	24.5	---			
21	---	10.0	5.0	7.0	9.0	11.5	---	24.0	---			
22	---	9.5	4.5	7.0	8.0	12.0	14.5	23.5	---			
23	16.0	---	5.0	6.5	8.5	11.0	13.0	22.5	---			
24	---	9.0	5.5	6.5	9.0	11.0	15.0	---	---			
25	16.0	9.5	5.0	5.5	9.0	12.0	15.0	---	25.0			
26	---	8.0	5.0	5.0	9.0	---	15.5	25.5	---			
27	---	7.0	5.5	5.0	8.5	11.0	---	25.5	26.5			
28	15.0	9.0	5.0	5.0	8.5	12.5	---	25.5	---			
29	---	10.5	4.5	4.0	---	10.5	16.0	25.0	---			
30	---	10.0	3.0	5.0	---	---	16.0	---	25.5			
31	11.5	---	---	6.5	---	---	---	25.0	---			
MONTH	---	9.5	6.0	7.0	8.0	11.0	13.5	---	---			

SACRAMENTO RIVER BASIN

11418500 DEER CREEK NEAR SMARTVILLE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), OCTOBER 1978 TO JUNE 1979

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	2.6	2	.01	9.3	5	.13	18	4	.19
2	2.7	3	.02	8.5	2	.05	20	3	.16
3	3.0	3	.02	8.7	3	.07	16	3	.13
4	2.3	3	.02	7.7	2	.04	14	3	.11
5	2.2	1	.01	7.3	3	.06	15	5	.20
6	2.4	1	.01	7.2	2	.04	14	7	.26
7	2.5	2	.01	7.3	1	.02	11	7	.21
8	2.5	2	.01	7.1	1	.02	11	7	.21
9	2.7	2	.01	7.3	1	.02	12	5	.16
10	2.7	2	.01	7.5	1	.02	12	5	.16
11	143	21	18	7.5	1	.02	13	5	.18
12	86	19	7.0	7.9	2	.04	11	5	.15
13	2.7	6	.04	10	4	.11	11	4	.12
14	2.4	4	.03	11	11	.33	11	6	.18
15	2.2	4	.02	8.0	6	.13	11	3	.09
16	2.4	4	.03	7.1	3	.06	11	3	.09
17	2.6	4	.03	5.9	2	.03	44	18	3.5
18	2.6	4	.03	6.1	2	.03	101	23	6.1
19	2.7	3	.02	16	10	.43	57	7	1.1
20	3.2	2	.02	66	22	4.3	27	5	.36
21	3.1	3	.03	146	26	11	20	4	.22
22	3.0	6	.05	199	28	18	18	6	.29
23	2.7	8	.06	77	10	2.1	16	5	.22
24	2.6	7	.05	33	4	.36	15	4	.16
25	2.8	4	.03	22	3	.18	14	4	.15
26	3.0	2	.02	18	2	.10	13	4	.14
27	3.3	4	.04	16	3	.13	13	4	.14
28	3.6	7	.07	14	3	.11	13	5	.18
29	3.6	6	.06	14	3	.11	12	8	.26
30	3.4	3	.03	14	3	.11	12	7	.23
31	3.5	4	.04	---	---	---	11	4	.12
TOTAL	310.0	---	25.83	776.4	---	38.15	597	---	15.77
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	11	3	.09	32	7	.60	1700	50	303
2	11	2	.06	32	6	.52	465	21	26
3	11	3	.09	26	6	.42	358	18	17
4	12	4	.13	24	6	.39	263	17	12
5	12	4	.13	22	5	.30	210	15	8.5
6	11	3	.09	22	5	.30	188	15	7.6
7	13	5	.18	21	4	.23	185	14	7.0
8	142	36	28	21	4	.23	195	13	6.8
9	177	20	9.6	20	5	.27	209	11	6.2
10	69	10	1.9	19	5	.26	227	10	6.1
11	1800	66	382	19	4	.21	235	9	5.7
12	265	25	18	19	4	.21	234	9	5.7
13	94	23	5.8	475	49	112	234	9	5.7
14	470	33	44	1000	52	187	222	7	4.2
15	995	34	97	208	10	5.6	335	13	12
16	250	17	11	639	37	93	495	16	21
17	110	11	3.3	216	12	7.0	397	13	14
18	75	10	2.0	862	58	244	312	11	9.3
19	55	11	1.6	830	35	78	266	10	7.2
20	45	10	1.2	712	35	91	232	10	6.3
21	40	9	.97	1270	50	213	214	8	4.6
22	36	8	.78	926	41	117	232	9	5.6
23	32	8	.69	699	30	57	218	9	5.3
24	30	8	.65	321	20	17	187	8	4.0
25	29	8	.63	216	20	12	174	7	3.3
26	25	7	.47	210	20	11	143	7	2.7
27	23	8	.50	195	20	11	708	43	128
28	22	7	.42	896	41	192	617	33	55
29	19	6	.31	---	---	---	383	21	22
30	21	7	.40	---	---	---	301	20	16
31	35	9	.85	---	---	---	261	19	13
TOTAL	4940	---	612.84	9952	---	1451.54	10400	---	750.8

11418500 DEER CREEK NEAR SMARTVILLE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), OCTOBER 1978 TO JUNE 1979

	APRIL				MAY			JUNE		
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	232	18	11	41	6	.66	5.5	4	.06	
2	212	18	10	40	6	.65	2.9	4	.03	
3	191	13	6.7	35	5	.47	3.6	6	.06	
4	170	11	5.0	29	4	.31	4.7	7	.09	
5	158	11	4.7	46	7	.87	3.4	4	.04	
6	166	12	5.4	99	10	2.7	3.7	4	.04	
7	166	12	5.4	138	13	4.8	11	10	.52	
8	156	11	4.6	221	20	12	16	23	1.1	
9	155	10	4.2	181	8	3.9	2.7	12	.09	
10	149	10	4.0	146	6	2.4	2.9	12	.09	
11	144	10	3.9	93	7	1.8	3.2	12	.10	
12	151	10	4.1	85	8	1.8	3.1	12	.10	
13	143	10	3.9	125	8	2.7	3.0	12	.10	
14	142	9	3.5	101	5	1.4	2.7	11	.08	
15	93	8	2.0	54	5	.73	2.8	5	.04	
16	72	8	1.6	37	5	.50	3.7	2	.02	
17	113	11	3.4	36	7	.68	3.9	2	.02	
18	118	12	3.8	22	7	.42	3.9	3	.03	
19	100	11	3.0	15	6	.24	4.7	3	.04	
20	91	11	2.7	13	4	.14	5.2	4	.06	
21	87	12	2.8	11	3	.09	4.1	4	.04	
22	89	12	2.9	12	4	.13	4.0	5	.05	
23	84	12	2.7	11	4	.12	4.3	6	.07	
24	72	12	2.3	11	4	.12	4.7	7	.09	
25	45	10	1.2	9.3	4	.10	3.9	8	.08	
26	54	12	1.7	9.1	4	.10	4.0	7	.08	
27	101	13	3.5	11	5	.15	4.2	4	.05	
28	58	7	1.1	9.8	4	.11	4.5	3	.04	
29	49	6	.79	11	7	.21	3.9	3	.03	
30	44	6	.71	12	6	.19	4.6	2	.02	
31	---	---	---	9.7	5	.13	---	---	---	
TOTAL	3605	---	112.60	1673.9	---	40.62	134.8	---	3.26	
PERIOD	32389.1	---	3051.41							

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, OCTOBER 1978 TO JUNE 1979

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	SED. SUSP. SIEVE	SED. SUSP. SIEVE	SED. SUSP. SIEVE	SED. SUSP. SIEVE
						DIAM. % FINER THAN .062 MM	DIAM. % FINER THAN .125 MM	DIAM. % FINER THAN .250 MM	DIAM. % FINER THAN .500 MM	DIAM. % FINER THAN 1.00 MM
FEB										
28...	1815	1220	8.5	74	244	74	86	94	100	--
MAR										
01...	1530	975	8.5	34	90	79	85	92	97	100
27...	1900	1390	11.0	82	308	82	90	95	99	100

11420700 DRY CREEK NEAR BROWNS VALLEY, CA

LOCATION.--Lat 39°15'23", long 121°20'34", in NE&SW¼ sec.7, T.16 N., R.6 E., Yuba County, Hydrologic Unit 18020125, on left bank 500 ft (150 m) upstream from diversion dam, and 3.6 mi (5.8 km) east of Browns Valley.

DRAINAGE AREA.--87.1 mi² (225.6 km²).

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 265 ft (80.8 m), from topographic map.

REMARKS.--Records good except those for the summer months, which are fair. Flow regulated by Lake Mildred, capacity, 1,500 acre-ft (1.85 hm³) and Merle Collins Reservoir since 1963, capacity, 57,000 acre-ft (70.3 hm³), 6.5 mi (10.5 km) upstream. Some diversion above station for irrigation. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE (unadjusted).--15 years, 75.3 ft³/s (2.132 m³/s), 54,560 acre-ft/yr (67.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft³/s (169 m³/s) Jan. 21, 1969, gage height, 10.38 ft (3.164 m); minimum daily, 0.84 ft³/s (0.024 m³/s) Oct. 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,440 ft³/s (97.4 m³/s) Mar. 1, gage height, 9.17 ft (2.795 m); minimum daily, 2.1 ft³/s (0.059 m³/s) on several days during December and January.

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	8.0	7.0	3.6	2.1	4.4	2300	127	71	8.6	10	8.0	7.0
2	7.8	6.1	3.1	2.1	4.5	761	111	60	7.9	9.1	8.3	6.6
3	8.0	4.0	3.0	2.1	4.6	482	100	49	7.1	8.7	8.2	6.8
4	8.2	4.5	3.0	2.1	4.5	376	90	43	5.8	9.0	8.8	6.6
5	8.1	4.4	2.9	2.1	4.4	278	85	42	5.8	8.9	9.1	6.7
6	8.2	4.3	2.8	2.1	4.2	225	78	71	5.7	8.5	7.7	6.9
7	7.0	4.4	2.7	2.3	4.0	187	68	95	5.7	8.1	7.6	6.6
8	8.5	4.4	2.7	4.4	4.1	163	65	103	5.8	7.6	7.7	6.1
9	8.8	4.5	2.7	3.1	4.0	145	64	82	5.8	7.8	7.7	6.6
10	8.6	4.4	2.7	2.4	4.0	129	55	60	5.8	8.0	7.8	6.9
11	8.7	3.9	2.5	1.64	3.9	118	49	43	5.8	8.1	7.5	6.9
12	8.8	3.9	2.6	55	3.9	109	48	37	5.8	8.3	7.3	7.1
13	8.5	5.2	2.5	23	7.1	101	46	33	5.8	8.3	7.7	7.4
14	8.4	3.9	2.5	94	305	93	44	30	5.4	7.6	8.3	7.2
15	8.6	3.4	2.5	151	69	115	39	16	5.5	7.8	8.4	7.1
16	8.8	3.2	2.4	64	83	295	41	10	5.6	8.6	8.2	6.2
17	9.0	2.8	3.9	32	48	343	40	10	5.2	8.7	8.0	6.4
18	9.1	2.6	6.2	20	105	210	39	10	5.3	8.6	7.6	6.2
19	8.8	6.2	4.2	13	98	163	42	11	6.9	7.9	6.7	6.7
20	9.0	12	2.9	10	168	136	46	11	10	7.7	7.1	7.1
21	8.7	17	2.6	8.5	361	117	44	11	11	10	7.2	7.2
22	8.5	27	2.5	7.3	873	108	41	11	9.9	9.6	7.2	7.4
23	8.4	10	2.5	6.4	933	101	78	8.7	11	11	7.7	7.6
24	8.3	4.9	2.4	6.0	493	94	244	8.5	9.9	11	8.1	7.8
25	8.4	3.8	2.3	5.7	320	87	180	8.1	8.7	9.5	8.0	7.9
26	8.2	3.4	2.3	5.1	257	84	128	8.2	9.8	7.8	7.5	8.1
27	8.2	3.2	2.3	4.9	223	202	173	9.0	11	8.0	7.3	8.3
28	8.3	3.1	2.3	5.1	625	413	142	10	11	8.0	7.7	8.5
29	8.4	4.4	2.1	4.8	---	278	106	8.5	11	8.9	7.8	8.7
30	8.9	3.9	2.1	4.6	---	190	85	8.2	10	8.4	7.7	8.9
31	9.2	---	2.1	5.4	---	149	---	8.1	---	8.6	7.6	---
TOTAL	262.4	175.8	86.9	803.7	5082.5	8552	2498	986.3	228.6	268.1	241.5	215.5
MEAN	8.46	5.86	2.80	25.9	182	276	83.3	31.8	7.62	8.65	7.79	7.18
MAX	9.2	27	6.2	164	933	2300	244	103	11	11	9.1	8.9
MIN	7.0	2.6	2.1	2.1	3.9	84	39	8.1	5.2	7.6	6.7	6.1
AC-FT	520	349	172	1590	10080	16960	4950	1960	453	532	479	427
CAL YR 1978 TOTAL	30187.0		MEAN 82.7	MAX 2670	MIN 2.1	AC-FT 59880						
WTR YR 1979 TOTAL	19401.3		MEAN 53.2	MAX 2300	MIN 2.1	AC-FT 38480						

11421000 YUBA RIVER NEAR MARYSVILLE, CA

LOCATION.--Lat 39°10'33", long 121°31'26", in New Helvetia Grant, Yuba County, Hydrologic Unit 18020107, on left bank 4.2 mi (6.8 km) northeast of Marysville, and 5 mi (8 km) downstream from Dry Creek.

DRAINAGE AREA.--1,339 mi² (3,468 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to September 1943 (low-water periods only), October 1943 to current year.

Published as "at Marysville" October 1940 to September 1957. Records published for two sites August 1954 to September 1955. Yearly discharge for the 1945 water year published in WSP 1315-A.

REVISED RECORDS.--WSP 1715: 1956(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.95 ft (0.899 m) below (corrected) National Geodetic Vertical Datum of 1929. Prior to August 1954 and Oct. 1, 1956, to Sept. 30, 1957, at Simpson Lane Bridge in Marysville 4.2 mi (6.8 km) downstream at same datum. Sept. 3, 1963, to Sept. 23, 1968, auxiliary water-stage recorder at Simpson Lane Bridge in Marysville 4.2 mi (6.8 km) downstream at same datum.

REMARKS.--Records good. Flow regulated by several reservoirs above station. Many diversions above station for power. Diversions for irrigation of about 13,000 acres (53 km²) between stations at Englebright Dam and near Marysville. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--36 years (water years 1944-79), 2,456 ft³/s (69.55 m³/s), 1,779,000 acre-ft/yr (2.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1944, 1947-79), 180,000 ft³/s (5,100 m³/s) Dec. 22, 1964, gage height, 90.15 ft (27.478 m) from floodmarks, from rating curve extended above 91,000 ft³/s (2,580 m³/s) on basis of Corps of Engineers flood routing study; minimum recorded, 10 ft³/s (0.28 m³/s) July 2, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,000 ft³/s (340 m³/s) Mar. 1, gage height, 67.54 ft (20.586 m); minimum daily, 310 ft³/s (8.78 m³/s) May 4.

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	2540	758	923	905	1840	8940	1120	851	1410	927	1670	1840
2	2530	737	893	906	1840	5040	980	509	1360	931	1670	1840
3	1550	737	880	917	1830	3160	936	442	1360	933	1700	1850
4	1390	733	908	916	1830	2850	885	310	1220	952	1680	1870
5	1360	723	923	910	1820	2480	913	343	1000	958	1650	1880
6	1370	730	918	911	1820	1780	885	433	983	941	1660	1880
7	1370	737	906	916	1820	1680	875	627	962	909	1660	1900
8	1370	740	916	1050	1840	1630	858	899	954	920	1660	1920
9	1360	771	911	1310	1840	1600	846	982	623	973	1670	1930
10	1360	803	916	1050	1840	1600	832	1160	595	1280	1680	1950
11	1450	805	917	5730	1850	1560	808	1070	730	1290	1710	2000
12	1420	806	894	5030	1840	1480	800	1030	912	1290	1720	2010
13	1300	823	907	2360	2290	1370	790	1070	906	1300	1720	1960
14	1290	822	917	2370	5140	1280	769	1070	891	1300	1730	1980
15	1280	815	919	3120	2870	1330	695	1030	880	1300	1700	1990
16	1190	811	896	2180	2730	1810	621	1220	560	1300	1690	2030
17	899	818	929	1990	2350	1900	622	1650	552	1300	1720	2080
18	858	819	1010	1930	2800	1520	631	1700	555	1190	1730	2040
19	848	858	990	1860	3760	1340	583	1670	566	1270	1730	2040
20	802	973	953	1870	3130	1060	546	1670	535	1290	1730	2050
21	739	1080	937	1860	4740	996	477	1950	529	1290	1760	2040
22	721	1190	933	1860	4250	975	425	3450	530	1300	1760	2060
23	711	1070	928	1860	4570	955	449	3520	526	1300	1770	2080
24	657	976	922	1850	4440	907	567	3570	526	1270	1770	1490
25	518	934	914	1810	2740	875	532	3430	530	1270	1770	627
26	469	917	915	1810	2580	877	462	1910	615	1300	1780	584
27	452	911	926	1800	2450	1850	681	1810	905	1320	1780	586
28	739	804	933	1800	2880	4220	1220	1840	919	1250	1780	690
29	765	867	933	1800	---	2130	627	1840	907	1250	1780	1880
30	771	917	915	1810	---	1350	581	1840	918	1380	1800	1970
31	781	---	905	1840	---	1210	---	1670	---	1650	1830	---
TOTAL	34860	25485	28587	58331	75730	61755	22016	46566	24459	37134	53460	53047
MEAN	1125	850	922	1882	2705	1992	734	1502	815	1198	1725	1768
MAX	2540	1190	1010	5730	5140	8940	1220	3570	1410	1650	1830	2080
MIN	452	723	880	905	1820	875	425	310	526	909	1650	584
AC-FT	69140	50550	56700	115700	150200	122500	43670	92360	48510	73660	106000	105200
CAL YR 1978	TOTAL	952327	MEAN	2609	MAX	10800	MIN	404	AC-FT	1889000		
WTR YR 1979	TOTAL	521430	MEAN	1429	MAX	8940	MIN	310	AC-FT	1034000		

SACRAMENTO RIVER BASIN

11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-52, 1954-66, 1973 to current year.

CHEMICAL ANALYSES: Water years 1951-52, 1954-66, 1973 to current year. Published as Yuba River at Marysville (sta 11421500) during water years 1966, 1973-76.

WATER TEMPERATURES: Water years 1973 to September 1978.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT											
27...	0915	422	94	7.4	14.0	--	10.3	--	--	37	9.7
NOV											
30...	0930	913	88	7.2	10.0	--	11.4	--	--	38	9.1
DEC											
28...	1215	933	83	7.3	8.0	--	12.1	--	--	33	10
JAN											
25...	0945	1810	77	7.1	7.0	--	11.4	--	--	33	9.0
FEB											
26...	1530	2620	82	7.3	10.5	--	11.2	--	--	32	8.0
MAR											
15...	1330	1300	87	7.3	11.0	--	11.0	1	1.0	39	9.0
APR											
24...	0945	585	92	7.3	13.5	.00	10.8	--	--	39	9.0
MAY											
23...	0930	3520	72	7.3	15.5	--	10.0	--	--	32	8.0
JUN											
21...	1015	542	78	7.5	18.0	--	9.5	--	--	32	8.0
JUL											
26...	0800	1300	74	7.2	16.5	--	9.9	--	--	32	8.0
AUG											
23...	1015	1760	76	7.3	11.5	--	9.9	--	--	32	8.0
SEP											
20...	0920	2060	76	7.4	15.5	--	10.3	1	.2	35	9.0

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	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, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT									
27...	3.2	2.4	12	.2	36	3.8	.9	70	.10
NOV									
30...	3.8	2.4	12	.2	36	4.8	1.1	58	.08
DEC									
28...	2.0	3.0	16	.2	34	4.0	1.0	49	.07
JAN									
25...	2.6	3.4	18	.3	33	2.6	2.6	54	.07
FEB									
26...	3.0	3.0	16	.2	32	5.0	1.0	65	.09
MAR									
15...	4.0	3.0	14	.2	34	5.0	.0	68	.09
APR									
24...	4.0	3.0	14	.2	36	6.0	.0	62	.08
MAY									
23...	3.0	3.0	17	.2	29	4.0	1.0	52	.07
JUN									
21...	3.0	2.0	12	.2	31	4.0	1.0	56	.08
JUL									
26...	3.0	2.0	12	.2	31	2.0	.0	51	.07
AUG									
23...	3.0	2.0	12	.2	31	3.0	.0	56	.08
SEP									
20...	3.0	2.0	11	.1	32	4.0	.0	55	.07

11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, KJEL- DAHL, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT 27...	.02	.01	--	.01	--	.10	--	.01	.01	0
NOV 30...	.04	.00	--	.00	--	.10	--	.00	.00	0
DEC 28...	.03	.00	--	.01	--	.10	--	.00	.00	0
JAN 25...	.12	.00	--	.00	--	.20	--	.02	.00	0
FEB 26...	--	--	.11	--	.00	--	.20	.02	.00	0
MAR 15...	--	--	.13	--	.01	--	.10	.01	.00	0
APR 24...	--	--	.00	--	.00	--	.10	.00	.00	0
MAY 23...	--	--	.00	--	.02	--	.10	.01	.00	0
JUN 21...	--	--	.01	--	.00	--	.40	.01	.00	0
JUL 26...	.00	--	.00	--	.00	--	.10	.00	.00	0
AUG 23...	.02	--	.02	--	.02	--	.20	.00	.00	0
SEP 20...	.00	--	.01	--	.00	--	.10	.00	.00	100

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, 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 PR)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 15...	1330	0	0	0	0	0	20	0	10	.0	2.0
SEP 20...	0920	0	0	10	0	0	10	10	0	.0	.9

SACRAMENTO RIVER BASIN

11421700 FEATHER RIVER BELOW SHANGHAI BEND, NEAR OLIVEHURST, CA

LOCATION.--Lat 39°04'44", long 121°36'08", in New Helvetia Grant, Sutter County, Hydrologic Unit 18020106, on right bank 1.5 mi (2.4 km) downstream from Shanghai Bend, 3.0 mi (4.8 km) southeast of Olivehurst, and 3.4 mi (5.5 km) south of Yuba City.

DRAINAGE AREA.--5,334 mi² (13,815 km²).

PERIOD OF RECORD.--June 1944 to September 1969 in reports of California Department of Water Resources, October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3.01 ft (0.917 m) below National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources).

REMARKS.--Flow regulated by many reservoirs and powerplants. See schematic diagrams of South Fork Feather River, North Fork Feather River, and Yuba River basins and Feather River at Lake Oroville.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--10 years, 7,199 ft³/s (204.9 m³/s), 5,216,000 acre-ft/yr (6.43 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 133,000 ft³/s (3,770 m³/s) Jan. 22, 1970, gage height, 62.55 ft (19.065 m); minimum daily, 581 ft³/s (16.5 m³/s) June 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 ft³/s (617 m³/s) Feb. 24, gage height, 44.09 ft (13.439 m); minimum daily, 1,900 ft³/s (53.8 m³/s) Apr. 22.

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	5310	3140	3570	3920	3760	16300	4210	2750	3060	6200	6050	4560
2	5250	3110	3480	3910	3710	14500	3720	2400	2930	6280	6070	4530
3	4400	3090	3530	3960	3670	10900	3620	2240	2920	6090	6070	4630
4	3970	3060	3550	3950	3630	11800	3440	2050	2880	5520	6040	4670
5	3920	3030	3610	3920	3600	11400	3310	2050	2930	5200	6110	4670
6	3930	3050	3630	3930	3600	10600	3120	2240	2960	5160	6450	4660
7	3900	3090	3640	3880	3580	10200	2910	2400	3130	5090	6480	4710
8	3850	3100	3650	4090	3550	8720	2730	2950	3190	5060	6480	4600
9	3890	3110	3670	4830	3550	8130	2520	3470	2960	5110	6500	4430
10	3880	3080	3650	4550	3510	7940	2280	3680	3040	5390	6500	4400
11	3940	3100	3630	8290	3490	6950	2170	3640	3090	5080	6500	4320
12	3890	3150	3640	11800	3480	5890	2180	3550	3590	4850	6550	4140
13	3750	3150	3650	7190	3830	4630	2130	3570	3760	4850	6530	3990
14	3710	3160	3670	6190	7980	4130	2070	3540	3870	4850	6510	3950
15	3650	3160	3680	8340	7870	4070	2040	3500	3870	4810	6110	4280
16	3580	3140	3680	8430	5570	4520	2110	3610	3510	4810	5620	4440
17	3300	3140	3710	6580	5530	6110	2100	4130	3470	4810	5530	4500
18	3240	3140	3860	5840	5020	7660	2120	4210	3490	5010	5570	4500
19	3230	3180	3930	5490	7880	7710	2100	4210	3490	5610	5570	4480
20	3160	3410	3850	5280	6520	7360	2060	4180	3590	6150	5580	4470
21	3120	3620	3980	5030	10900	6380	1940	4350	4460	6390	5330	4490
22	3110	3790	4020	4750	16000	5380	1900	5850	4540	6410	4920	4500
23	3080	3790	4010	4660	19400	4380	2610	6130	4590	6410	4730	4500
24	3050	3530	3980	4500	21300	3710	3060	6710	4710	6340	4750	4440
25	3120	3400	3970	4370	19500	3530	3050	7160	4750	6110	4770	3590
26	3290	3340	3960	4240	18800	3510	2960	5080	4770	5760	4790	3490
27	2960	3360	3950	4140	15300	4620	3110	4330	5400	5720	4820	3450
28	3080	3470	3960	3960	10400	7620	3560	4100	5640	5660	4570	3250
29	3070	3480	3980	3920	---	6020	2880	3930	5680	5650	4420	4100
30	3040	3550	3960	3810	---	4760	2550	3760	5980	5700	4500	4270
31	3070	---	3920	3750	---	4480	---	3430	---	6000	4570	---
TOTAL	111740	97920	116970	161500	224930	223910	80560	119200	116250	172080	174990	129010
MEAN	3605	3264	3773	5210	8033	7223	2685	3845	3875	5551	5645	4300
MAX	5310	3790	4020	11800	21300	16300	4210	7160	5980	6410	6550	4710
MIN	2960	3030	3480	3750	3480	3510	1900	2050	2880	4810	4420	3250
AC-FT	221600	194200	232000	320300	446100	444100	159800	236400	230600	341300	347100	255900
CAL YR 1978 TOTAL	2404910			MEAN 6589	MAX 24200	MIN 1630	AC-FT 4770000					
WTR YR 1979 TOTAL	1729060			MEAN 4737	MAX 21300	MIN 1900	AC-FT 3430000					

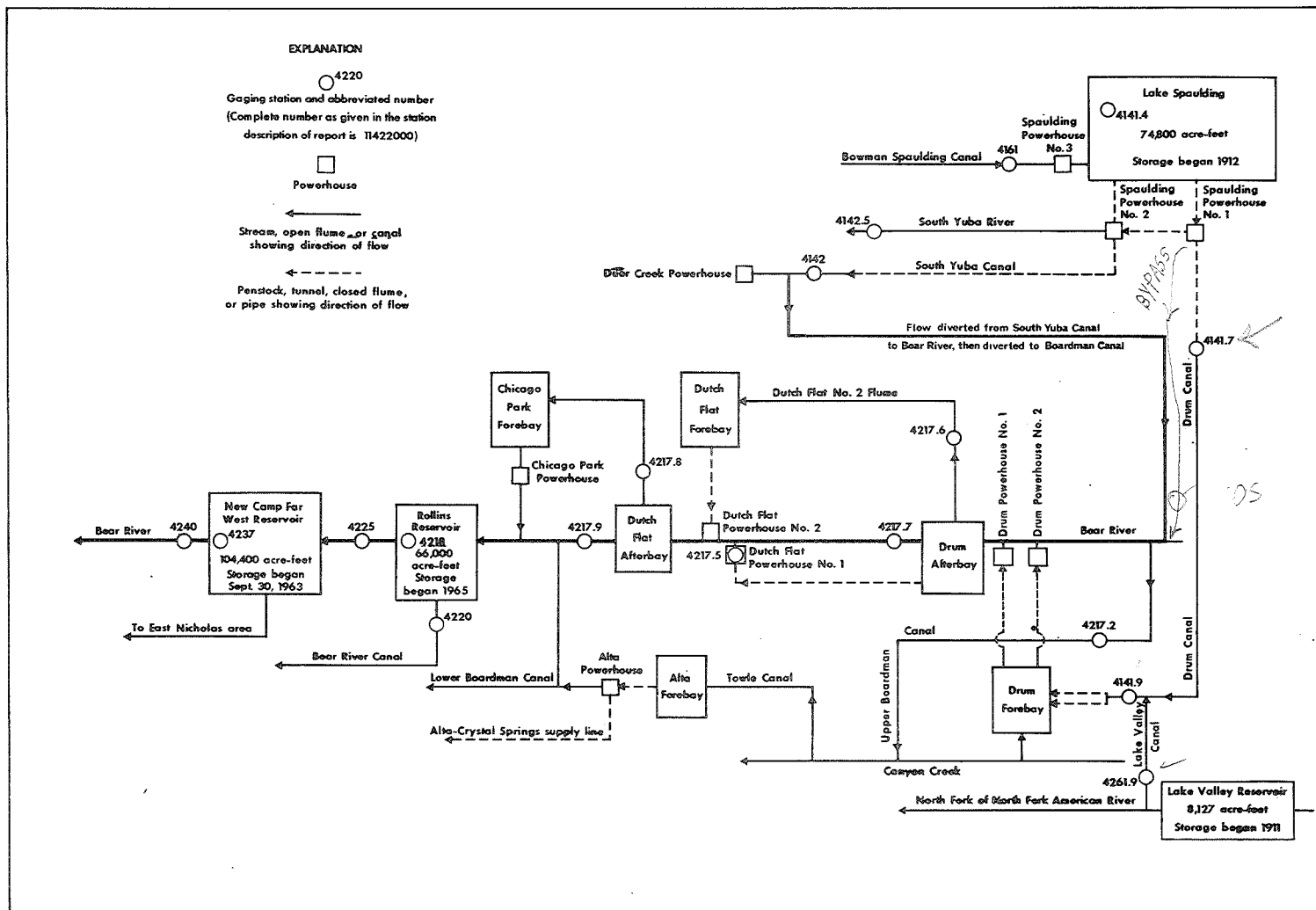


FIGURE 9.--Schematic diagram showing diversion and storage in Bear River basin.

SACRAMENTO RIVER BASIN

11421720 BOARDMAN CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°17'49", long 120°42'08", in SE¼NE¼ sec.35, T.17 N., R.11 E., Placer County, Hydrologic Unit 18020126, on right bank 0.4 mi (0.6 km) downstream from Boardman diversion dam, and 1.8 mi (2.9 km) west of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 4,490 ft (1,370 m), from topographic map. Prior to June 14, 1967, water-stage recorder 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Water is diverted from Bear River to be used for power development and irrigation in the Bear River basin. See schematic diagram of Bear 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.--15 years, 21.4 ft³/s (0.606 m³/s), 15,500 acre-ft/yr (19.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft³/s (1.22 m³/s) Dec. 21, 1964; no flow for several days in most years.

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	23	25	31	8.9	22	14	5.4	5.0	16	22	28	23
2	24	25	29	9.0	22	13	5.3	5.0	16	25	31	23
3	24	27	28	9.2	22	13	5.2	5.0	15	25	31	25
4	24	29	26	9.4	22	12	5.2	5.0	15	25	25	25
5	23	29	22	9.3	22	11	5.2	5.0	16	24	17	28
6	24	30	21	9.1	22	11	5.1	5.0	21	26	27	26
7	24	32	15	9.2	22	11	5.0	5.0	21	26	33	25
8	24	32	12	9.6	22	10	5.0	5.0	22	26	33	24
9	25	31	13	9.6	22	9.9	5.0	5.0	22	26	31	24
10	25	31	13	9.6	22	9.9	5.0	5.0	21	26	30	24
11	25	31	4.0	9.6	22	9.4	14	5.0	24	26	30	28
12	25	31	0	9.6	20	9.1	13	5.0	27	26	30	28
13	25	31	0	9.6	20	8.9	3.9	5.0	26	26	29	28
14	26	32	4.0	14	20	8.7	3.7	5.0	26	26	29	28
15	26	31	8.9	21	19	8.5	3.6	10	25	25	27	28
16	25	29	8.6	20	19	8.3	3.6	10	25	25	27	26
17	25	29	9.2	15	19	8.2	3.6	10	26	28	27	24
18	25	28	9.7	15	19	8.1	5.0	10	26	28	26	19
19	25	29	9.8	14	19	8.0	5.0	10	26	28	26	.42
20	25	31	9.7	14	19	7.9	5.0	10	27	28	26	.42
21	25	31	9.6	14	19	7.8	5.0	10	27	28	26	.42
22	25	30	9.5	18	17	7.6	5.0	10	25	28	26	.42
23	25	28	9.3	21	18	7.4	5.0	10	22	27	26	26
24	25	27	8.9	21	17	6.8	5.0	10	23	24	26	29
25	25	27	8.9	21	16	6.4	5.0	10	24	24	28	29
26	25	27	9.0	19	16	6.4	0	10	24	24	28	27
27	25	27	9.3	19	16	6.2	5.0	10	23	25	27	30
28	24	28	9.1	22	16	5.9	5.0	10	27	27	28	30
29	24	29	9.1	22	---	5.9	5.0	10	28	26	29	26
30	24	29	9.0	22	---	5.8	5.0	10	26	26	28	25
31	25	---	8.9	22	---	5.5	---	10	---	27	24	---
TOTAL	764	876	374.5	455.7	551	271.6	156.8	240.0	692	803	859	679.68
MEAN	24.6	29.2	12.1	14.7	19.7	8.76	5.23	7.74	23.1	25.9	27.7	22.7
MAX	26	32	31	22	22	14	14	10	28	28	33	30
MIN	23	25	0	8.9	16	5.5	0	5.0	15	22	17	.42
AC-FT	1520	1740	743	904	1090	539	311	476	1370	1590	1700	1350
CAL YR 1978	TOTAL	6476.56	MEAN 17.7	MAX 32	MIN 0	AC-FT 12850						
WTR YR 1979	TOTAL	6723.28	MEAN 18.4	MAX 33	MIN 0	AC-FT 13340						

11421750 DUTCH FLAT NO. 1 POWERPLANT NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°13'02", long 120°50'04", in SW¼SE¼ sec.27, T.16 N., R.10 E., Placer County, Hydrologic Unit 18020126, at powerplant 0.8 mi (1.3 km) north of Dutch Flat.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Recorded powerplant output.

REMARKS.--Water is diverted from Drum Afterbay through a tunnel to Dutch Flat No. 1 powerplant and returned to Dutch Flat Afterbay. See schematic diagram showing diversion and storage in Bear River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--15 years, 235 ft³/s (6.655 m³/s), 170,300 acre-ft/yr (210 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 548 ft³/s (15.5 m³/s) for several days in January, February, April 1965; no flow at times in each year.

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	245	158	111	0	142	71	245	212	261	119	286	71
2	359	205	0	87	87	95	205	368	261	205	205	79
3	312	95	0	119	0	95	197	330	228	158	173	103
4	320	0	79	119	0	103	236	418	312	119	71	0
5	349	0	87	126	158	0	134	189	295	166	87	0
6	368	173	142	0	95	0	320	189	295	181	166	0
7	320	158	0	0	134	0	245	349	286	150	134	0
8	330	150	236	228	158	0	245	339	95	126	173	0
9	320	158	0	158	9.9	142	166	359	0	158	173	142
10	330	71	0	158	0	270	303	487	0	245	197	55
11	312	63	87	330	0	270	212	339	253	245	0	173
12	150	0	87	330	0	501	218	339	220	166	63	228
13	189	126	103	158	111	515	212	312	111	212	71	359
14	189	228	111	398	103	529	245	438	173	0	205	197
15	197	119	87	349	111	529	236	388	79	0	158	270
16	166	111	0	270	95	428	261	408	0	197	181	220
17	142	71	0	330	87	270	220	378	0	205	142	228
18	205	36	111	312	103	245	228	428	103	220	0	197
19	205	103	36	197	95	303	220	368	36	245	0	253
20	79	134	142	212	63	286	236	398	111	189	103	71
21	142	134	95	220	79	189	261	359	212	103	79	212
22	142	158	0	197	71	253	220	388	189	103	87	173
23	142	0	0	228	103	212	236	349	126	253	142	87
24	166	0	0	320	95	245	270	378	197	228	150	119
25	158	0	0	142	63	261	220	378	166	245	0	0
26	142	0	103	166	134	278	253	312	245	261	0	0
27	71	79	95	0	119	339	286	339	166	166	95	0
28	0	150	166	0	79	312	228	428	236	63	111	55
29	0	111	36	158	---	303	228	398	126	87	142	205
30	205	95	0	173	---	197	295	349	173	166	103	253
31	158	---	0	142	---	205	---	330	---	236	55	---
TOTAL	6413	2886	1914	5627	2294.9	7446	7075	11044	4955	5217	3552	3750
MEAN	207	96.2	61.7	182	82.0	240	236	356	165	168	115	125
MAX	368	228	236	398	158	529	320	487	312	261	286	359
MIN	0	0	0	0	0	0	134	189	0	0	0	0
AC-FT	12720	5720	3800	11160	4550	14770	14030	21910	9830	10350	7050	7440
CAL YR 1978 TOTAL	117612.00			MEAN 322	MAX 543	MIN 0	AC-FT 233300					
WTR YR 1979 TOTAL	62173.90			MEAN 170	MAX 529	MIN 0	AC-FT 123300					

11421760 DUTCH FLAT NO. 2 FLUME NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'16", long 120°46'28", in SE¼NE¼ sec.18, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on left bank 600 ft (183 m) downstream from Drum Afterbay, and 3.6 mi (5.8 km) west of Blue Canyon.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,348.09 ft (1,020.498 m) National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District).

REMARKS.--Records good except flows below 50 ft³/s (1.42 m³/s), which are poor. Water is diverted from Drum Afterbay through the flume to Dutch Flat No. 2 powerplant and then to Dutch Flat Afterbay. See schematic diagram of Bear River basin.

AVERAGE DISCHARGE.--13 years, 343 ft³/s (9.714 m³/s), 248,500 acre-ft/yr (306 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 610 ft³/s (17.3 m³/s) Mar. 1, 1968; no flow at times in most years.

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	228	350	357	17	476	329	589	543	507	304	481	42
2	246	318	15	253	358	295	585	532	503	321	472	10
3	124	301	15	255	19	300	586	506	512	333	469	10
4	156	15	129	159	34	255	586	524	499	336	314	10
5	134	15	293	186	330	369	590	589	534	307	312	10
6	154	185	267	15	513	126	586	596	510	315	373	10
7	167	399	311	15	475	222	585	552	529	239	542	10
8	131	351	263	285	266	583	587	580	407	245	552	10
9	168	384	46	356	222	518	586	558	127	302	529	23
10	186	269	146	298	100	465	588	595	138	537	516	232
11	182	26	260	482	71	217	582	595	351	516	218	451
12	328	56	251	583	259	20	587	577	341	402	171	416
13	361	383	259	581	484	20	583	596	376	387	368	237
14	345	425	229	453	539	20	586	593	367	303	575	315
15	346	412	195	495	348	20	586	593	56	424	526	39
16	300	463	17	480	342	218	588	597	20	476	525	230
17	342	360	104	446	337	583	592	599	20	522	420	360
18	339	257	242	436	321	579	587	600	268	513	206	383
19	368	509	272	419	349	521	567	600	253	518	137	426
20	359	489	270	546	331	508	588	600	260	538	364	453
21	377	450	258	530	369	540	585	601	318	285	415	375
22	375	320	214	563	333	579	585	590	318	299	427	111
23	398	51	20	556	334	578	588	607	306	429	490	10
24	378	15	15	507	340	578	594	606	290	494	295	10
25	418	15	15	562	311	577	590	586	317	473	30	10
26	414	15	183	388	325	577	595	604	291	496	117	10
27	331	203	241	55	285	583	593	606	340	436	320	10
28	15	372	199	129	353	585	594	573	337	349	424	48
29	15	459	210	276	---	585	592	564	314	345	385	20
30	241	397	15	430	---	585	589	568	313	425	383	20
31	366	---	68	466	---	584	---	566	---	484	271	---
TOTAL	8292	8264	5379	11222	8824	12519	17619	17996	9722	12353	11627	4301
MEAN	267	275	174	362	315	404	587	581	324	398	375	143
MAX	418	509	357	583	539	585	595	607	534	538	575	453
MIN	15	15	15	15	19	20	567	506	20	239	30	10
AC-FT	16450	16390	10670	22260	17500	24830	34950	35700	19280	24500	23060	8530
CAL YR 1978 TOTAL	128609.0		MEAN 352	MAX 600	MIN	1.0	AC-FT 255100					
WTR YR 1979 TOTAL	128118.0		MEAN 351	MAX 607	MIN	10	AC-FT 254100					

LOCATION.--Lat 39°15'16", long 120°46'26", in SW¼NW¼ sec.17, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on left bank 60 ft (18 m) downstream from Drum Afterbay Dam, and 3.5 mi (5.6 km) west of Blue Canyon.

GAGE.--Water-stage recorder and 4-ft (1.2 m) steel Cipolletti weir set in a concrete broad-crested weir. Altitude of gage is 3,300 ft (1,006 m), from topographic map. April 1966 to May 25, 1967, water-stage recorder at present site at different datum, May 26, 1967, to Feb. 11, 1968, water-stage recorder at site 1,000 ft (305 m) downstream at different datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,880 ft³/s (81.6 m³/s) Jan. 21, 1970, gage height, 3.68 ft (1.122 m), from rating curve extended above 900 ft³/s (25.5 m³/s); minimum daily, 1.0 ft³/s (0.028 m³/s) Dec. 9, 1967.

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	7.4	5.1	5.1	5.1	5.1	5.2	10	10	10	10	10	10
2	5.1	5.1	5.1	5.1	5.1	6.8	10	10	10	10	10	10
3	5.2	5.2	5.1	5.1	5.2	8.3	10	10	10	10	10	10
4	5.2	5.1	5.2	5.1	5.1	8.3	10	10	10	10	10	10
5	5.1	5.1	5.1	5.1	5.2	8.3	10	10	10	10	10	10
6	5.2	5.1	5.1	5.1	5.2	8.4	10	10	10	10	10	10
7	5.1	5.1	5.1	5.2	5.2	8.3	10	10	10	10	10	10
8	5.1	5.2	5.1	5.1	5.2	8.3	10	10	10	10	10	10
9	5.1	5.1	5.2	5.1	5.1	8.3	10	10	10	10	10	10
10	5.1	5.1	5.1	5.1	5.1	8.4	10	10	10	10	10	10
11	5.1	5.1	5.1	29	5.1	8.3	10	10	10	10	10	10
12	5.1	5.1	5.1	5.1	5.2	8.3	10	10	10	10	10	10
13	5.1	5.2	5.1	5.2	5.2	8.3	10	10	10	10	10	10
14	5.2	5.1	5.1	5.2	5.1	8.3	10	10	10	10	10	10
15	5.2	5.1	5.1	5.2	5.1	8.3	10	10	10	10	10	10
16	5.1	5.1	5.1	5.2	5.1	8.3	10	10	10	10	10	10
17	5.1	5.1	5.2	5.2	5.1	9.2	10	10	10	10	10	10
18	5.1	5.1	5.2	5.2	5.1	10	11	10	10	10	10	10
19	5.2	5.1	5.2	5.2	5.2	10	10	10	10	10	10	10
20	5.1	5.1	5.1	5.1	5.2	10	10	10	10	10	10	10
21	5.2	5.1	5.0	5.2	5.1	10	10	10	10	10	10	10
22	5.1	5.1	5.1	5.1	5.1	10	10	10	10	10	10	10
23	5.2	5.1	5.1	5.1	5.1	10	10	10	10	10	10	10
24	5.2	5.1	5.1	5.1	5.1	10	10	10	10	10	10	10
25	5.2	5.1	5.1	5.1	5.1	10	10	10	10	10	10	10
26	5.2	5.1	5.2	5.1	5.1	10	10	10	10	10	10	10
27	5.2	5.1	5.1	5.2	5.2	10	10	10	10	10	10	10
28	5.1	5.1	5.1	5.1	5.1	10	10	10	10	10	10	10
29	5.1	5.1	5.1	5.1	---	10	10	10	10	10	10	10
30	5.1	5.2	5.1	5.1	---	10	10	10	10	10	10	10
31	5.1	---	5.1	5.1	---	10	---	10	---	10	10	---
TOTAL	161.6	153.4	158.6	183.0	143.8	277.6	301	310	300	310	310	300
MEAN	5.21	5.11	5.12	5.90	5.14	8.95	10.0	10.0	10.0	10.0	10.0	10.0
MAX	7.4	5.2	5.2	29	5.2	10	11	10	10	10	10	10
MIN	5.1	5.1	5.0	5.1	5.1	5.2	10	10	10	10	10	10
AC-FT	321	304	315	363	285	551	597	615	595	615	615	595
CAL YR 1978	TOTAL	3465.8	MEAN 9.50	MAX 198	MIN 2.2	AC-FT	6870					
WTR YR 1979	TOTAL	2909.0	MEAN 7.97	MAX 29	MIN 5.0	AC-FT	5770					

11421780 CHICAGO PARK FLUME NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°12'55", long 120°50'23", in NW¼NE¼ sec.34, T.16 N., R.10 E., Nevada County, Hydrologic Unit 18020126, on left bank 670 ft (204 m) downstream from Dutch Flat Afterbay, and 0.6 mi (1.0 km) north of Dutch Flat.

PERIOD OF RECORD.--November 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,600 ft (792 m), from topographic map. Prior to Sept. 8, 1968, at site 420 ft (128 m) upstream at same datum.

REMARKS.--Records good except flows below 70 ft³/s (1.98 m³/s), which are poor. Flow regulated by Dutch Flat Afterbay. See schematic diagram of Bear River basin.

AVERAGE DISCHARGE.--13 years, 597 ft³/s (16.91 m³/s), 432,500 acre-ft/yr (533 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,080 ft³/s (30.6 m³/s) Nov. 12, 13, 1973; no flow for several days in most years.

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	560	551	502	20	604	569	934	905	743	443	788	241
2	679	551	46	272	526	403	931	907	807	477	747	134
3	504	395	60	425	52	429	783	882	817	509	644	123
4	493	20	167	417	41	540	868	843	907	510	352	33
5	493	20	396	285	489	440	870	875	837	510	343	0
6	505	362	432	20	649	180	871	907	813	510	629	0
7	539	547	473	54	649	403	889	1060	959	488	798	0
8	549	522	540	540	493	765	956	1080	575	455	738	0
9	548	459	125	725	327	640	921	1080	20	405	739	22
10	528	393	182	489	115	814	906	1080	337	790	708	140
11	506	30	305	996	147	633	852	1080	448	785	284	549
12	512	20	352	1090	292	854	853	920	585	652	223	690
13	548	448	351	1090	707	676	852	1080	636	721	549	626
14	547	568	354	741	764	551	864	1080	562	354	812	609
15	547	645	299	959	559	544	908	1080	223	376	713	312
16	525	544	20	795	461	715	911	1080	20	750	711	444
17	512	497	110	799	437	957	910	1080	20	727	614	606
18	512	340	413	841	549	920	909	1080	259	694	178	682
19	509	442	417	770	554	887	906	1030	376	844	196	606
20	507	608	290	756	461	886	903	899	319	756	463	584
21	518	632	426	746	473	890	852	1050	608	417	596	549
22	533	549	318	800	553	883	850	1050	518	431	597	300
23	545	20	20	802	396	889	882	1050	393	710	557	305
24	545	91	28	801	621	885	911	1050	551	818	572	93
25	541	120	20	856	363	886	897	1050	580	815	121	0
26	540	20	331	607	576	886	799	1040	402	748	141	0
27	492	308	413	20	442	1070	925	1070	552	729	387	0
28	20	521	397	102	447	1080	943	913	596	431	570	74
29	20	475	272	441	---	1080	895	1060	519	401	528	298
30	292	528	20	664	---	952	903	1060	459	627	513	301
31	552	---	128	662	---	751	---	965	---	795	499	---
TOTAL	15221	11226	8207	18585	12747	23058	26654	31386	15421	18678	16310	8321
MEAN	491	374	265	600	455	744	888	1012	514	603	526	277
MAX	679	645	540	1090	764	1080	956	1080	959	844	812	690
MIN	20	20	20	20	41	180	783	843	20	354	121	0
AC-FT	30190	22270	16280	36860	25280	45740	52870	62250	30590	37050	32350	16500
CAL YR 1978	TOTAL	274639.0	MEAN	752	MAX	1070	MIN	2.0	AC-FT	544700		
WTR YR 1979	TOTAL	205814.0	MEAN	564	MAX	1090	MIN	0	AC-FT	408200		

11421790 BEAR RIVER BELOW DUTCH FLAT AFTERBAY, NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°12'55", long 120°50'23", in NE&NW¼ sec.34, T.16 N., R.10 E., Placer County, Hydrologic Unit 18020126, at the left bank downstream end of spillway on Dutch Flat Afterbay Dam, 0.6 mi (1.0 km) north of Dutch Flat.

DRAINAGE AREA.--21.5 mi² (55.7 km²).

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,600 ft (790 m), from topographic map.

REMARKS.--Records excellent except flows above 13 ft³/s (0.37 m³/s), which are good. Water is imported from South Yuba River basin via Drum Canal above forebay (station 11414190). Chicago Park flume (station 11421780) diverts above station to Chicago Park powerplant. Records include spill over Dutch Flat Afterbay Dam. This station measures flow from Dutch Flat Afterbay in connection with a Federal Energy Regulatory Commission Project. See schematic diagram of Bear River basin.

COOPERATION.--Records of elevations for Dutch Flat Afterbay furnished by Pacific Gas and Electric Co.

AVERAGE DISCHARGE.--13 years, 25.5 ft³/s (0.722 m³/s), 18,470 acre-ft/yr (22.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,500 ft³/s (42.5 m³/s) Jan. 20, 1969; minimum daily, 0.08 ft³/s (0.002 m³/s) Mar. 8-19, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 262 ft³/s (7.42 m³/s) Jan. 11; minimum daily, 3.7 ft³/s (0.10 m³/s) Dec. 4, 5.

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	11	5.3	5.0	4.8	5.0	5.2	5.2	8.0	10	11	10	10
2	11	5.3	5.0	4.8	5.0	5.2	5.2	10	10	11	10	9.9
3	11	5.3	5.0	4.8	5.0	5.2	5.2	10	10	11	10	9.9
4	11	5.3	3.7	4.8	5.0	5.2	5.2	10	10	11	10	10
5	11	5.3	3.7	4.8	5.0	5.2	5.2	10	10	11	10	28
6	11	5.3	4.4	4.8	5.0	5.2	5.2	10	10	11	10	70
7	11	5.2	4.4	4.8	5.0	5.2	5.3	10	9.9	11	10	45
8	11	5.2	4.4	4.8	5.0	5.2	5.3	10	9.9	10	10	22
9	11	5.2	4.4	4.8	5.0	5.2	5.3	10	9.9	10	10	25
10	11	5.2	4.4	4.8	5.0	5.2	5.3	10	10	10	10	10
11	11	5.2	4.4	78	5.0	5.3	5.3	10	9.9	10	10	10
12	11	5.3	4.4	14	5.0	5.3	5.5	10	10	10	10	10
13	11	5.3	4.4	4.8	5.0	5.2	5.5	10	10	10	10	10
14	11	5.3	4.4	4.8	5.0	5.2	5.5	10	10	10	10	10
15	11	5.2	4.6	4.8	5.0	5.3	5.5	10	10	10	10	10
16	11	5.2	4.8	4.8	5.0	5.3	5.5	10	10	10	10	10
17	11	5.2	4.8	4.8	5.0	5.3	5.5	10	10	10	10	10
18	11	5.2	4.8	4.8	5.0	5.3	5.5	10	10	10	11	10
19	11	5.0	4.8	4.8	5.0	5.3	5.3	10	10	10	11	10
20	11	5.2	4.8	4.8	5.2	5.3	5.3	10	10	10	11	10
21	11	5.2	4.8	4.8	5.2	5.3	5.3	10	10	10	11	10
22	11	5.0	4.8	4.8	5.2	5.2	5.3	10	10	10	10	10
23	11	5.0	4.8	4.8	5.2	5.2	5.3	10	10	10	10	10
24	11	5.2	4.8	5.0	5.2	5.2	5.3	10	10	10	10	10
25	11	5.2	4.8	5.0	5.2	5.2	5.3	10	10	10	10	10
26	11	5.2	4.8	5.0	5.2	5.3	5.3	10	10	10	10	10
27	11	5.0	4.8	5.0	5.2	5.3	5.3	10	10	10	10	10
28	11	5.0	4.8	5.0	5.2	5.3	5.5	10	10	10	10	10
29	11	5.0	4.8	5.0	---	5.3	5.5	10	10	10	10	10
30	11	5.0	4.8	5.0	---	5.2	5.5	10	11	10	10	10
31	8.5	---	4.8	5.0	---	5.2	---	10	---	10	10	---
TOTAL	338.5	155.5	143.4	232.8	141.8	162.5	160.4	308.0	300.6	317	314	439.8
MEAN	10.9	5.18	4.63	7.51	5.06	5.24	5.35	9.94	10.0	10.2	10.1	14.7
MAX	11	5.3	5.0	78	5.2	5.3	5.5	10	11	11	11	70
MIN	8.5	5.0	3.7	4.8	5.0	5.2	5.2	8.0	9.9	10	10	9.9
AC-FT	671	308	284	462	281	322	318	611	596	629	623	872
CAL YR 1978	TOTAL	8642.2	MEAN	23.7	MAX	826	MIN	3.7	AC-FT	17140		
WTR YR 1979	TOTAL	3014.3	MEAN	8.26	MAX	78	MIN	3.7	AC-FT	5980		

SACRAMENTO RIVER BASIN

11421800 ROLLINS RESERVOIR NEAR COLFAX, CA

LOCATION.--Lat 39°08'05", long 120°56'54", in NE4SE4 sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on left bank just upstream from Rollins Dam on Bear River, 2.3 mi (3.7 km) north of Colfax.

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--December 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District).

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 15, 1964. Usable capacity, 66,000 acre-ft (81.4 hm³) between elevations 1,970.0 ft (600.46 m), invert of outlet tunnel and 2,171.0 ft (661.72 m), spillway crest. Dead storage, 270 acre-ft (333,000 m³). Several diversions into and out of basin upstream for power development and irrigation. Stored water is released into Bear River, part of which is diverted to Pacific Gas and Electric's Bear River Canal for power development. Water is later used for irrigation. See schematic diagram of Bear River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 70,100 acre-ft (86.4 hm³) Jan. 21, 1970, elevation, 2,175.8 ft (663.18 m); minimum since reservoir first filled, 4,250 acre-ft (5.24 hm³) Oct. 10, 1977, elevation, 2,022.5 ft (616.46 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 67,200 acre-ft (82.9 hm³) Mar. 27, elevation, 2,172.4 ft (662.15 m); minimum, 43,500 acre-ft (53.6 hm³) Jan. 7, elevation, 2,139.6 ft (652.15 m).

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

2,020	3,920	2,080	16,800
2,030	5,320	2,120	32,700
2,040	6,990	2,140	43,800
2,050	8,940	2,160	57,300
2,060	11,200	2,176	70,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56300	55500	60900	46600	65700	66700	66800	66700	66600	60800	63900	60100
2	56600	56600	60100	46100	65800	66500	66800	66800	66700	60800	64300	59100
3	56600	57300	59300	46000	65000	66500	66700	66700	66700	60700	64500	58200
4	56600	57500	58500	45900	64200	66600	66700	66700	66700	60600	64100	57200
5	56500	57500	58400	45500	64300	66500	66700	66800	66600	60600	63600	56100
6	56500	58100	58300	44500	64600	66400	66700	66800	66600	60400	63700	55200
7	56500	59100	58300	43500	65000	66700	66700	67000	66600	60300	64100	54100
8	56500	60100	58500	43900	65100	66900	66800	67000	66200	60100	64400	52900
9	56600	60900	57800	44700	65200	66800	66700	66900	65200	59800	64800	51800
10	56600	61200	57000	44900	64400	66900	66700	66900	64900	60300	65100	50900
11	56600	60800	56600	50200	63700	66700	66700	66900	64800	60800	64500	50900
12	56600	60300	56400	52300	64100	66900	66700	66800	64900	61000	63800	51200
13	56600	60600	56100	53900	64300	66800	66700	66900	65200	61400	63500	51400
14	56600	61700	55900	55100	66100	66600	66700	66900	65200	61000	64000	51500
15	56600	62700	55600	57300	66400	66800	66700	66900	64700	60600	64300	51100
16	56600	62900	54700	58500	66400	66900	66700	66900	63700	60900	64600	50900
17	56600	63100	54000	59600	66300	67000	66700	66900	62700	61200	64800	50900
18	56600	62700	53800	60500	66700	66900	66700	66900	62100	61500	63900	51300
19	56500	62700	53800	61400	66700	66900	66700	66800	61900	62000	63100	51300
20	56400	63300	53400	62100	66700	66900	66700	66700	61400	62400	62800	51400
21	56400	63900	53300	62700	66700	66900	66700	66800	61500	62100	62900	51500
22	56400	64300	53000	63500	66700	66900	66700	66800	61500	61800	63000	50900
23	56400	63500	52000	64300	66500	66900	66700	66800	61200	62000	63000	51000
24	56400	62600	51100	65100	66600	66900	66700	66800	61200	62500	63100	49600
25	56400	61700	50200	66000	66300	66800	66700	66800	61300	62900	62200	48400
26	56400	60800	49800	66100	66600	66900	66700	66800	61100	63200	61300	47200
27	56400	60400	49800	65200	66500	67200	66800	66800	61100	63500	60800	46100
28	55400	60600	49600	64500	66900	67100	66800	66700	61200	63300	60900	44900
29	54400	60600	49200	64400	---	67000	66700	66800	61200	62900	60800	44400
30	54100	60700	48300	64800	---	66800	66700	66800	61100	63000	60800	43800
31	54300	---	47500	65300	---	66700	---	66700	---	63500	60600	---
MAX	56600	64300	60900	66100	66900	67200	66800	67000	66700	63500	65100	60100
MIN	54100	55500	47500	43500	63700	66400	66700	66700	61100	59800	60600	43800
†	2155.9	2164.4	2146.0	2170.2	2172.1	2171.9	2171.9	2171.9	2164.9	2167.9	2164.3	2140.1
‡	-1900	+6400	-13200	+17800	+1600	-200	0	0	-5600	+2400	-2900	-17800
CAL YR 1978	‡ -3700											
WTR YR 1979	‡ -12400											

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

‡ Change in contents, in acre-feet.

11422000 BEAR RIVER CANAL INTAKE NEAR COLFAX, CA

LOCATION.--Lat 39°07'58", long 120°57'12", in SW¼SE¼ sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on right bank 600 ft (183 m) downstream from canal inlet, 0.2 mi (0.3 km) below Rollins Dam, and 2.2 mi (3.5 km) north of Colfax.

PERIOD OF RECORD.--January 1912 to September 1953, October 1964 to current year. Monthly discharge only for some periods published in WSP 1315-A. Prior to October 1912, published as Pacific Gas and Electric Co.'s Canal near Colfax, October 1912 to September 1953, published as Bear River Canal near Colfax.

GAGE.--Water-stage recorder. Altitude of gage is 1,980 ft (604 m), from topographic map. Prior to Mar. 25, 1946, water-stage recorder at site 1.5 mi (2.4 km) downstream at different datum.

REMARKS.--Canal diverts from left bank of Bear River. Water is first used to develop power at Halsey and Wise powerhouse, part of it is then distributed for irrigation and part is eventually spilled into North Fork American River. See schematic diagram showing diversion and storage in Bear 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.--56 years (water years 1913-53, 1965-79), 292 ft³/s (8.269 m³/s), 211,600 acre-ft/yr (261 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 516 ft³/s (14.6 m³/s) Oct. 6, 1976; no flow at times in most years.

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	477	18	477	477	487	471	466	483	472	462	472	472
2	477	7.6	476	479	489	465	465	483	473	463	472	470
3	477	7.5	475	487	488	465	464	483	474	460	472	474
4	476	7.4	474	487	487	467	463	477	476	456	472	477
5	476	12	473	486	486	468	463	470	476	457	472	474
6	476	31	474	485	487	468	461	470	476	458	472	472
7	476	31	474	482	488	482	461	471	470	458	473	473
8	476	32	474	481	489	485	461	473	467	459	473	473
9	476	90	474	482	321	483	458	475	466	459	473	472
10	477	261	473	484	481	483	463	476	466	459	479	472
11	477	243	473	427	482	483	470	476	466	459	479	470
12	477	243	473	449	482	483	474	477	466	459	480	471
13	477	243	473	481	484	483	483	476	466	469	484	472
14	478	73	473	485	488	483	482	477	466	477	487	472
15	478	166	473	482	488	483	481	475	469	478	490	472
16	478	460	472	475	487	483	481	474	465	479	489	470
17	478	452	488	475	487	484	481	473	456	482	489	472
18	478	453	487	477	488	484	480	473	458	481	490	473
19	479	453	486	479	489	484	480	473	460	483	490	473
20	479	466	485	480	475	484	481	473	459	481	487	473
21	479	473	485	481	466	484	481	472	462	476	484	473
22	479	475	485	477	467	483	482	473	462	476	484	472
23	479	474	484	474	468	481	482	473	462	476	485	471
24	479	473	482	476	467	480	483	473	462	476	485	469
25	477	472	480	483	466	478	482	472	464	477	484	470
26	477	470	480	489	466	479	482	472	464	478	481	468
27	477	469	484	489	467	479	483	472	463	479	481	464
28	465	473	483	487	469	474	484	472	463	478	484	465
29	438	476	483	487	---	470	484	471	463	476	482	467
30	403	476	481	486	---	468	484	472	463	474	481	465
31	403	---	479	486	---	467	---	473	---	472	478	---
TOTAL	14599	8480.5	14833	14855	13289	14814	14245	14703	13975	14577	14904	14131
MEAN	471	283	478	479	475	478	475	474	466	470	481	471
MAX	479	476	488	489	489	485	484	483	476	483	490	477
MIN	403	7.4	472	427	321	465	458	470	456	456	472	464
AC-FT	28960	16820	29420	29460	26360	29380	28250	29160	27720	28910	29560	28030
CAL YR 1978	TOTAL	167086.5	MEAN	458	MAX	507	MIN	7.4	AC-FT	331400		
WTR YR 1979	TOTAL	167405.5	MEAN	459	MAX	490	MIN	7.4	AC-FT	332000		

SACRAMENTO RIVER BASIN

11422500 BEAR RIVER BELOW ROLLINS DAM, NEAR COLFAX, CA

LOCATION.--Lat 39°07'53", long 120°57'29", in SE¼SW¼ sec.22, T.15 N., R.9 E., Nevada County, Hydrologic Unit 18020126, on right bank 65 ft (20 m) downstream from highway bridge, 0.5 mi (0.8 km) downstream from Rollins Dam, and 2.2 mi (3.5 km) north of Colfax.

DRAINAGE AREA.--105 mi² (272 km²).

PERIOD OF RECORD.--January 1912 to September 1913, October 1913 to July 1915 (gage heights and discharge measurements only), August 1915 to June 1917, November 1949 to September 1953, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to August 1964, published as Bear River near Colfax. Records for November and December 1911 include diversion to Bear River Canal and are not equivalent.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,927.41 ft (587.475 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1915, nonrecording gages at several sites above diversion dam 0.3 mi (0.5 km) upstream at different datums. Aug. 8, 1915, to June 30, 1917, nonrecording gage 0.7 mi (1.1 km) downstream at different datum. Nov. 1, 1949, to Sept. 30, 1953, at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good. Flow regulated by Rollins Reservoir (station 11421800) beginning Dec. 15, 1964. Bear River Canal (station 11422000) diverts above station. See schematic diagram of Bear River basin.

AVERAGE DISCHARGE (unadjusted).--20 years (water years 1913, 1916, 1951-53, 1965-79), 360 ft³/s (10.20 m³/s), 260,800 acre-ft/yr (322 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (prior to construction of Rollins Dam in 1964), 9,620 ft³/s (272 m³/s) Nov. 20, 1950, gage height, 21.40 ft (6.523 m) site and datum then in use, from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in 1912, 1952. Maximum discharge since construction of Rollins Dam, 12,700 ft³/s (360 m³/s) Jan. 21, 1970, gage height, 11.72 ft (3.572 m), from rating curve extended above 6,000 ft³/s (170 m³/s); minimum daily, 0.5 ft³/s (0.014 m³/s) Nov. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,330 ft³/s (37.7 m³/s) Mar. 28, gage height, 4.04 ft (1.231 m); minimum daily, 9.8 ft³/s (0.28 m³/s) Nov. 14.

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	75	22	22	20	19	1110	697	605	413	104	102	67
2	75	21	22	20	20	581	748	595	344	100	99	67
3	76	21	21	20	20	415	589	564	395	103	99	67
4	75	21	21	21	20	473	620	514	435	109	99	67
5	75	19	21	21	20	429	621	614	433	109	98	67
6	75	18	21	21	19	232	668	702	331	109	98	67
7	75	18	21	21	19	233	646	972	547	108	98	69
8	75	18	21	22	19	650	686	1060	389	109	98	70
9	75	19	21	21	19	564	684	966	83	109	99	71
10	76	17	21	22	19	709	643	897	80	109	99	72
11	76	13	21	48	19	591	593	858	80	109	98	72
12	76	13	21	23	19	611	559	743	80	109	98	72
13	76	13	21	21	26	583	540	765	80	107	94	72
14	77	9.8	21	30	33	453	538	803	80	106	91	72
15	77	15	21	40	264	429	573	793	80	106	87	72
16	78	22	21	32	321	747	585	786	84	106	87	72
17	78	22	22	19	209	893	631	777	89	106	87	79
18	78	22	22	19	370	876	616	770	85	106	87	86
19	78	22	22	18	840	772	580	755	89	106	87	86
20	78	24	21	18	545	735	567	601	97	110	87	86
21	78	23	21	18	759	688	525	636	97	117	87	86
22	78	23	21	18	753	676	499	699	97	117	77	89
23	78	22	21	18	542	647	540	692	97	117	68	92
24	81	21	21	18	546	624	616	681	97	116	74	92
25	83	22	21	18	321	621	603	673	97	116	74	89
26	83	22	21	140	445	627	562	665	98	116	75	88
27	84	22	20	22	427	1080	660	671	105	116	78	88
28	81	22	20	18	477	1260	740	585	106	116	78	88
29	76	21	20	18	---	1080	617	583	105	116	78	88
30	68	21	20	19	---	926	601	651	104	116	79	87
31	69	---	20	20	---	682	---	615	---	116	75	---
TOTAL	2383	588.8	651	804	7110	20997	18347	22291	5297	3419	2735	2340
MEAN	76.9	19.6	21.0	25.9	254	677	612	719	177	110	88.2	78.0
MAX	84	24	22	140	840	1260	748	1060	547	117	102	92
MIN	68	9.8	20	18	19	232	499	514	80	100	68	67
AC-FT	4730	1170	1290	1590	14100	41650	36390	44210	10510	6780	5420	4640
CAL YR 1978	TOTAL	183331.1	MEAN 502	MAX 3810	MIN 4.3	AC-FT 363600						
WTR YR 1979	TOTAL	86962.8	MEAN 238	MAX 1260	MIN 9.8	AC-FT 172500						

11423700 NEW CAMP FAR WEST RESERVOIR NEAR WHEATLAND, CA

LOCATION.--Lat 39°03'01", long 121°18'53", in NE¼SW¼ sec.21, T.14 N., R.6 E., on Yuba-Placer County line, Hydrologic Unit 18020126, in center of New Camp Far West Dam on the Bear River, 6.4 mi (10.3 km) east of Wheatland, and 11.8 mi (19.0 km) northeast of Sheridan.

DRAINAGE AREA.--283 mi² (733 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by South Sutter Water District).

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Sept. 30, 1963. Usable capacity, 102,200 acre-ft (126 hm³) between elevations 175.0 ft (53.34 m) bottom of lowest river outlet, and 300.0 ft (91.44 m) crest of spillway. Dead storage, 2,200 acre-ft (2.71 hm³). See schematic diagram of Bear River basin.

COOPERATION.--Records furnished by South Sutter Water District and California Department of Water Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 120,200 acre-ft (148 hm³) Jan. 21, 1970, elevation, 307.3 ft (93.66 m); minimum, 2,200 acre-ft (2.71 hm³) Oct. 11, 1968, elevation, 175.0 ft (53.34 m), may have been lower during periods of no record Oct. 12-16, 1968, and during the 1977 water year.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 109,800 acre-ft (135 hm³) Feb. 22, Mar. 1, elevation, 302.46 ft (92.190 m); minimum observed, 7,200 acre-ft (8.88 hm³) Sept. 30, elevation, 200.70 ft (61.173 m).

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

170	1,400	250	34,200
180	3,000	260	44,000
190	4,800	270	55,500
200	7,000	280	69,500
210	9,800	290	85,600
220	14,000	300	104,400
230	19,400	320	151,000
240	25,800		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66700	---	72600	76700	104600	109800	106600	106100	105800	81400	49900	18500
2	---	---	72700	76900	104800	107900	106600	106100	105700	80400	48700	17400
3	---	---	73000	---	104800	107200	106600	106100	105200	79300	47700	16500
4	66400	---	73200	77100	104800	106800	106400	106100	104600	78400	46500	15700
5	---	---	73500	---	104800	106600	106400	106100	104400	77400	45400	14800
6	---	---	73500	---	104800	106100	106400	106200	104000	76300	44300	14200
7	---	---	73700	---	104800	105900	106400	106400	103500	75100	43400	13600
8	---	---	73800	---	104800	105900	106400	107000	103300	74000	42400	13000
9	66000	65400	73800	---	104600	106100	106400	107000	102900	73200	40500	12400
10	---	65600	74000	---	104600	106100	106400	106800	102100	72200	39500	11900
11	---	65700	74000	87700	104600	106100	106400	106600	101000	71100	38400	11500
12	---	65700	74000	89700	104600	106100	106100	106600	100100	70000	37300	11100
13	---	65900	74200	90700	105700	106100	106100	106400	99300	68900	36300	10600
14	---	66000	74300	93300	107200	106100	105900	106400	98400	68000	35200	10300
15	---	66100	74300	98800	106400	106400	105900	106400	97300	67000	34100	9800
16	---	66100	74500	101000	107000	106800	106100	106200	96500	66000	33100	9600
17	---	66300	74800	101800	106600	106800	106400	106200	95600	64900	32200	9400
18	65300	66300	75100	102500	108100	106800	106400	106200	94400	63900	31200	9200
19	---	66700	75110	102900	108100	106800	105900	106200	93700	62800	30400	9000
20	---	67700	75100	103100	108100	106600	105700	106100	92400	61800	29600	8800
21	---	68700	75300	103500	109200	106600	105900	106000	91600	60800	28600	8600
22	---	69800	75500	103600	109800	106600	105900	105900	90500	59800	27500	8300
23	---	70300	75600	104000	108500	106400	106100	106000	89400	58900	26400	8200
24	---	70800	75800	104200	107200	106400	106100	106000	88200	57700	25900	8000
25	---	71100	75900	104200	106600	106400	106100	106000	87300	56600	25400	7800
26	---	71300	76100	103800	106400	106400	106100	106000	86400	55800	24100	7800
27	---	71600	76300	104200	106400	107900	106100	106000	85300	54700	23200	7600
28	---	71800	76300	104000	108100	108300	106100	106000	84300	53800	22200	7600
29	---	72100	76400	104000	---	107900	106100	106000	83300	52900	21200	7400
30	64500	72200	76600	104600	---	107400	106100	105800	82400	51900	20300	7200
31	64500	---	76600	104800	---	107000	---	105800	---	50900	19300	---
MAX	---	---	76600	---	109800	109800	106600	107000	105800	81400	49900	18500
MIN	---	---	72600	---	104600	105900	105700	105800	82400	50900	19300	7200
†	267.4	281.7	284.4	300.2	301.7	301.2	300.8	300.6	288.0	266.0	229.9	200.7
‡	-2300	+7700	+4400	+28200	+3300	-1100	-900	-300	-23400	-31500	-31600	-12100

CAL YR 1978 † -1300
WTR YR 1979 ‡ -59600

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

11424000 BEAR RIVER NEAR WHEATLAND, CA

LOCATION.--Lat 39°00'01", long 121°24'21", in SE¼SW¼ sec.3, T.13 N., R.5 E., Placer County, Hydrologic Unit 18020108, on right bank 100 ft (30 m) downstream from bridge on U.S. Highway 99E, 1 mi (2 km) southeast of Wheatland, and 6.5 mi (10.5 km) downstream from Rock-Creek.

DRAINAGE AREA.--292 mi² (756 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.92 ft (21.921 m) National Geodetic Vertical Datum of 1929. See WSP 2131 for history of changes prior to May 28, 1970.

REMARKS.--Records good. Natural flow of stream affected by inflow from Yuba River and American River basins. Flow regulated by Lake Combie, usable capacity, 7,840 acre-ft (9.67 hm³), Rollins Reservoir (station 11421800) since December 1964, and New Camp Far West Reservoir (station 11423700) since October 1963. Many diversions for irrigation and power. See schematic diagram of Bear River basin.

AVERAGE DISCHARGE (adjusted for diversions and change in contents in New Camp Far West Reservoir since 1966).--50 years, 451 ft³/s (12.77 m³/s), 326,700 acre-ft/yr (403 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s (935 m³/s) Dec. 22, 1955, gage height, 19.30 ft (5.883 m) site and datum then in use; maximum gage height, 20.83 ft (6.349 m) Nov. 21, 1950, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,340 ft³/s (151 m³/s) Mar. 1, gage height, 10.82 ft (3.298 m); minimum daily, 0.06 ft³/s (0.002 m³/s) Dec. 2.

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	2.4	6.0	.20	1.4	100	4250	1020	275	59	4.2	3.3	4.6
2	2.0	3.9	.06	1.4	105	2950	936	235	42	4.0	3.2	4.7
3	1.6	3.1	4.4	1.4	113	1780	912	212	30	4.5	4.1	4.8
4	2.9	2.9	2.8	1.4	118	1370	792	175	20	4.4	3.3	5.0
5	4.4	2.5	1.8	1.4	112	1140	756	124	14	4.2	5.7	5.1
6	4.7	2.1	1.3	1.4	106	905	740	267	10	4.9	7.8	5.8
7	5.0	1.5	1.7	1.7	98	722	769	385	7.4	6.6	7.3	7.5
8	5.5	1.2	1.9	8.0	93	623	766	653	6.0	6.5	7.8	8.8
9	5.6	1.2	1.9	12	89	792	772	737	8.7	6.8	8.1	7.5
10	6.2	1.1	1.9	4.8	86	798	763	651	6.0	6.4	11	6.2
11	8.7	1.1	1.9	30	85	835	744	561	5.6	6.3	6.8	5.8
12	8.5	1.1	1.9	13	82	768	719	478	6.3	6.0	6.8	6.2
13	5.2	1.4	1.9	6.8	172	792	679	367	8.5	4.4	7.4	5.1
14	3.4	1.4	1.6	22	1330	762	661	335	6.6	4.3	9.1	5.5
15	2.7	1.4	1.2	50	1090	737	659	343	6.0	3.8	7.0	7.5
16	2.5	1.2	1.2	14	1120	915	616	314	5.3	3.8	6.3	5.8
17	2.4	.82	2.6	7.8	1230	1110	629	291	5.0	3.5	6.6	5.8
18	2.2	.75	4.9	6.6	1010	1170	658	266	5.4	3.4	7.0	4.8
19	2.6	1.9	4.1	5.2	1340	1100	768	244	5.9	5.7	5.8	3.8
20	2.8	7.6	2.8	4.2	1780	965	360	219	6.7	6.6	5.4	3.6
21	2.8	13	1.9	4.4	2770	902	356	192	4.2	5.0	4.5	5.5
22	2.5	14	9.8	3.7	3100	855	361	170	6.5	6.7	4.3	5.8
23	2.5	9.2	4.2	3.2	3400	830	349	153	6.4	8.1	4.3	4.4
24	2.7	5.5	2.3	3.1	1960	808	380	138	5.3	8.8	4.2	4.8
25	3.9	4.2	1.7	3.1	1340	787	409	133	6.7	9.0	4.2	4.1
26	6.4	3.7	1.6	15	944	769	371	118	6.2	6.6	4.1	3.1
27	6.8	3.0	1.6	41	853	1050	440	106	5.2	5.9	4.1	2.7
28	7.1	2.8	1.6	92	940	2110	468	93	4.5	6.3	4.1	2.1
29	7.9	1.7	1.4	89	---	1860	457	82	4.5	4.7	4.2	2.1
30	8.7	.45	1.4	80	---	1500	356	74	4.3	4.2	4.3	1.9
31	8.2	---	1.4	90	---	1260	---	66	---	3.2	4.4	---
TOTAL	140.8	101.72	70.96	619.0	25566	37215	18666	8457	318.2	168.8	176.5	150.4
MEAN	4.54	3.39	2.29	20.0	913	1200	622	273	10.6	5.45	5.69	5.01
MAX	8.7	14	9.8	92	3400	4250	1020	737	59	9.0	11	8.8
MIN	1.6	.45	.06	1.4	82	623	349	66	4.2	3.2	3.2	1.9
AC-FT	279	202	141	1230	50710	73820	37020	16770	631	335	350	298
†	4570	0	0	0	0	0	8293	29152	28793	29962	29100	10405

CAL YR 1978 TOTAL 181107.80 MEAN 496 MAX 7930 MIN .06 AC-FT 359200 MEAN ‡ 749 AC-FT ‡ 542500
WTR YR 1979 TOTAL 91650.38 MEAN 251 MAX 4250 MIN .06 AC-FT 181800 MEAN ‡ 363 AC-FT ‡ 262500

† Diversions, in acre-feet, to Camp Far West North and South Canals and South Sutter conveyance canal, furnished by South Sutter Water District.

‡ Adjusted for diversions and change in contents in New Camp Far West Reservoir.

11424000 BEAR RIVER NEAR WHEATLAND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1953 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)
DEC 18...	1130	5.3	234	7.4	8.0	1.0	11.3	100
JAN 25...	1030	3.1	206	7.3	7.0	1.0	--	92
FEB 26...	1610	969	97	7.4	9.0	10	11.1	39
MAR 15...	1145	716	91	7.3	13.5	6.0	11.0	39
APR 24...	1230	380	89	7.4	14.5	3.0	9.7	32
MAY 23...	0845	153	82	7.2	21.0	.00	8.3	30
JUN 21...	1130	3.3	210	8.1	24.0	.00	8.8	84
JUL 26...	0850	6.6	174	7.9	25.5	.00	--	74
AUG 23...	1100	4.3	199	8.1	25.5	.00	9.9	88
SEP 20...	0840	3.1	190	7.9	19.0	.00	8.4	80

DATE	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	ALKA- LINITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 18...	21	12	7.0	.3	78	7.0	140	.19
JAN 25...	16	--	6.4	--	66	7.7	129	.18
FEB 26...	9.0	4.0	4.0	.3	32	3.0	65	.09
MAR 15...	9.0	4.0	3.0	.2	30	3.0	63	.09
APR 24...	8.0	3.0	3.0	.2	28	2.0	54	.07
MAY 23...	7.0	3.0	4.0	.3	26	4.0	55	.07
JUN 21...	17	10	6.0	.3	67	6.0	125	.17
JUL 26...	15	9.0	6.0	.3	63	4.0	112	.15
AUG 23...	17	11	7.0	.3	75	5.0	123	.17
SEP 20...	17	--	7.0	--	74	7.0	121	.16

11425000 FEATHER RIVER NEAR NICOLAUS, CA

LOCATION.--Lat 38°53'26", long 121°36'12", in SE&NE¼ sec.14, T.12 N., R.3 E., Sutter County, Hydrologic Unit 18020106, on left bank 1.7 mi (2.7 km) southwest of Nicolaus, 4.2 mi (6.8 km) downstream from Bear River, and at mile 8.1 (13.0 km).

DRAINAGE AREA.--5,921 mi² (15,335 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1921 to December 1942 (low-water periods only), April 1943 to current year. Prior to October 1974, published as "at Nicolaus."

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.30 ft (1.006 m) below National Geodetic Vertical Datum of 1929. Prior to November 1931, on middle fender pier of bridge 1.6 mi (2.6 km) upstream at same datum. November 1931 to September 1974, at highway bridge 1.3 mi (2.1 km) upstream at same datum.

REMARKS.--Records good. Flow partly regulated by many reservoirs, total capacity, 6,868,000 acre-ft (8.47 km³), the largest of which are Lake Oroville (station 11406800) completed in 1968, Lake Almanor (station 11399000) completed in 1913, and New Bullards Bar Reservoir (station 11413515) completed in 1969. Diversions for irrigation of about 87,000 acres (352 km²) between stations at Oroville and near Nicolaus.

AVERAGE DISCHARGE.--36 years (water years 1944-79), 7,931 ft³/s (224.6 m³/s), 5,746,000 acre-ft/yr (7.08 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1944-79), 357,000 ft³/s (10,100 m³/s) Dec. 23, 1955; maximum gage height, 51.60 ft (15.728 m) Dec. 23, 1955; no flow Aug. 2-18, 1924, July 11-22, 24, 26, Aug. 1, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,700 ft³/s (784 m³/s) Mar. 2, gage height, 33.92 ft (10.339 m); maximum gage height, 35.90 ft (10.942 m) Feb. 24, backwater from the Sacramento River; minimum daily discharge, 2,130 ft³/s (60.3 m³/s) May 5.

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	5160	3320	3680	3660	4050	19700	5340	2930	3140	6100	6210	4840
2	5060	3320	3670	3660	4050	25300	5140	2780	2920	6150	6240	4800
3	4620	3280	3650	3690	3990	14500	4850	2470	2870	6100	6250	4870
4	3890	3270	3630	3720	3960	14200	4570	2280	2890	5620	6240	4930
5	3800	3260	3690	3690	3940	13500	4300	2130	2830	5170	6240	4930
6	3790	3260	3620	3650	3940	12700	4070	2340	2940	5120	6640	4890
7	3790	3320	3640	3620	3940	12300	3860	2610	3030	5070	6730	4910
8	3770	3360	3640	3730	3910	10600	3620	3200	3210	5020	6730	4840
9	3790	3410	3660	4620	3920	9610	3440	4100	2990	5050	6800	4680
10	3810	3400	3640	4670	3900	9440	3180	4300	2980	5240	6830	4580
11	3830	3390	3640	6380	3880	8390	2990	4220	3090	5170	6850	4530
12	3920	3420	3660	13300	3900	7190	2950	4030	3400	4850	6820	4390
13	3820	3490	3650	8540	4040	5890	2900	3960	3720	4810	6860	4230
14	3740	3490	3750	6810	8960	5150	2830	3880	3740	4810	6850	4150
15	3720	3480	3730	9290	11400	4940	2770	3850	3920	4750	6660	4320
16	3670	3490	3650	12100	7140	5370	2760	3790	3590	4780	6160	4610
17	3450	3450	3700	12200	7420	6960	2740	4280	3460	4770	5900	4690
18	3300	3480	3810	10400	6250	8820	2820	4440	3470	4800	5960	4720
19	3290	3500	3870	8060	11300	9320	2910	4420	3490	5350	5950	4700
20	3250	3730	3810	6650	10100	8860	2710	4350	3470	5890	5950	4670
21	3210	4050	3900	5820	13800	7700	2390	4350	4190	6240	5820	4680
22	3200	4410	3910	5210	21300	6600	2350	5400	4520	6320	5430	4690
23	3200	4570	3910	4970	26000	5560	2740	6060	4570	6420	5100	4690
24	3210	4210	3860	4780	27200	4820	3450	6440	4690	6360	5070	4840
25	3170	3910	3780	4660	23800	4460	3620	7170	4740	6250	5080	3990
26	3460	3730	3770	4450	21400	4380	3460	5880	4720	5870	5120	3640
27	3260	3630	3750	4350	18100	5040	3550	4470	5110	5800	5130	3540
28	3190	3730	3750	4220	12000	9590	4110	4240	5530	5770	5020	3390
29	3280	3700	3790	4140	---	9200	3670	4010	5600	5760	4720	3660
30	3250	3690	3830	4090	---	6390	3060	3840	5770	5800	4740	4130
31	3250	---	3700	4050	---	5590	---	3580	---	6110	4830	---
TOTAL	113150	107750	115740	183180	277590	282070	103150	125800	114590	171320	184930	134530
MEAN	3650	3592	3734	5909	9914	9099	3438	4058	3818	5526	5965	4484
MAX	5160	4570	3910	13300	27200	25300	5340	7170	5770	6420	6860	4930
MIN	3170	3260	3620	3620	3880	4380	2350	2130	2830	4750	4720	3390
AC-FT	224400	213700	229600	363300	550600	559500	204600	249500	227200	339800	366800	266800
CAL YR 1978	TOTAL	2597720	MEAN	7117	MAX	33500	MIN	1880	AC-FT	5153000		
WTR YR 1979	TOTAL	1913740	MEAN	5243	MAX	27200	MIN	2130	AC-FT	3796000		

11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

CHEMICAL ANALYSES: Water years 1951-66. Published as "at Nicolaus."

WATER TEMPERATURES: Water years 1951-58, 1960 to current year. Published as station 11425100 for period 1964-74.

SEDIMENT RECORDS: Water year 1979.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: October 1951 to September 1958, November 1959 to September 1962.

SPECIFIC CONDUCTANCE: March 1951 to September 1958, October 1960 to June 1966.

WATER TEMPERATURES: March 1951 to September 1958, November 1959 to current year.

SEDIMENT RECORDS: November 1978 to September 1979 (storm season only).

INSTRUMENTATION.--Temperature recorder since November 1961.

REMARKS.--Unpublished records of daily specific conductance available in files of district office. Prior to 1964 water year, thermograph located at gaging station "at Nicolaus", 1.3 mi (2.1 km) upstream. Records from October 1964 to September 1974 were obtained 2.5 mi (4.0 km) downstream and are considered equivalent.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 34.5°C July 21, 1961; minimum recorded, 0.0°C Jan. 3-6, 1961.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 217 mg/L Jan. 12, 1979; minimum daily mean, 12 mg/L Nov. 27, 1978.

SEDIMENT DISCHARGE: Maximum daily, 14,200 tons (12,900 metric tons) Feb. 24, 1979; minimum daily, 118 tons (107 metric tons) Nov. 27, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 27.0°C June 11; minimum recorded, 5.5°C Dec. 31, Jan. 1-3.

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 217 mg/L Jan. 12; minimum daily mean, 12 mg/L Nov. 27.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 14,200 tons (12,900 metric tons) Feb. 24; minimum daily, 118 tons (107 metric tons) Nov. 27.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SACRAMENTO RIVER BASIN

11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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				3320	22	197	3680	18	179
2				3320	22	197	3670	18	178
3				3280	22	195	3650	19	187
4				3270	22	194	3630	20	196
5				3260	22	194	3690	21	209
6				3260	22	194	3620	23	225
7				3320	22	197	3640	25	246
8				3360	22	200	3640	25	246
9				3410	22	203	3660	25	247
10				3400	22	202	3640	25	246
11				3390	21	192	3640	25	246
12				3420	22	203	3660	25	247
13				3490	22	207	3650	25	246
14				3490	21	198	3750	26	263
15				3480	21	197	3730	26	262
16				3490	20	188	3650	25	246
17				3450	20	186	3700	26	260
18				3480	19	179	3810	27	278
19				3500	19	180	3870	27	282
20				3730	18	181	3810	27	278
21				4050	18	197	3900	27	284
22				4410	20	238	3910	28	296
23				4570	22	271	3910	28	296
24				4210	18	205	3860	27	281
25				3910	15	158	3780	27	276
26				3730	13	131	3770	27	275
27				3630	12	118	3750	27	273
28				3730	13	131	3750	27	273
29				3700	14	140	3790	27	276
30				3690	16	159	3830	27	279
31				---	---	---	3700	27	270
TOTAL				107750	---	5632	115740	---	7846

11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	3660	27	267	4050	28	306	19700	56	3110
2	3660	27	267	4050	26	284	25300	63	4300
3	3690	27	269	3990	24	259	14500	50	1960
4	3720	27	271	3960	22	235	14200	49	1880
5	3690	27	269	3940	20	213	13500	48	1750
6	3650	26	256	3940	21	223	12700	47	1610
7	3620	26	254	3940	22	234	12300	46	1530
8	3730	27	272	3910	21	222	10600	43	1230
9	4620	37	462	3920	20	212	9610	41	1060
10	4670	38	479	3900	20	211	9440	41	1050
11	6380	68	1470	3880	20	210	8390	39	883
12	13300	217	7980	3900	20	211	7190	36	699
13	8540	103	2370	4040	21	229	5890	34	541
14	6810	70	1290	8960	62	1750	5150	32	445
15	9290	115	2880	11400	81	2650	4940	31	413
16	12100	182	5950	7140	43	829	5370	32	464
17	12200	183	6030	7420	45	902	6960	36	677
18	10400	140	3930	6250	36	607	8820	40	953
19	8060	92	2000	11300	78	2380	9320	41	1030
20	6650	67	1200	10100	67	1830	8860	40	957
21	5820	54	849	13800	103	3840	7700	38	790
22	5210	48	675	21300	146	8400	6600	35	624
23	4970	46	617	26000	181	12700	5560	33	495
24	4780	44	568	27200	194	14200	4820	30	390
25	4660	42	528	23800	177	11400	4460	30	361
26	4450	40	481	21400	147	8490	4380	29	343
27	4350	38	446	18100	69	3480	5040	31	422
28	4220	36	410	12000	46	1490	9590	42	1090
29	4140	34	380	---	---	---	9200	40	994
30	4090	32	353	---	---	---	6390	35	604
31	4050	30	328	---	---	---	5590	33	498
TOTAL	183180	---	43801	277590	---	77997	282070	---	33153
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	5340	32	461	2930	25	198			
2	5140	31	430	2780	24	180			
3	4850	31	406	2470	23	153			
4	4570	30	370	2280	22	135			
5	4300	29	337	2130	21	121			
6	4070	29	319	2340	22	139			
7	3860	28	292	2610	24	169			
8	3620	27	264	3200	26	225			
9	3440	26	241	4100	28	310			
10	3180	26	223	4300	29	337			
11	2990	25	202	4220	29	330			
12	2950	25	199	4030	28	305			
13	2900	25	196	3960	28	299			
14	2830	24	183	3880	27	283			
15	2770	24	179	3850	26	270			
16	2760	24	179	3790	25	256			
17	2740	24	178	4280	24	277			
18	2820	24	183	4440	23	276			
19	2910	25	196	4420	22	263			
20	2710	24	176	4350	21	247			
21	2390	23	148	4350	20	235			
22	2350	23	146	5400	23	335			
23	2740	24	178	6060	24	393			
24	3450	26	242	6440	26	452			
25	3620	26	254	7170	28	542			
26	3460	26	243	5880	26	413			
27	3550	26	249	4470	24	290			
28	4110	28	311	4240	22	252			
29	3670	26	258	4010	20	217			
30	3060	25	207	3840	19	197			
31	---	---	---	3580	18	174			
TOTAL	103150	---	7450	125800	---	8273			
PERIOD 1195280		---	184152						

SACRAMENTO RIVER BASIN

11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN								
12...	1205	16000	9.5	270	11700	21	24	29
FEB								
27...	1235	26300	9.0	65	4620	--	--	--
APR								
02...	1410	5040	14.0	23	313	--	--	--
MAY								
14...	1355	3960	22.5	24	257	--	--	--

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								
12...	33	38	42	52	67	96	99	100
FEB								
27...	--	--	45	60	70	93	100	--
APR								
02...	--	--	59	77	100	--	--	--
MAY								
14...	--	--	58	66	79	97	100	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	NUMBER OF SAM- PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM
NOV										
09...	1245	3400	13.0	5	0	8	90	99	100	--
09...	1246	--	--	--	0	7	76	97	100	--
09...	1247	--	--	--	0	3	72	97	100	--
09...	1248	--	--	--	0	5	69	96	99	100
09...	1249	--	--	--	0	4	62	93	99	100
DEC										
07...	1100	3660	6.0	5	0	2	64	96	99	100
07...	1101	--	--	--	0	5	81	99	100	--
07...	1102	--	--	--	0	9	88	99	100	--
07...	1103	--	--	--	0	5	72	96	99	100
07...	1104	--	--	--	0	4	74	98	99	100
JAN										
12...	1230	14400	9.5	5	0	8	98	100	--	--
12...	1231	--	--	--	8	81	99	100	--	--
12...	1232	--	--	--	0	5	98	99	100	--
12...	1233	--	--	--	0	5	67	96	100	--
12...	1234	--	--	--	0	13	100	--	--	--
FEB										
05...	1200	4760	7.0	5	0	19	95	100	--	--
05...	1201	--	--	--	2	38	94	100	--	--
05...	1202	--	--	--	0	11	74	98	100	--
05...	1203	--	--	--	0	6	70	95	99	100
05...	1204	--	--	--	0	4	74	98	100	--
27...	1320	17600	9.0	5	0	1	73	99	100	--
27...	1321	--	--	--	0	3	61	98	100	--
27...	1322	--	--	--	0	4	89	100	--	--
27...	1323	--	--	--	0	3	67	98	100	--
27...	1324	--	--	--	0	2	73	97	100	--
APR										
02...	1350	5040	15.0	5	0	3	77	99	100	--
02...	1351	--	--	--	0	7	71	98	100	--
02...	1352	--	--	--	1	14	94	100	--	--
02...	1353	--	--	--	1	24	97	100	--	--
02...	1354	--	--	--	2	22	98	100	--	--
MAY										
14...	1340	3880	21.5	5	0	3	76	98	100	--
14...	1341	--	--	--	0	9	68	98	100	--
14...	1342	--	--	--	0	10	75	98	100	--
14...	1343	--	--	--	0	2	64	96	100	--
14...	1344	--	--	--	0	8	81	99	100	--

11425500 SACRAMENTO RIVER AT VERONA, CA

LOCATION.--Lat 38°46'51", long 121°36'12", in SW¼SE¼ sec.23, T.11 N., R.3 E., Sutter County, Hydrologic Unit 18020109, on left bank 0.8 mi (1.3 km) southeast of Verona, 1 mi (2 km) downstream from Feather River, 6.2 mi (10.0 km) east of Knights Landing, and at mile 19.6 (31.5 km) upstream from Sacramento.

DRAINAGE AREA.--21,251 mi² (55,040 km²).

PERIOD OF RECORD.--May 1926 to September 1929 (low-water periods only), October 1929 to current year.

REVISED RECORDS.--WDR CA 77-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.00 ft (0.914 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, return flow from irrigated areas, and bypassing for flood control. When discharge exceeds about 55,000 ft³/s (1,560 m³/s) flow begins over Fremont weir (just upstream) into Yolo Bypass (station 11453000). Gage height of crest of Fremont weir is 33.5 ft (10.21 m).

AVERAGE DISCHARGE.--50 years (water years 1930-79), 18,750 ft³/s (531.0 m³/s), 13,580,000 acre-ft/yr (16.7 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,200 ft³/s (2,240 m³/s) Mar. 1, 1940, gage height, 41.20 ft (12.558 m); minimum daily, 304 ft³/s (8.61 m³/s) July 23, 24, 1931; maximum reverse flow, 16,800 ft³/s (476 m³/s) Dec. 4, 1950, backwater from American River. Maximum combined discharge of Sacramento River at Verona and Fremont weir, about 322,000 ft³/s (9,120 m³/s) Dec. 25, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 57,100 ft³/s (1,620 m³/s) Feb. 24, gage height, 32.63 ft (9.946 m); minimum daily, 7,380 ft³/s (209 m³/s) Apr. 23.

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	13200	9830	12200	11800	12900	37100	24300	11500	9660	12900	15300	12400
2	12300	9590	12100	11700	12700	44100	21900	10800	8790	13300	15100	13000
3	12500	9450	12200	11700	12000	43900	20500	10500	8580	13800	15000	13400
4	11700	9320	12000	11800	11400	39100	19600	9810	8410	14300	14800	13400
5	11300	9290	11700	11800	11300	34600	18200	8700	7910	14100	14800	13600
6	11300	9630	11400	11800	11200	31500	16200	8240	7980	14100	15100	13700
7	11300	9880	11400	11800	11000	28900	15000	9050	8180	14000	15300	13600
8	11300	9950	11300	11700	10700	26600	14900	11100	8450	14100	15400	13300
9	11300	9990	11400	12900	10500	24800	14300	12600	8310	14300	15600	13200
10	11300	9960	11300	14700	10300	23900	13400	12900	8160	14500	15400	12900
11	11200	9880	11300	16600	10200	22600	12700	11700	8370	14600	14900	12600
12	11100	9950	11300	25300	10200	21000	12400	10600	8500	14200	14700	12500
13	11100	10200	11400	28400	10600	19400	11300	10400	8910	13900	14800	12400
14	11000	10400	11400	26200	15500	17900	10300	11000	8930	13500	14500	12100
15	10900	10500	11500	28100	31800	16900	9740	11700	8950	13400	14200	11900
16	10700	10500	11400	35500	35300	16800	9600	12400	8680	13200	13600	12100
17	10400	10700	11600	37600	36000	18300	9910	12700	8470	13100	13200	12100
18	10100	10700	11800	34900	35500	21400	10100	13100	8540	12900	12800	11800
19	10000	10700	12000	30700	35800	22600	10100	13300	8940	13200	12500	11600
20	9950	11100	12100	27100	38300	22900	9620	13300	9070	13800	12500	11500
21	9900	11600	11900	24300	40600	22100	8180	13200	9460	14400	12300	11400
22	9830	12600	11900	21800	46800	19800	7400	13400	9870	15000	12200	11500
23	9830	13900	11900	19900	53700	17900	7380	14300	9800	15300	12000	11400
24	9890	13900	11900	18600	56900	16800	8770	14700	10100	15200	11800	11300
25	9880	13200	11800	17100	56000	15700	10700	15300	10500	15300	11700	10900
26	10100	12700	11800	15700	52700	15000	12400	14800	10300	15200	11700	10200
27	10000	12200	11800	14800	47400	15100	13000	13300	10500	14900	11800	10100
28	9740	12100	11800	14000	39600	18600	13400	12400	11000	14700	11700	10300
29	9870	12000	11900	13500	---	27100	13800	11600	11400	14700	11600	10100
30	9770	12200	11900	13300	---	28400	12600	11300	12100	15000	11600	10600
31	9780	---	11900	13100	---	26500	---	10600	---	15100	12000	---
TOTAL	332540	327920	363300	598200	766900	757300	391700	370300	276820	440000	419900	360900
MEAN	10730	10930	11720	19300	27390	24430	13060	11950	9227	14190	13550	12030
MAX	13200	13900	12200	37600	56900	44100	24300	15300	12100	15300	15600	13700
MIN	9740	9290	11300	11700	10200	15000	7380	8240	7910	12900	11600	10100
AC-FT	659600	650400	720600	1187000	1521000	1502000	776900	734500	549100	872700	832900	715800
CAL YR 1978 TOTAL	7928240			MEAN 21720	MAX 67600	MIN 8820	AC-FT 15730000					
WTR YR 1979 TOTAL	5405780			MEAN 14810	MAX 56900	MIN 7380	AC-FT 10720000					

SACRAMENTO RIVER BASIN

11426000 SACRAMENTO WEIR SPILL TO YOLO BYPASS, NEAR SACRAMENTO, CA

LOCATION.--Lat 38°36'25", long 121°33'15", unsurveyed, Sacramento County, Hydrologic Unit 18020109, 2 gages on right bank, one 100 ft (30 m) upstream from weir and one 100 ft (30 m) downstream from weir, 3.2 mi (5.1 km) upstream from American River, 4 mi (6 km) northwest of Sacramento, and at mile 4.2 (6.8 km) upstream from Sacramento.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for water years 1940-51, published in WSP 1735. Published as Sacramento weir near Sacramento 1939-61. Gage-height records collected at same site February 1926 to September 1934 and major flood flows only October 1934 to September 1939 are contained in reports of California Department of Water Resources.

GAGE.--Water-stage recorders and concrete weir crest. Datum of gage is 3.00 ft (0.914 m) below National Geodetic Vertical Datum of 1929. October 1939 to September 1942, October 1959 to September 1963, water-stage recorder or nonrecording gage at downstream end of weir. October 1942 to September 1959, water-stage recorder on left bank at Sacramento River opposite center of weir. Since February 1963, water-stage recorders on right bank 100 ft (30 m) upstream and 100 ft (30 m) downstream from ends of weir.

REMARKS.--Crest of weir is at gage height 22.0 ft (6.71 m) and top of moveable gates at 28.0 ft (8.53 m). Weir consists of 48 gates each 38.1 ft (11.61 m) long. Flow over weir enters Yolo Bypass by way of Sacramento Bypass. Flow regulated by weir gates. Since February 1963, stage is obtained by averaging the stage obtained at sites above and below the weir. Flow for current year is leakage through the weir gates.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--40 years, 192 ft³/s (5.437 m³/s) 139,100 acre-ft/yr (172 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 118,000 ft³/s (3,340 m³/s) Mar. 26, 1928; maximum gage height, 33.01 ft (10.061 m) Dec. 23, 1955; no flow all or most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 92 ft³/s (2.61 m³/s) Feb. 24; no flow most of year.

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					0							
2					0							
3					0							
4					0							
5					0							
6					0							
7					0							
8					0							
9					0							
10					0							
11					0							
12					0							
13					0							
14					0							
15					0							
16					0							
17					0							
18					0							
19					0							
20					0							
21					0							
22					0							
23					10							
24					92							
25					82							
26					13							
27					0							
28					0							
29					---							
30					---							
31		---			---		---		---			---
TOTAL	0	0	0	0	197	0	0	0	0	0	0	0
MEAN	0	0	0	0	7.04	0	0	0	0	0	0	0
MAX	0	0	0	0	92	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	391	0	0	0	0	0	0	0
CAL YR 1978	TOTAL	4768.50	MEAN	13.1	MAX	502	MIN	0	AC-FT	9460		
WTR YR 1979	TOTAL	197.00	MEAN	.54	MAX	92	MIN	0	AC-FT	391		

11426150 ONION CREEK NEAR SODA SPRINGS, CA

LOCATION.--Lat 39°16'02", long 120°21'50", in SE¼NE¼ sec.11, T.16 N., R.14 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 0.3 mi (0.5 km) upstream from unnamed tributary, 1 mi (2 km) upstream from mouth, and 4.0 mi (6.5 km) south of Soda Springs.

DRAINAGE AREA.--3.58 mi² (9.27 km²).

PERIOD OF RECORD.--August 1959 to September 1979 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,900 ft (1,798 m), from topographic map.

REMARKS.--Records fair except those for winter months and below 0.10 ft³/s (0.003 m³/s), which are poor.

AVERAGE DISCHARGE.--20 years, 9.05 ft³/s (0.256 m³/s), 6,560 acre-ft/yr (8.09 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) Dec. 23, 1964, gage height, 4.98 ft (1.518 m) in gage well, 6.82 ft (2.079 m) from floodmarks, from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 0.01 ft³/s (<0.001 m³/s) Sept. 1, 2, 7-10, 1977.

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)	
Jan. 11	1300	67	1.90	1.90	0.579
May 3	1730	74	2.10	2.10	.640
May 14	1630	72	2.04	2.04	.622

Minimum daily, 0.03 ft³/s (<0.001 m³/s) Sept. 11.

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	.25	.30	1.5	.72	.90	1.3	5.0	34	15	1.6	.28	.14
2	.24	.33	.89	.72	.91	1.3	5.4	41	14	1.5	.25	.12
3	.24	.28	.83	.72	.89	1.3	6.8	49	14	1.5	.21	.11
4	.23	.25	.82	.70	.91	1.4	10	54	12	1.4	.23	.10
5	.20	.22	.81	.67	.90	2.1	15	49	12	1.4	.22	.09
6	.20	.21	.80	.66	.92	16	15	40	11	1.3	.20	.08
7	.20	.18	.80	.69	.92	12	13	31	9.9	1.2	.22	.07
8	.19	.16	.79	.80	.92	8.6	15	25	9.3	1.2	.19	.07
9	.19	.16	.77	.90	1.0	9.0	15	23	8.2	1.2	.15	.06
10	.19	.17	.75	1.1	1.2	10	12	25	7.7	1.1	.14	.06
11	.18	.20	.73	20	1.2	11	11	30	7.2	1.1	.16	.03
12	.17	.21	.76	5.3	1.3	11	14	37	6.8	.96	.18	.06
13	.16	.26	.71	3.0	1.6	12	20	46	6.3	.90	.15	.05
14	.16	.24	.72	2.0	3.2	11	23	51	6.1	.85	.14	.04
15	.16	.32	.72	1.7	1.6	9.6	26	52	5.8	.81	.14	.07
16	.16	.29	.73	1.6	1.5	7.3	25	52	5.1	.70	.13	.07
17	.16	.27	.82	1.5	1.4	6.0	20	53	5.5	.65	.11	.06
18	.16	.39	.82	1.4	1.4	5.4	16	55	4.1	.59	.14	.04
19	.16	.39	.81	1.4	1.4	4.9	15	55	3.5	.52	.14	.05
20	.16	.52	.80	1.4	1.4	4.6	16	52	3.2	.60	.13	.05
21	.16	.48	.73	1.4	1.4	4.4	17	53	2.8	1.3	.16	.04
22	.16	.45	.75	1.3	1.4	4.4	17	49	2.4	.96	.14	.06
23	.16	.41	.78	1.4	1.4	4.5	15	41	2.2	.69	.11	.07
24	.16	.46	.78	1.4	1.3	6.1	14	36	2.0	.55	.10	.04
25	.16	.44	.78	1.3	1.3	8.0	15	35	1.9	.47	.11	.06
26	.16	.46	.79	1.1	1.3	7.7	24	35	1.8	.44	.11	.06
27	.16	.48	.79	1.0	1.3	6.8	36	31	1.7	.43	.07	.05
28	.16	.66	.79	.90	1.3	5.8	34	26	1.7	.45	.09	.05
29	.16	1.7	.78	.85	---	5.2	33	21	1.7	.45	.18	.09
30	.16	1.7	.74	.80	---	4.8	39	19	1.6	.31	.29	.08
31	.35	---	.73	.90	---	4.8	---	17	---	.29	.18	---
TOTAL	5.71	12.59	24.82	59.33	36.17	208.3	542.2	1217	186.5	27.42	5.05	2.02
MEAN	.18	.42	.80	1.91	1.29	6.72	18.1	39.3	6.22	.88	.16	.067
MAX	.35	1.7	1.5	20	3.2	16	39	55	15	1.6	.29	.14
MIN	.16	.16	.71	.66	.89	1.3	5.0	17	1.6	.29	.07	.03
AC-FT	11	25	49	118	72	413	1080	2410	370	54	10	4.0

CAL YR 1978	TOTAL	4073.31	MEAN	11.2	MAX	89	MIN	.16	AC-FT	8080
WTR YR 1979	TOTAL	2327.11	MEAN	6.38	MAX	55	MIN	.03	AC-FT	4620

SACRAMENTO RIVER BASIN

11426190 LAKE VALLEY CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°17'58", long 120°39'11", in NE¼NW¼ sec.32, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 500 ft (152 m) upstream from inlet to Carpenter Flat siphon, and 1 mi (2 km) east of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,360 ft (1,634 m), from topographic map.

REMARKS.--Canal diverts from right bank of the North Fork of North Fork American River, 2.7 mi (4.3 km) downstream from Lake Valley Reservoir to the Drum Canal in the Bear River basin. See schematic diagram of Bear River and Yuba River basins.

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.--15 years, 13.8 ft³/s (0.391 m³/s), 10,000 acre-ft/yr (12.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 40 ft³/s (1.133 m³/s) Mar. 29, 1974, Apr. 27, May 5, 1979; no flow many days in each year.

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	28	24	18	15	18	26	33	36	26	4.9	32	
2	28	22	16	15	18	30	33	37	17	4.7	32	
3	28	19	15	15	18	30	34	37	15	4.7	22	
4	28	3.0	15	15	18	30	34	38	14	4.9	11	
5	28	2.4	15	15	18	30	35	40	13	4.8	9.7	
6	29	9.9	19	15	14	25	36	38	12	4.8	9.6	
7	29	24	18	15	12	19	35	36	11	4.7	9.7	
8	29	23	18	23	12	24	35	33	9.5	4.7	9.5	
9	29	23	18	14	12	26	35	36	8.7	12	9.5	
10	29	23	18	14	12	34	35	36	8.1	29	9.5	
11	30	23	18	14	12	38	35	36	7.7	35	9.4	
12	30	23	18	14	12	37	37	36	7.3	35	9.3	
13	26	23	18	13	22	35	38	37	7.0	34	9.3	
14	26	23	18	12	38	33	38	37	6.6	34	9.3	
15	26	23	18	12	26	37	38	37	6.2	34	9.3	
16	29	25	18	12	22	34	38	37	6.3	34	9.2	
17	32	25	18	11	20	30	38	37	7.0	34	9.2	
18	32	21	28	11	22	28	37	37	6.9	34	9.1	
19	32	23	28	11	28	26	33	37	6.5	34	9.1	
20	32	28	23	10	27	33	33	37	6.1	34	4.6	
21	32	25	16	10	27	34	35	37	5.8	34	0	
22	32	21	16	10	28	35	35	36	5.9	33	0	
23	32	20	16	10	31	33	35	35	6.0	33	0	
24	33	20	16	10	30	35	34	34	5.9	33	0	
25	37	20	16	16	22	37	34	35	5.7	33	0	
26	38	20	16	15	26	38	38	36	5.2	33	0	
27	34	16	16	19	17	39	40	36	5.1	33	0	
28	32	13	15	19	17	36	37	32	5.0	32	0	
29	32	13	15	19	---	35	37	34	5.0	32	0	
30	31	15	15	18	---	34	37	34	4.9	32	0	
31	29	---	15	18	---	33	---	32	---	32	0	---
TOTAL	942	593.3	547	440	579	994	1072	1116	256.4	781.2	242.3	0
MEAN	30.4	19.8	17.6	14.2	20.7	32.1	35.7	36.0	8.55	25.2	7.82	0
MAX	38	28	28	23	38	39	40	40	26	35	32	0
MIN	26	2.4	15	10	12	19	33	32	4.9	4.7	0	0
AC-FT	1870	1180	1080	873	1150	1970	2130	2210	509	1550	481	0
CAL YR 1978	TOTAL	9196.27	MEAN 25.2	MAX 39	MIN 0	AC-FT 18240						
WTR YR 1979	TOTAL	7563.20	MEAN 20.7	MAX 40	MIN 0	AC-FT 15000						

11426194 NORTH FORK AMERICAN RIVER NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°11'06", long 120°45'40", in SW¼NE¼ sec.5, T.15 N., R.11 E., Placer County, Hydrologic Unit 18020128, just upstream from unnamed tributary, 1,600 ft (488 m) downstream from confluence of North Fork of North Fork American River and 4.3 mi (6.9 km) southeast of Dutch Flat.

DRAINAGE AREA.--198 mi² (513 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water Year 1979 (discontinued).

BIOLOGICAL DATA: Water year 1979 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 01...	1400	1000	45	7.5	13.0	10.2	<1	K3	20	3	6.4	1.0
AUG 01...	1200	250	114	8.1	20.5	8.7	K8	ND	49	6	16	2.3

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	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)	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)
JUN 01...	1.6	14	.2	2.4	.8	17	3.1	1.0	.1	9.7	37
AUG 01...	2.8	11	.2	3.5	.7	43	8.1	2.4	.1	12	70

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
JUN 01...	34	.05	.02	.01	.03	.37	.40	.42	.00	.002	.00
AUG 01...	70	.10	.02	.00	.01	.02	.03	.05	.02	.035	.03

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUN 01...	1400	--	--	30	100	90	10	0	0	0	.9
AUG 01...	1200	30	10	20	70	70	0	10	6	4	.9

< 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).

ND Material specifically analyzed for but not detected.

SACRAMENTO RIVER BASIN

11426197 NORTH FORK AMERICAN RIVER ABOVE SLAUGHTER RAVINE, NEAR COLFAX, CA

LOCATION.--Lat 39°06'02", long 120°55'27", in NE¼NW¼ sec.1, T.14 N., R.9 E., Placer County, Hydrologic Unit 18020128, 200 ft (16 m) upstream from county bridge, 800 ft (244 m) upstream from Slaughter Ravine, and 1.6 mi (2.6 km) east of Colfax.

DRAINAGE AREA.--236 mi² (611 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

SEDIMENT RECORDS: Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 06...	1440	1000	102	7.6	9.0	11.2	<1	<1	48	12	14	3.1
MAY 31...	1500	1000	48	7.7	14.0	10.0	<1	K1	20	4	6.3	1.0
JUL 30...	1230	630	122	8.2	24.0	8.1	K9	K6	53	8	15	3.7

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AU- 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 CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 06...	3.0	12	.2	--	.4	36	16	2.9	.0	12	64
MAY 31...	1.4	13	.1	2.1	.7	22	3.1	1.2	.1	9.9	.40
JUL 30...	3.1	11	.2	4.0	.9	54	2.8	2.4	.0	14	75

DATE	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- GFN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)
MAR 06...	73	.09	.01	--	.01	.19	.20	.21	.00	--	--
MAY 31...	33	.05	.00	.00	.01	.08	.09	.09	.00	.005	.00
JUL 30...	69	.10	.02	.00	.00	.19	.19	.21	.05	.000	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 06...	1440	190	150	40	220	--	10	0	--	0	1.6
MAY 31...	1500	--	--	30	70	60	10	10	10	0	.8
JUL 30...	1230	20	10	10	50	40	10	10	6	4	.0

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

K Results based on colony count outside the acceptable range (non-ideal colony count).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 30...	1230	630	24.0	2	3.4	32

LOCATION.--Lat 39°08'37", long 120°45'30", in NW¼SE¼ sec.17, T.15 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 0.2 mi (0.3 km) downstream from Big Reservoir, and 6.0 mi (9.7 km) southeast of Dutch Flat.

PERIOD OF RECORD.--July 1956 to current year.

REMARKS.--Flow regulated by Big Reservoir, capacity, 2,200 acre-ft (2.71 hm³). Some diversion above station for mining.

AVERAGE DISCHARGE.--23 years, 4.36 ft³/s (0.123 m³/s), 3,160 acre-ft/yr (3.90 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 377 ft³/s (10.7 m³/s) Jan. 22, 1970, gage height, 4.76 ft (1.451 m); no flow many days in 1964-66, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 6.40 ft (1.951 m) probably Dec. 23, 1955, from flood-marks, discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40 ft³/s (1.13 m³/s) Mar. 16, gage height, 2.89 ft (0.881 m); minimum daily, 0.04 ft³/s (0.001 m³/s) many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.17	.61	.18	.04	.45	22	6.0	1.0	4.3	.44	1.2
2	.10	.17	.17	.18	.04	.33	19	3.8	.97	4.3	.44	1.2
3	.10	.14	.14	.18	.04	.33	17	1.6	1.6	4.5	.48	1.2
4	.08	.17	.14	.18	.04	.37	16	1.4	2.5	4.3	.68	1.2
5	.07	.17	.14	.18	.04	.50	15	2.3	2.3	4.3	.68	1.2
6	.07	.12	.14	.18	.04	.65	17	2.7	1.9	4.2	.68	.89
7	.04	.12	.12	.18	.04	.77	15	3.9	1.8	4.2	.68	.41
8	.04	.14	.12	.18	.04	.90	14	4.4	1.8	4.0	.68	.38
9	.04	.14	.12	.39	.04	.97	12	5.8	2.5	4.0	.64	.41
10	.04	.17	.12	.85	.05	1.0	11	6.9	2.2	4.0	.59	.41
11	.04	.29	.12	1.7	.07	1.1	10	8.0	1.8	4.0	.64	.41
12	.05	.33	.12	.78	.08	1.1	9.6	7.8	1.5	4.0	.64	.38
13	.05	.37	.12	.33	.72	1.1	8.5	7.4	1.5	3.9	.90	.38
14	.04	.41	.12	.23	1.2	1.2	7.8	6.8	1.8	3.9	1.2	.38
15	.05	.41	.12	.20	.37	19	6.9	7.4	1.9	3.9	1.2	.41
16	.07	.41	.12	.17	.22	34	6.9	6.9	1.9	3.9	1.2	.41
17	.08	.45	.17	.15	.17	37	8.3	5.8	1.9	3.9	1.2	.41
18	.10	.45	.23	.13	.19	32	8.0	5.0	1.9	3.7	1.2	.41
19	.12	.50	.21	.12	.26	28	6.9	4.5	1.9	1.6	1.2	.41
20	.14	.71	.18	.10	.26	24	6.0	4.2	1.8	.48	1.2	.41
21	.14	.77	.18	.09	.37	20	5.5	3.9	1.8	.59	1.2	.41
22	.12	.65	.18	.09	.29	19	5.5	3.4	1.7	.52	1.2	.41
23	.10	.60	.18	.08	.26	16	8.1	3.1	1.7	.48	1.2	.48
24	.08	.60	.18	.07	.26	15	8.5	2.7	2.8	.48	1.2	.48
25	.10	.60	.18	.07	.22	15	6.4	2.5	4.3	.44	1.2	.52
26	.10	.60	.18	.06	.33	15	9.1	2.3	4.5	.44	1.2	.52
27	.05	.60	.18	.06	.37	30	9.1	2.2	4.3	.48	1.2	.52
28	.05	.60	.18	.05	.53	34	7.4	1.9	4.3	.44	1.2	.48
29	.05	.60	.18	.05	---	30	6.8	1.6	4.3	.44	1.2	.48
30	.07	.60	.18	.05	---	28	6.4	1.5	4.3	.44	1.2	.48
31	.10	---	.18	.04	---	23	---	1.1	---	.44	1.2	---
TOTAL	2.38	12.06	5.31	7.30	6.58	429.77	309.7	128.8	70.47	80.57	29.77	17.29
MEAN	.077	.40	.17	.24	.24	13.9	10.3	4.15	2.35	2.60	.96	.58
MAX	.14	.77	.61	1.7	1.2	37	22	8.0	4.5	4.5	1.2	1.2
MIN	.04	.12	.12	.04	.04	.33	5.5	1.1	.97	.44	.44	.38
AC-FT	4.7	24	11	14	13	852	614	255	140	160	59	34
CAL YR 1978	TOTAL	2142.95	MEAN	5.87	MAX	44	MIN	.04	AC-FT	4250		
WTR YR 1979	TOTAL	1100.00	MEAN	3.01	MAX	37	MIN	.04	AC-FT	2180		

11426400 NORTH SHIRTAIL CREEK NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°07'49", long 120°47'44", in NW¼SE¼ sec.24, T.15 N., R.10 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 200 ft (61 m) downstream from Forbes Creek, and 7.0 mi (11.3 km) southeast of Dutch Flat.

DRAINAGE AREA.--9.10 mi² (23.57 km²).

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,500 ft (1,067 m), from topographic map.

REMARKS.--Flow slightly regulated by Big Reservoir, capacity, 2,200 acre-ft (2.71 hm³).

COOPERATION.--Records furnished by Water and Power Resources Service and reviewed by Geological Survey.

AVERAGE DISCHARGE.--23 years, 19.7 ft³/s (0.558 m³/s), 14,270 acre-ft/yr (17.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s (50.4 m³/s) Dec. 22, 1964, gage height, 7.56 ft (2.304 m), from rating curve extended above 590 ft³/s (16.7 m³/s) on basis of slope-area measurement at gage height 6.36 ft (1.939 m); no flow many days in 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 7.30 ft (2.225 m) from floodmarks, discharge, 1,650 ft³/s (46.7 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 301 ft³/s (8.52 m³/s) Jan. 11, gage height, 3.68 ft (1.122 m); minimum daily, 0.08 ft³/s (0.002 m³/s) on several days.

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	.32	.32	3.6	1.3	4.9	38	56	20	7.0	1.9	.44	.08
2	.29	.29	2.6	1.2	5.1	26	51	18	6.8	2.5	.48	.15
3	.32	.29	2.0	1.2	4.7	25	48	15	6.2	1.8	.44	.20
4	.36	.29	1.6	1.2	4.6	26	44	13	5.8	2.0	.44	.20
5	.40	.26	1.4	1.3	4.6	29	45	20	5.4	1.2	.40	.20
6	.40	.23	1.4	1.4	4.7	40	50	21	5.1	1.9	.40	.20
7	.40	.20	1.2	1.8	4.7	53	44	36	4.7	2.1	.36	.17
8	.40	.23	1.1	1.0	4.7	59	40	36	4.3	1.8	.26	.15
9	.40	.26	1.2	9.9	4.9	60	37	34	4.3	1.3	.11	.15
10	.40	.26	1.1	1.0	5.2	61	33	29	4.1	1.3	.11	.11
11	.44	.29	1.1	139	5.2	64	32	27	3.7	1.2	.11	.10
12	.44	.36	1.0	46	5.2	64	28	24	3.1	1.3	.10	.08
13	.44	.54	.85	23	38	62	26	22	3.0	1.8	.10	.08
14	.36	.48	.85	18	95	59	23	20	2.8	1.8	.10	.08
15	.36	.40	.85	24	48	108	21	20	2.7	1.9	.10	.08
16	.36	.40	.85	21	34	102	22	20	2.7	1.4	.11	.10
17	.36	.40	1.4	15	26	86	25	19	3.0	1.1	.10	.10
18	.36	.40	1.8	12	26	76	23	19	2.6	1.0	.10	.11
19	.36	.60	1.4	10	29	69	20	19	2.4	1.0	.10	.11
20	.32	2.6	1.4	9.1	32	63	18	18	1.8	.85	.10	.11
21	.32	5.6	1.4	8.4	39	58	17	16	1.5	.93	.08	.11
22	.32	3.3	1.4	8.0	28	54	17	15	5.1	1.0	.10	.11
23	.32	2.4	1.3	7.4	22	50	23	13	2.4	1.1	.11	.11
24	.32	1.6	1.3	7.2	20	47	25	13	2.4	1.0	.11	.10
25	.32	1.4	1.3	7.0	19	46	21	11	2.6	1.0	.11	.10
26	.32	1.2	1.3	6.4	25	51	30	11	1.9	.54	.13	.10
27	.32	1.1	1.4	6.0	26	97	32	10	1.9	.48	.15	.10
28	.32	1.0	1.4	5.6	34	93	26	9.9	1.7	.44	.15	.10
29	.32	.85	1.4	4.9	---	78	24	9.4	1.8	.44	.10	.10
30	.32	1.0	1.4	5.2	---	67	21	8.2	2.0	.44	.08	.10
31	.32	---	1.3	5.2	---	60	---	7.4	---	.44	.08	---
TOTAL	11.01	28.55	43.60	427.7	599.5	1871	922	573.9	104.8	38.96	5.66	3.57
MEAN	.36	.95	1.41	13.8	21.4	60.4	30.7	18.5	3.49	1.26	.18	.12
MAX	.44	5.6	3.6	139	95	108	56	36	7.0	2.5	.48	.20
MIN	.29	.20	.85	1.2	4.6	25	17	7.4	1.5	.44	.08	.08
AC-FT	22	57	86	848	1190	3710	1830	1140	208	77	11	7.1
CAL YR 1978	TOTAL	8648.66	MEAN 23.7	MAX 336	MIN .20	AC-FT 17150						
WTR YR 1979	TOTAL	4630.25	MEAN 12.7	MAX 139	MIN .08	AC-FT 9180						

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA

LOCATION.--Lat 38°56'10", long 121°01'22", in SW¼NW¼ sec.31; T.13 N., R.9 E., Placer County, Hydrologic Unit 18020128, on left bank 50 ft (15 m) upstream from spillway of North Fork Dam, 2 mi (3 km) upstream from Middle Fork, and 4 mi (6 km) northeast of Auburn.

DRAINAGE AREA.--342 mi² (886 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 715.0 ft (217.93 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Minor regulation by Lake Clementine, usable capacity, 12,800 acre-ft (15.8 hm³) formed by North Fork Dam. Storage in Big Reservoir and Lake Valley Reservoir, combined capacity, 10,300 acre-ft (12.7 hm³) above station. Lake Valley Canal (station 11426190) diverts from North Fork of North Fork American River into Bear River basin for power development in powerhouses of Pacific Gas and Electric Co. Combined storage and diversion have small effect on natural flow.

AVERAGE DISCHARGE.--38 years, 801 ft³/s (22.68 m³/s), 580,300 acre-ft/yr (716 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s (1,850 m³/s) Dec. 23, 1964, gage height, 11.87 ft (3.618 m), from rating curve extended above 24,000 ft³/s (680 m³/s) on basis of computed flow over spillway of dam at gage height 10.22 ft (3.115 m); no flow Aug. 27-30, Sept. 2-11, 1944, Oct. 5, 6, 1963, Nov. 7-10, 1965, caused by operation of valve in North Fork Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft³/s (295 m³/s) Jan. 11 (1700 hrs), gage height, 5.10 ft (1.554 m), no other peak above base of 4,300 ft³/s (122 m³/s); minimum daily, 33 ft³/s (0.93 m³/s) Sept. 24.

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	57	45	116	69	209	2470	1150	1990	965	169	70	51
2	56	47	200	73	229	1590	1090	1690	929	163	68	50
3	56	48	128	72	218	1230	1030	2050	924	162	66	49
4	55	48	101	72	208	1110	1030	2290	936	160	63	48
5	54	46	95	75	210	1080	1150	2490	906	155	63	48
6	53	45	95	75	210	1190	1500	2880	870	151	61	48
7	53	45	87	79	206	1520	1350	2250	788	144	60	46
8	52	43	78	125	203	1650	1230	2020	649	138	60	42
9	48	43	78	321	195	1640	1290	1750	560	133	61	40
10	48	43	80	214	197	1590	1190	1600	524	129	59	39
11	48	42	79	4790	214	1670	1100	1600	508	125	58	39
12	47	46	76	2680	212	1660	1090	1740	494	125	55	38
13	47	61	71	1080	347	1560	1200	1910	476	120	56	36
14	46	65	71	863	2820	1500	1390	2230	435	114	55	35
15	45	56	69	1370	1610	1750	1440	2370	386	109	55	36
16	45	53	68	1040	1240	1950	1530	2470	352	105	54	35
17	47	52	83	661	1070	1570	1560	2370	333	105	53	34
18	47	53	146	508	947	1380	1280	2500	336	99	52	34
19	46	63	131	415	1430	1250	1070	2560	306	95	51	34
20	45	112	102	367	1210	1120	990	2530	284	92	51	34
21	45	240	88	332	2050	1040	978	2470	274	103	53	34
22	45	224	83	307	1940	980	1040	2480	265	115	53	34
23	44	150	83	283	1930	932	1090	2130	246	101	53	34
24	44	110	82	268	1340	903	1170	1860	237	102	52	33
25	43	94	80	267	1050	952	1110	1740	230	91	52	34
26	42	86	83	241	1020	1000	1300	1850	219	85	51	34
27	43	82	83	219	971	1610	2810	1890	207	82	50	35
28	44	79	81	213	1000	2070	2360	1640	195	79	49	36
29	43	74	79	184	---	1640	1970	1380	186	76	49	34
30	42	74	76	176	---	1400	1870	1140	179	74	55	34
31	42	---	71	211	---	1240	---	1020	---	72	54	---
TOTAL	1472	2269	2843	17650	24486	44247	40358	62890	14199	3573	1742	1158
MEAN	47.5	75.6	91.7	569	875	1427	1345	2029	473	115	56.2	38.6
MAX	57	240	200	4790	2820	2470	2810	2880	965	169	70	51
MIN	42	42	68	69	195	903	978	1020	179	72	49	33
AC-FT	2920	4500	5640	35010	48570	87760	80050	124700	28160	7090	3460	2300

CAL YR 1978 TOTAL 348180 MEAN 954 MAX 7890 MIN 42 AC-FT 690600
WTR YR 1979 TOTAL 216887 MEAN 594 MAX 4790 MIN 33 AC-FT 430200

SACRAMENTO RIVER BASIN

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to current year.

CHEMICAL ANALYSES: Water years 1977, 1979.

BIOLOGICAL DATA: Water year 1979.

WATER TEMPERATURES: Water years 1960 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1959 to current year.

INSTRUMENTATION.--Temperature recorder since November 1959.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 29.0°C Aug. 8, 9, 1978; minimum recorded, 4.5°C Jan. 21, 1967,

Jan. 25, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 26.5°C on several days in July; minimum recorded, 3.5°C Dec. 31, Jan. 1, 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, KF AGAR (COLS. PER 100 ML)	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)
MAR 05...	1200	1080	99	7.3	9.5	11.8	K6	K13	46	10	11	4.6
MAY 30...	1200	1180	41	7.6	16.0	10.1	K1	K4	22	7	6.8	1.2
JUL 27...	1300	79	108	8.1	24.5	8.6	K2	>3	44	0	12	3.5

DATE	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 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 05...	3.0	12	.2	--	.3	36	9.2	2.3	.1	14	64
MAY 30...	1.3	11	.1	2.1	.8	18	3.3	.8	.1	9.4	37
JUL 27...	2.9	12	.2	3.6	.7	45	2.4	1.9	.0	14	68

DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
MAR 05...	66	.09	.04	.05	.00	.12	.12	.16	.01	.003	.00
MAY 30...	33	.05	.01	.01	.01	.13	.14	.15	.01	.003	.00
JUL 27...	65	.09	.00	.00	.00	.04	.04	.04	.05	.000	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE- D RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE- D RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 05...	1200	120	100	20	170	--	10	10	--	10	.9
MAY 30...	1200	--	--	30	100	80	20	10	0	10	1.0
JUL 27...	1300	50	0	60	70	50	20	10	6	4	1.7

K Results based on colony count outside the acceptable range (non-ideal colony count).

> Actual value is known to be greater than the value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE- D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE- D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 27...	1300	79	24.5	4	.85	47

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	22.0	18.5	15.5	11.5	11.0	9.0	6.0	3.5	6.5	6.0	8.5	7.5
2	22.0	18.5	16.0	13.0	9.5	8.5	5.0	3.5	6.5	5.5	8.5	7.5
3	22.0	18.5	16.0	12.5	9.5	8.0	6.0	4.5	6.0	5.0	8.5	7.5
4	22.0	18.0	16.0	12.5	9.5	8.0	7.5	5.5	6.5	5.0	9.0	8.0
5	22.0	18.5	16.0	12.5	9.5	7.5	6.5	6.0	6.5	5.0	9.5	8.5
6	21.5	17.5	16.0	12.0	8.0	6.5	7.5	5.5	6.5	5.0	10.0	9.0
7	21.5	17.0	16.0	12.0	8.0	5.5	6.5	5.5	6.5	5.0	10.5	9.5
8	21.0	16.5	16.0	12.0	7.5	5.5	7.0	6.5	6.5	5.0	10.5	9.5
9	21.0	17.0	16.0	11.5	7.0	5.5	6.5	6.0	7.0	5.5	10.5	9.5
10	21.0	17.0	13.5	11.0	8.0	6.5	7.0	6.0	7.5	5.5	10.5	9.5
11	21.0	17.0	12.5	9.5	8.0	6.5	7.5	5.5	7.5	6.5	10.5	9.5
12	21.5	17.0	11.0	9.0	8.5	7.0	7.5	7.0	7.5	7.0	10.5	9.5
13	21.5	17.0	11.5	10.0	8.5	7.0	7.0	7.0	7.5	7.0	10.5	9.5
14	21.0	17.0	13.0	10.5	8.5	6.5	7.0	6.5	7.5	5.0	10.0	9.5
15	21.0	17.5	12.5	9.5	8.5	6.0	7.0	6.5	8.0	7.5	10.0	9.5
16	20.5	16.5	12.0	10.5	8.0	6.0	6.5	6.0	7.5	7.5	9.5	8.5
17	20.5	16.0	13.0	10.0	7.5	6.5	6.5	6.0	7.5	7.0	8.5	7.5
18	20.5	16.0	13.0	9.5	7.5	7.0	6.0	6.0	7.5	7.0	9.0	7.5
19	19.0	16.0	11.5	10.0	8.0	6.5	6.0	5.5	7.5	7.0	9.5	8.5
20	19.5	15.5	12.0	11.0	7.5	5.5	6.0	5.5	7.5	7.0	9.5	8.5
21	19.5	15.0	12.0	12.0	7.0	5.5	6.5	5.5	7.5	7.0	9.5	9.0
22	19.5	14.5	12.0	10.5	7.5	5.5	6.0	5.5	7.5	7.5	9.5	9.0
23	19.0	13.5	11.0	9.5	6.0	6.0	6.0	5.5	8.0	7.5	10.0	9.0
24	18.0	13.5	11.5	9.5	7.0	5.5	6.5	5.5	8.0	7.5	11.0	9.5
25	18.0	13.5	10.0	9.0	7.0	5.5	7.0	6.0	8.5	8.0	11.5	10.0
26	18.0	13.5	10.5	8.5	7.0	5.5	6.0	5.5	9.0	8.5	11.0	10.5
27	18.0	13.0	10.0	8.0	6.0	5.5	6.0	5.0	9.0	8.5	10.5	9.5
28	18.0	13.0	10.5	8.5	7.0	5.0	6.0	5.0	9.0	8.0	9.5	8.5
29	17.5	13.0	10.5	9.0	6.0	5.0	6.0	4.5	---	---	9.5	8.5
30	16.0	11.5	10.5	9.5	5.5	4.0	6.0	5.0	---	---	9.5	9.0
31	13.5	12.0	---	---	6.0	3.5	6.5	5.5	---	---	10.0	9.0
MONTH	22.0	11.5	16.0	8.0	11.0	3.5	7.5	3.5	9.0	5.0	11.5	7.5
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.5	9.0	12.0	11.0	17.5	15.0	24.0	21.0	26.0	22.0	22.5	19.0
2	10.5	9.0	12.0	10.5	18.0	15.5	24.0	21.0	26.0	22.0	24.0	19.5
3	11.0	9.5	12.5	11.5	18.5	16.5	23.5	20.5	26.0	22.0	23.5	19.0
4	11.5	9.5	12.5	12.0	19.5	17.5	23.5	20.5	25.5	21.0	24.0	19.0
5	12.0	10.0	12.5	11.0	20.0	18.0	23.5	20.5	25.0	20.0	24.0	19.5
6	12.0	11.0	11.0	9.5	20.5	18.0	23.5	20.5	25.0	20.0	24.5	19.5
7	11.5	9.5	10.0	9.5	21.0	19.0	23.5	20.5	25.0	21.0	24.5	20.0
8	11.5	10.0	10.0	9.0	20.5	18.0	23.5	20.5	25.0	21.0	24.5	19.5
9	11.5	10.0	10.0	9.0	20.0	17.5	22.0	20.5	25.5	21.0	24.5	19.0
10	11.5	10.5	11.0	9.0	21.0	18.0	23.5	20.5	26.0	22.0	24.0	18.5
11	12.0	10.5	12.0	10.5	21.0	18.5	24.0	20.5	25.5	22.0	24.0	18.5
12	12.0	10.5	13.5	12.5	21.5	19.0	25.0	21.0	25.0	21.5	24.5	19.5
13	12.0	10.5	14.5	13.0	21.0	17.5	25.5	21.5	24.0	20.5	25.0	20.0
14	12.5	11.0	14.5	13.0	21.0	18.5	26.0	22.5	24.0	19.5	25.0	19.5
15	12.5	11.0	14.0	13.0	21.5	18.5	25.5	22.5	24.0	20.0	25.0	20.0
16	12.0	10.5	14.0	13.0	21.0	17.5	26.5	23.0	24.0	19.5	25.0	20.0
17	11.5	10.0	14.0	13.0	20.5	18.0	26.5	23.5	24.0	19.5	25.0	19.5
18	10.5	9.0	14.0	13.5	20.5	18.5	26.5	23.0	24.5	20.0	24.5	18.5
19	10.5	9.0	14.5	13.5	21.5	18.0	26.5	23.0	23.5	19.5	24.0	18.0
20	11.0	8.5	14.5	13.5	21.5	18.0	25.0	23.5	22.0	19.5	24.0	17.5
21	11.0	9.0	14.5	14.0	21.5	18.0	24.0	23.5	23.0	19.0	23.5	18.0
22	11.0	10.5	15.0	14.0	22.0	19.5	26.5	23.0	23.0	18.5	23.5	18.0
23	11.5	10.5	15.0	14.5	23.0	20.0	26.5	23.5	23.5	19.0	23.5	18.0
24	11.0	9.5	15.0	14.0	23.5	20.5	26.5	23.0	23.5	18.5	23.5	18.5
25	11.5	9.5	15.5	14.5	23.5	20.5	26.5	23.5	23.5	18.5	23.5	19.0
26	11.5	10.5	16.0	15.5	24.0	21.0	25.5	22.5	23.5	19.0	23.0	17.0
27	10.5	10.0	16.5	15.5	24.0	21.5	25.0	21.5	24.0	19.5	22.0	16.5
28	11.0	10.0	16.5	15.0	24.5	21.5	25.0	21.0	22.5	20.0	22.5	18.5
29	11.5	10.5	16.5	14.5	24.0	21.5	25.5	21.5	23.0	19.0	22.0	18.5
30	11.5	10.5	16.5	15.5	24.0	21.0	26.0	22.0	23.0	20.0	22.0	18.5
31	---	---	17.0	15.0	---	---	26.5	22.5	23.5	18.5	---	---
MONTH	12.5	8.5	17.0	9.0	24.5	15.0	26.5	20.5	26.0	18.5	25.0	16.5

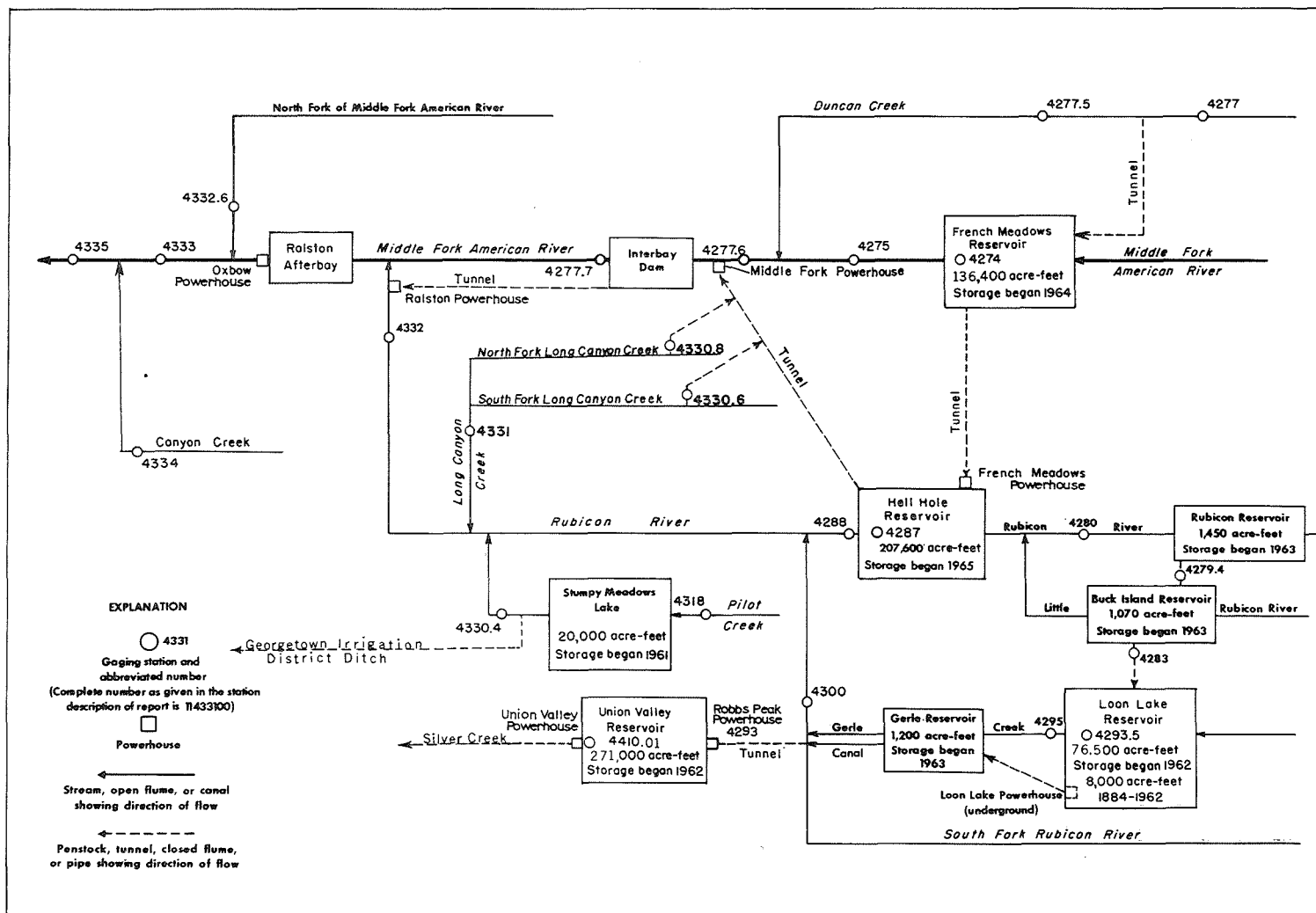


FIGURE 10.--Schematic diagram showing diversions and storage in Middle Fork American and Rubicon river basins.

11427400 FRENCH MEADOWS RESERVOIR NEAR FORESTHILL, CA

LOCATION.--Lat 39°06'32", long 120°25'49", in SW¼NE¼ sec.32, T.15 N., R.14 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 2.2 mi (3.5 km) upstream from dam on Middle Fork American River, 6.9 mi (11.1 km) upstream from Chipmunk Creek, and 21 mi (34 km) northeast of Foresthill.

DRAINAGE AREA.--47.0 mi² (121.7 km²).

PERIOD OF RECORD.--December 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Placer County Water Agency).

REMARKS.--Reservoir is formed by rockfill dam with earth core. Storage began Dec. 21, 1964. Usable capacity, 125,601 acre-ft (155 hm³) between elevations 5,125 ft (1,562.1 m), minimum operating level and 5,263 ft (1,604.2 m), top of radial gates. Dead storage, 10,804 acre-ft (13.3 hm³). Reservoir is used to store water for hydroelectric power. Up to 400 ft³/s (11.3 m³/s) is diverted from Duncan Creek through a tunnel to reservoir. Water is released through a tunnel to French Meadows powerplant at Hell Hole Reservoir on the Rubicon River; releases began Dec. 13, 1965. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 137,700 acre-ft (170 hm³) May 19, 1966, elevation, 5,263.9 ft (1,604.44 m); minimum since reservoir first filled, 37,722 acre-ft (46.5 hm³) Nov. 20, 1977, elevation, 5,170.86 ft (1,576.078 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 134,150 acre-ft (165 hm³) June 4, 6, elevation, 5,261.40 ft (1,603.675 m); minimum, 66,598 acre-ft (82.1 hm³) Mar. 6, elevation, 5,204.30 ft (1,586.271 m).

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

5,125	10,804	5,200	62,447
5,130	13,075	5,230	94,074
5,150	23,743	5,270	146,502
5,170	37,085		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97075	94935	95120	94910	84190	68861	76612	100668	133981	133519	122112	107761
2	97063	94935	95120	94910	83555	68275	76854	102386	134009	133547	121560	107724
3	96968	94935	95120	94910	82878	67711	77148	103923	134051	133589	121010	107724
4	96487	94935	95120	94910	82269	67089	77517	105999	134150	133617	120838	106983
5	95854	94922	95166	94910	81651	66637	78013	108220	134136	133631	120678	106367
6	95492	94910	95143	94910	81003	66598	78809	110092	134150	133645	120256	105631
7	95854	94899	95143	94945	80412	66893	79342	111552	134055	133659	119729	105024
8	95481	94887	94887	94841	79779	67188	79929	112362	133799	133659	119137	104787
9	95457	94852	94748	94225	79075	67582	80573	112489	133463	133589	118679	104777
10	95423	94829	94748	93727	78440	68077	81111	112616	133183	132792	118090	104288
11	95388	94945	94724	95039	77866	68573	81651	113113	132848	132053	117504	103608
12	95342	94853	94724	95003	77222	69271	82204	114019	132541	131358	117374	102844
13	95330	94864	94712	94538	76886	69771	83042	115367	132290	130809	116858	102277
14	95306	94864	94712	94190	76749	70354	83894	116673	132262	130676	116258	101627
15	95296	94841	94712	93799	76339	71040	84817	117764	132234	130665	115434	101483
16	95284	94750	94701	93265	75890	71515	85954	119072	132192	130123	115096	101351
17	95271	94750	94853	92690	75307	71851	86820	120494	132206	129563	114480	100859
18	95248	94738	94957	92083	74819	72177	87455	122046	132206	128880	114301	100178
19	95216	94771	94923	91486	74280	72457	87891	123621	132342	128297	114096	99701
20	95192	94819	94923	90860	73790	72707	88430	124994	132471	127750	113648	98762
21	95168	94922	94923	90291	73322	72968	89014	126687	132610	127572	112960	97993
22	95144	94933	94923	89691	72861	73169	89668	128050	132764	127367	112362	97298
23	95099	94968	94923	89104	72299	73394	90405	129024	132903	126877	111855	96522
24	95087	94993	94923	88520	71729	73631	90906	129878	133015	126225	111210	95819
25	95063	94933	94923	87858	71131	74002	91498	130817	133141	125574	111059	94968
26	95038	94922	94923	87255	70535	74437	92925	131802	133239	124926	110883	94213
27	95026	94899	94923	86643	69871	75078	94771	132555	133309	124334	110393	93439
28	95003	94899	94923	86010	69470	75494	96405	133141	133393	124118	109716	92644
29	94968	94899	94923	85390	---	75797	97698	133575	133435	123984	109091	92070
30	94945	94910	94923	84784	---	76079	99118	133575	133477	123447	108468	91544
31	94922	---	94923	84355	---	76329	---	133869	---	122830	107910	---
MAX	97075	94993	95166	95039	84190	76329	99118	133869	134150	133659	122112	107761
MIN	94922	94738	94701	84355	69470	66598	76612	100668	132192	122830	107910	91544
†	5230.73	5230.72	5230.73	5221.38	5207.20	5213.90	5234.30	5261.20	5260.92	5253.14	5241.55	5227.80
‡	-2165	-12	+13	-10568	-14885	+6859	+22789	+34751	-392	-10647	-14920	-16366

CAL YR 1978 † +45308
WTR YR 1979 † -5545

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11427500 MIDDLE FORK AMERICAN RIVER AT FRENCH MEADOWS, CA

LOCATION.--Lat 39°06'35", long 120°28'49", in SW¼NW¼ sec.36, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 0.6 mi (1.0 km) downstream from French Meadows Dam, 4.1 mi (6.6 km) upstream from Chipmunk Creek, and 14 mi (23 km) south of Cisco.

DRAINAGE AREA.--47.9 mi² (124.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1445: 1953-54. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,920 ft (1,500 m), from topographic map. Prior to Oct. 1, 1962, at site 0.8 mi (1.3 km) upstream at different datum.

REMARKS.--Flow regulated by French Meadows Reservoir (station 11427400) 0.6 mi (1.0 km) upstream beginning in December 1964. Diversions from Duncan Creek to French Meadows Reservoir since December 1964 and from French Meadows Reservoir to Hell Hole Reservoir since December 1965. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--13 years (water years 1952-64, prior to regulation by French Meadows Reservoir), 149 ft³/s (4.22 m³/s), 107,900 acre-ft/yr (133.0 hm³/yr); 15 years (water years 1965-79), 19.8 ft³/s (0.561 m³/s), 14,350 acre-ft/yr (17.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s (609 m³/s) Jan. 31, 1963, gage height, 14.20 ft (4.328 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of maximum flow at former site; minimum, 0.3 ft³/s (0.008 m³/s) Oct. 4, 5, 21-25, 1960, Oct. 5, 6, 1961. Maximum discharge since construction of French Meadows Dam in 1964, 1,310 ft³/s (37.1 m³/s) Apr. 30, 1965, gage height, 7.68 ft (2.341 m); minimum daily, 0.8 ft³/s (0.023 m³/s) Oct. 22-25, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56 ft³/s (1.59 m³/s) Jan. 11, gage height, 4.70 ft (1.433 m); minimum daily, 5.0 ft³/s (0.14 m³/s) June 14-17.

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	7.7	7.7	8.9	7.0	7.7	8.6	9.7	7.8	7.1	6.6	7.1	6.5
2	7.7	7.7	7.9	7.0	7.7	8.3	9.6	7.4	7.0	6.5	7.1	6.6
3	7.7	7.7	7.7	7.0	7.7	8.3	9.7	7.1	6.8	6.5	7.1	6.9
4	7.7	7.7	7.7	7.3	7.7	8.5	10	6.8	6.8	6.5	7.0	6.7
5	7.7	7.7	7.7	7.3	7.7	9.0	11	8.9	6.6	6.5	6.8	6.8
6	7.7	7.7	7.7	7.3	7.7	10	12	8.9	6.3	6.5	6.8	6.8
7	7.7	7.7	7.5	7.3	7.7	10	11	10	6.1	6.5	6.8	7.1
8	7.7	7.5	7.3	7.7	7.7	10	11	7.8	6.1	6.5	6.8	7.1
9	7.7	7.3	7.3	7.7	7.7	10	11	7.2	6.1	6.3	6.8	7.1
10	7.7	7.3	7.3	8.3	7.7	10	11	6.5	5.6	6.1	6.8	7.1
11	7.7	7.3	7.3	29	7.7	11	11	7.1	5.5	6.1	6.8	7.1
12	7.7	7.3	7.3	12	7.8	11	12	8.1	5.7	6.4	6.8	7.5
13	7.7	7.3	7.3	9.5	12	11	12	7.9	5.2	6.5	6.8	7.5
14	7.7	7.3	7.3	8.9	16	12	12	7.6	5.0	6.5	6.8	7.5
15	7.7	7.3	7.3	8.5	10	14	13	7.5	5.0	6.5	6.8	7.5
16	7.7	7.3	7.3	8.3	9.3	12	14	7.1	5.0	6.5	6.8	7.5
17	7.7	7.3	7.5	8.0	8.7	10	13	7.9	5.0	6.8	6.8	7.5
18	7.7	7.3	7.7	8.0	8.6	10	12	9.2	5.8	6.8	6.8	7.8
19	7.7	7.3	7.7	8.0	8.6	9.9	12	8.9	6.5	6.8	7.0	7.8
20	7.7	7.5	7.7	8.0	8.4	9.7	12	8.7	6.6	6.8	6.9	7.8
21	7.7	7.7	7.5	8.0	8.5	9.9	12	8.6	6.7	6.9	6.8	7.8
22	7.7	7.7	7.3	7.8	8.3	11	13	8.3	6.5	7.1	7.0	7.8
23	7.7	7.7	7.3	7.7	8.3	9.0	13	8.0	6.5	7.1	6.8	8.2
24	7.7	7.7	7.3	7.7	8.4	9.2	12	7.7	6.7	7.1	7.1	8.2
25	7.7	7.7	7.3	7.7	8.6	9.7	12	7.5	6.5	7.2	6.9	8.2
26	7.7	7.7	7.3	7.7	8.6	10	18	7.3	6.5	7.1	6.8	8.2
27	7.7	7.7	7.0	7.7	8.4	14	14	7.1	6.5	7.1	6.8	8.2
28	7.7	7.7	7.0	7.7	8.3	12	9.2	7.1	6.5	7.1	6.8	8.5
29	7.7	7.7	7.0	7.7	---	11	8.2	7.1	6.5	7.1	6.8	8.5
30	7.7	7.6	7.0	7.7	---	10	7.9	7.1	6.8	7.1	6.8	8.5
31	7.7	---	7.0	7.7	---	10	---	7.1	---	7.1	6.8	---
TOTAL	238.7	226.1	230.4	267.2	241.5	319.1	348.3	241.3	185.5	208.2	212.8	226.3
MEAN	7.70	7.54	7.43	8.62	8.63	10.3	11.6	7.78	6.18	6.72	6.86	7.54
MAX	7.7	7.7	8.9	29	16	14	18	10	7.1	7.2	7.1	8.5
MIN	7.7	7.3	7.0	7.0	7.7	8.3	7.9	6.5	5.0	6.1	6.8	6.5
AC-FT	473	448	457	530	479	633	691	479	368	413	422	449
†	1540	0	377	15640	18680	3370	0	16280	10920	11160	14430	15830

CAL YR 1978 TOTAL 2949.5 MEAN 8.08 MAX 25 MIN 3.7 AC-FT 5850
WTR YR 1979 TOTAL 2945.4 MEAN 8.07 MAX 29 MIN 5.0 AC-FT 5840

† Diversion, in acre-feet, from French Meadows Reservoir to Hell Hole Reservoir through French Meadows powerplant.

11427500 MIDDLE FORK AMERICAN RIVER AT FRENCH MEADOWS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 04...	1300	6.8	30	7.7	12.0	K1	K6	8	0	2.2	.5
JUL 31...	1047	7.1	32	7.2	9.0	K2	K1	11	0	3.1	.7

DATE	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- LINEITY (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)
JUN 04...	1.3	32	.2	1.7	.4	9	1.3	.4	.0	10	29
JUL 31...	1.2	19	.2	1.8	.6	12	4.2	.3	.1	12	25

DATE	SOLIDS, SUM OF CONSTI- TUENTS, 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
JUN 04...	22	.04	.01	.02	.04	.00	.04	.05	.00	.005	.00
JUL 31...	30	.03	.03	.00	.00	.11	.11	.14	.09	.007	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUN 04...	1300	--	--	0	290	120	170	60	0	140	1.6
JUL 31...	1047	30	10	20	370	190	180	90	0	90	1.3

K Results based on colony count outside the acceptable range (non-ideal colony count).

11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39°08'09", long 120°28'39", in NE¼NW¼ sec.24, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128 Tahoe National Forest, on left bank 0.2 mi (0.3 km) upstream from diversion dam, 0.5 mi (0.8 km) downstream from Little Duncan Creek, 2 mi (3 km) northwest of French Meadows, and 20 mi (32 km) northeast of Foresthill.

DRAINAGE AREA.--9.94 mi² (25.74 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,270 ft (1,606 m), from topographic map. Prior to Sept. 3, 1965, at site 150 ft (46 m) upstream at datum 9.56 ft (2.914 m) higher.

REMARKS.--No storage or diversion above station. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by the Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--19 years, 34.0 ft³/s (0.963 m³/s), 24,630 acre-ft/yr (30.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,650 ft³/s (103 m³/s) Dec. 22, 1964, gage height, 10.6 ft (3.23 m) from floodmarks, from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of computation of flow over diversion dam; minimum daily, 0.10 ft³/s (0.003 m³/s) July 31, Aug. 1, 2, 8, 9, 13-16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 11	1215	*448 12.7	7.70 2.347
May 21	1730	295 8.35	7.30 2.225

Minimum daily, 0.34 ft³/s (0.010 m³/s) Sept. 18-20, 23, 24.

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	1.1	1.2	12	1.9	4.9	9.0	23	132	91	6.2	1.4	.89
2	1.1	1.2	3.8	1.9	4.8	9.8	24	134	88	5.9	1.3	.88
3	1.1	1.1	3.1	1.9	4.7	9.0	26	151	90	5.4	1.2	.82
4	1.1	1.1	2.5	1.8	4.7	9.1	33	158	88	5.1	1.2	.82
5	1.1	1.0	2.2	1.7	4.7	12	43	194	82	4.6	1.1	.77
6	1.1	1.0	2.0	1.7	4.7	18	50	189	77	4.2	1.1	.70
7	1.1	.97	1.7	1.7	4.7	25	42	139	64	4.0	1.1	.64
8	1.0	.96	1.6	3.0	4.8	28	49	107	51	3.6	1.1	.63
9	.97	.97	1.7	3.7	5.1	32	50	90	43	3.6	1.0	.56
10	.97	.98	1.8	3.8	5.5	37	44	85	39	3.4	.99	.56
11	.97	1.1	1.7	216	5.4	44	43	91	36	3.2	.97	.55
12	.95	1.1	1.6	42	5.4	48	46	112	31	3.1	.90	.49
13	.87	1.4	1.6	19	15	50	60	142	23	2.8	.89	.49
14	.82	1.6	1.6	13	56	48	69	175	27	2.6	.92	.48
15	.82	1.5	1.5	11	22	48	76	201	23	2.4	.97	.41
16	.84	1.6	1.6	11	18	40	81	210	20	2.4	.89	.41
17	.89	1.5	1.5	8.1	16	35	71	218	20	2.2	.89	.41
18	.89	2.0	1.6	9.5	15	32	58	234	18	2.1	.80	.34
19	.89	2.4	1.6	9.2	14	29	51	242	16	2.0	.89	.34
20	.89	2.4	1.6	7.8	12	26	49	247	16	2.0	.91	.34
21	.88	2.4	1.6	7.5	11	25	51	254	14	3.4	1.1	.37
22	.82	2.3	1.6	7.0	8.8	25	50	240	13	3.1	1.0	.36
23	.82	2.3	1.8	6.8	8.3	23	46	211	12	2.5	.97	.34
24	.82	2.3	2.2	6.5	9.9	25	43	187	12	2.2	.93	.34
25	.82	2.3	2.4	6.4	11	29	45	183	11	2.0	.88	.41
26	.82	2.3	2.6	6.1	11	30	99	193	9.8	1.9	.82	.53
27	.82	2.3	2.6	5.9	9.8	32	152	185	9.3	1.7	.72	.54
28	.82	2.3	2.3	5.7	9.6	27	137	159	8.4	1.6	.83	.49
29	.82	4.8	2.2	5.5	---	24	127	131	7.5	1.5	1.0	.49
30	.82	4.1	2.0	5.3	---	23	124	111	6.9	1.4	1.1	.47
31	.90	---	1.9	5.1	---	22	---	98	---	1.4	1.0	---
TOTAL	28.63	54.48	71.5	437.5	306.8	873.9	1862	5203	1046.9	93.5	30.87	15.87
MEAN	.92	1.82	2.31	14.1	11.0	28.2	62.1	168	34.9	3.02	1.00	.53
MAX	1.1	4.8	12	216	56	50	152	254	91	6.2	1.4	.89
MIN	.82	.96	1.5	1.7	4.7	9.0	23	85	6.9	1.4	.72	.34
AC-FT	57	108	142	868	609	1730	3690	10320	2080	185	61	31
CAL YR 1978	TOTAL	15213.57	MEAN	41.7	MAX	228	MIN	.41	AC-FT	30180		
WTR YR 1979	TOTAL	10024.95	MEAN	27.5	MAX	254	MIN	.34	AC-FT	19880		

LOCATION.--Lat 39°07'59", long 120°28'58", in NE¼SE¼ sec.23, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 800 ft (244 m) downstream from unnamed right bank tributary, 1,000 ft (305 m) downstream from Duncan Creek diversion dam, and 20 mi (32 km) northeast of Foresthill.

REMARKS.--Flow is diverted above station through Duncan Creek diversion tunnel to French Meadows Reservoir (station 11427400). Maximum design flow of tunnel is 400 ft³/s (11.3 m³/s). See schematic diagram of Middle Fork American and Rubicon River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,640 ft³/s (103 m³/s) Dec. 22, 1964, gage height, 8.74 ft (2.664 m) in gage well, 10.0 ft (3.05 m) from floodmarks, from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of computation of peak flow over diversion dam; no flow at times in 1965-66.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 366 ft³/s (10.4 m³/s) Jan. 11, gage height, 4.20 ft (1.280 m); minimum daily, 0.40 ft³/s (0.011 m³/s) Sept. 17-19.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.0	7.6	1.5	5.5	9.0	6.3	7.5	7.3	6.3	1.3	.70
2	.97	1.4	4.8	1.6	5.3	9.3	6.3	7.0	7.0	5.8	1.2	.64
3	.96	1.2	3.0	1.6	5.2	9.1	6.8	7.1	6.8	5.4	1.1	.64
4	.96	1.1	2.9	1.6	5.2	9.1	8.8	7.4	6.8	5.1	1.1	.63
5	.96	1.0	3.7	1.7	5.2	9.3	9.5	27	6.8	4.7	1.0	.59
6	.89	.89	2.0	1.6	5.2	10	10	29	6.8	4.4	.98	.55
7	.89	.89	1.9	1.6	5.3	12	8.8	7.5	6.7	4.2	.99	.52
8	.89	.82	2.0	2.7	5.5	13	9.2	6.2	6.6	3.9	.99	.50
9	.89	.80	1.8	3.4	5.6	14	9.3	5.8	6.6	3.7	.89	.48
10	.85	.78	1.8	3.6	5.8	14	8.4	6.0	6.4	3.6	.86	.48
11	.82	.95	1.7	150	6.0	17	8.1	8.0	6.3	3.5	.81	.45
12	.82	.96	1.6	13	6.0	17	12	9.1	6.3	3.3	.78	.45
13	.79	1.1	1.5	9.8	9.9	17	8.3	8.6	6.3	3.1	.81	.45
14	.78	1.3	1.6	10	15	16	8.9	8.2	6.2	2.9	.82	.42
15	.76	1.3	1.9	9.5	11	15	9.2	20	6.1	2.7	.82	.42
16	.76	1.5	1.7	9.3	10	14	9.3	36	6.1	2.6	.78	.41
17	.76	1.9	1.7	8.5	9.9	13	8.4	24	6.1	2.4	.74	.40
18	.76	2.0	2.1	8.6	10	12	7.2	6.5	7.0	2.2	.71	.40
19	.76	2.0	2.1	8.3	9.5	11	6.4	12	8.0	2.1	.71	.40
20	.76	2.0	2.6	8.2	9.4	11	6.2	23	8.0	2.1	.73	.41
21	.71	2.1	2.5	7.8	9.4	11	6.2	29	8.0	3.4	.86	.41
22	.71	2.0	2.2	7.5	9.0	11	6.2	13	8.0	3.2	.85	.41
23	.67	1.9	2.0	7.4	8.5	11	5.9	4.7	8.0	2.5	.77	.41
24	.65	1.9	1.8	7.1	9.0	11	5.7	4.0	7.9	2.2	.70	.42
25	.65	1.8	1.7	6.9	10	12	5.7	5.3	7.8	2.0	.64	.44
26	.65	1.8	1.7	6.6	10	12	14	13	7.8	1.9	.63	.48
27	.65	1.8	1.7	6.5	9.5	12	24	9.7	7.8	1.8	.60	.48
28	.65	1.9	1.6	6.3	9.4	10	9.6	6.4	7.8	1.7	.60	.45
29	.65	5.0	1.8	6.1	---	6.8	8.5	7.2	7.6	1.6	.81	.45
30	.65	4.8	1.6	5.9	---	6.6	7.9	7.7	6.7	1.5	.81	.42
31	.72	---	1.6	5.7	---	6.3	---	7.5	---	1.4	.83	---
TOTAL	24.39	49.89	70.2	329.9	225.3	361.5	261.1	373.4	211.6	97.2	26.22	14.31
MEAN	.79	1.66	2.26	10.6	8.05	11.7	8.70	12.0	7.05	3.14	.85	.48
MAX	1.0	5.0	7.6	150	15	17	24	36	8.0	6.3	1.3	.70
MIN	.65	.78	1.5	1.5	5.2	6.3	5.7	4.0	6.1	1.4	.60	.40
AC-FT	48	99	139	654	447	717	518	741	420	193	52	28
CAL YR 1978	TOTAL	3485.16		MEAN 9.55	MAX 143	MIN .61	AC-FT 6910					
YR 1979	TOTAL	2045.01		MEAN 5.60	MAX 150	MIN .40	AC-FT 4060					

11427760 MIDDLE FORK AMERICAN RIVER ABOVE MIDDLE FORK POWERHOUSE, NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'31", long 120°35'40", in NW¼NW¼ sec.36, T.14 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 300 ft (91 m) upstream from Middle Fork powerhouse, 3.7 mi (6.0 km) upstream from Big Mosquito Creek, and 11 mi (18 km) east of Foresthill.

DRAINAGE AREA.--87.8 mi² (227.4 km²).

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft (774 m), from topographic map.

REMARKS.--Records good. Flow regulated by French Meadows Reservoir (station 11427400). See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--14 years, 90.4 ft³/s (2.560 m³/s), 65,490 acre-ft/yr (80.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s (110 m³/s) Jan. 21, 1970, gage height, 8.00 ft (2.438 m); minimum daily, 5.3 ft³/s (0.15 m³/s) Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Jan. 11, gage height, 5.16 ft (1.573 m); minimum daily, 10 ft³/s (0.28 m³/s) Jan. 29.

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	18	18	48	17	15	93	152	205	69	40	22	18
2	18	19	31	17	17	79	146	195	66	39	22	18
3	17	18	23	17	19	81	140	195	64	39	21	17
4	18	18	21	18	21	82	142	197	61	39	21	17
5	18	18	22	18	23	88	154	235	59	38	21	17
6	18	17	20	18	25	110	182	264	57	38	21	17
7	18	17	18	19	27	143	164	260	55	37	21	17
8	17	17	18	31	29	170	162	227	53	36	20	17
9	17	17	19	32	32	184	166	211	52	36	20	17
10	17	17	19	30	33	199	158	202	50	33	20	16
11	17	18	18	584	33	227	164	200	49	32	20	16
12	17	18	18	168	33	231	166	202	47	31	19	16
13	17	19	18	93	66	231	168	201	46	30	19	16
14	17	17	18	82	218	233	173	199	46	29	20	16
15	17	17	17	83	116	258	177	190	45	28	19	16
16	17	17	17	65	101	231	190	210	44	27	19	16
17	17	17	22	56	84	200	189	201	46	27	19	16
18	17	17	23	51	84	184	167	166	46	26	19	15
19	17	17	19	36	88	165	149	157	48	25	19	16
20	17	23	18	32	86	152	140	159	48	25	18	16
21	17	29	18	28	96	144	136	163	46	30	19	16
22	17	23	19	25	86	137	136	142	45	30	19	16
23	17	20	19	23	82	130	153	122	45	27	19	16
24	17	18	19	22	74	132	149	107	44	25	18	16
25	17	18	19	20	75	138	144	99	43	25	18	16
26	17	18	19	16	82	148	192	96	43	24	18	16
27	17	17	19	16	77	218	262	98	42	24	18	16
28	17	17	19	13	85	222	227	88	42	23	18	16
29	17	18	18	10	---	187	214	80	41	23	18	16
30	17	22	17	14	---	170	207	77	41	22	18	16
31	17	---	17	15	---	161	---	72	---	22	19	---
TOTAL	533	556	630	1669	1807	5128	5069	5220	1483	930	602	490
MEAN	17.2	18.5	20.3	53.8	64.5	165	169	168	49.4	30.0	19.4	16.3
MAX	18	29	48	584	218	258	262	264	69	40	22	18
MIN	17	17	17	10	15	79	136	72	41	22	18	15
AC-FT	1060	1100	1250	3310	3580	10170	10050	10350	2940	1840	1190	972

CAL YR 1978 TOTAL 38591 MEAN 106 MAX 642 MIN 17 AC-FT 76550
WTR YR 1979 TOTAL 24117 MEAN 66.1 MAX 584 MIN 10 AC-FT 47840

11427770 MIDDLE FORK AMERICAN RIVER BELOW INTERBAY DAM, NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'35", long 120°36'09", in SW¼SE¼ sec.26, T.14 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 500 ft (152 m) downstream from Interbay Dam, 3.3 mi (5.3 km) upstream from Big Mosquito Creek, and 10.6 mi (17.1 km) east of Foresthill.

DRAINAGE AREA.--89.1 mi² (230.8 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 2,470 ft (753 m), from topographic map.

REMARKS.--Flow regulated by French Meadows Reservoir (station 11427400) and after Aug. 22, 1966, by Interbay Reservoir, capacity, 130 acre-ft (160,000 m³) between normal operating limits of 2,502.0 ft (762.61 m) and 2,526.0 ft (769.92 m). Water is diverted from Hell Hole Reservoir through a tunnel to Middle Fork powerplant and re-diverted to Ralston powerplant. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--14 years, 41.0 ft³/s (1.161 m³/s), 29,700 acre-ft/yr (36.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s (107 m³/s) Jan. 21, 1970, gage height, 6.95 ft (2.118 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Oct. 25-30, 1966, Jan. 19, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Feb. 6, gage height, 3.95 ft (1.204 m); minimum daily, 14 ft³/s (0.40 m³/s) Oct. 14-16.

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	20	17	47	20	19	25	24	23	21	21	21	19
2	20	17	35	20	19	27	24	23	21	21	22	19
3	20	17	25	18	19	25	24	23	21	21	22	19
4	20	17	23	17	19	24	24	24	21	21	21	19
5	20	17	25	17	19	24	24	24	21	21	22	19
6	20	17	46	17	72	24	24	23	21	21	22	19
7	20	17	20	17	19	24	24	23	21	21	21	18
8	20	17	20	17	19	24	24	23	21	21	21	18
9	20	17	20	18	20	24	24	23	21	21	21	18
10	20	17	20	18	24	24	24	23	21	21	21	18
11	20	17	20	80	24	24	24	23	21	21	21	18
12	18	17	20	19	24	24	23	24	21	21	21	18
13	16	16	20	19	24	24	23	24	22	21	21	18
14	14	17	20	19	24	24	23	24	22	21	21	18
15	14	17	20	19	24	24	23	23	22	21	21	18
16	14	17	20	19	24	24	24	21	22	21	21	18
17	18	17	20	19	24	24	25	21	21	21	21	18
18	19	17	20	19	24	24	24	21	21	21	20	18
19	17	17	20	19	24	24	24	21	21	21	21	18
20	17	17	20	19	24	24	24	21	21	21	20	18
21	16	17	20	19	25	51	24	21	21	21	20	18
22	16	17	20	19	25	24	24	21	21	21	20	18
23	16	17	20	19	25	24	24	21	21	21	20	18
24	16	17	20	19	25	24	23	21	21	21	20	18
25	16	17	20	19	24	24	23	21	21	21	20	18
26	17	17	20	19	25	24	23	21	21	21	20	18
27	17	17	20	19	24	24	23	21	21	27	20	18
28	16	17	20	19	24	24	23	21	21	21	20	18
29	16	17	20	19	---	24	23	21	21	21	20	18
30	17	17	20	19	---	24	23	21	21	22	19	17
31	17	---	20	19	---	24	---	21	---	22	19	---
TOTAL	547	509	701	639	686	776	710	686	634	659	640	545
MEAN	17.6	17.0	22.6	20.6	24.5	25.0	23.7	22.1	21.1	21.3	20.6	18.2
MAX	20	17	47	80	72	51	25	24	22	27	22	19
MIN	14	16	20	17	19	24	23	21	21	21	19	17
AC-FT	1080	1010	1390	1270	1360	1540	1410	1360	1260	1310	1270	1080
†	9240	31430	14250	35630	35760	13910	12150	38540	28810	39330	47040	38870

CAL YR 1978 TOTAL 7989.1 MEAN 21.9 MAX 47 MIN 8.6 AC-FT 15850
WTR YR 1979 TOTAL 7732.0 MEAN 21.2 MAX 80 MIN 14 AC-FT 15340

† Diversion, in acre-feet, to Ralston powerplant.

SACRAMENTO RIVER BASIN

11427940 RUBICON-ROCKBOUND TUNNEL NEAR MEEKS BAY, CA

LOCATION (REVISED).--Lat 38°59'26", long 120°13'29", in NE¼SE¼ sec.8, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at tunnel intake 100 ft (30 m) upstream from diversion dam on Rubicon River, 2.5 mi (4.0 km) upstream from Rubicon Springs, and 6.4 mi (10.3 km) southwest of Meeks Bay.

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,533.23 ft (1,991.328 m) National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District). Auxiliary water-stage recorder since Aug. 26, 1966, 220 ft (67 m), revised, downstream from tunnel outlet at different datum.

REMARKS.--Records good. Tunnel diverts water from Rubicon River to Rockbound Lake. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--16 years, 100 ft³/s (2,832 m³/s), 72,450 acre-ft/yr (89.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,120 ft³/s (31.7 m³/s) Dec. 23, 1964; no flow at times in most years.

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	.01	0	22	4.0	14	27	25	295	324	111	4.4	.06
2	0	0	24	3.2	13	22	26	227	347	105	3.5	.06
3	0	0	18	2.6	12	17	30	375	399	105	2.8	.06
4	0	0	17	2.3	11	17	49	492	458	98	1.9	.05
5	0	0	32	2.6	11	22	87	540	458	92	.99	.04
6	0	0	20	3.0	10	34	121	359	492	82	.55	.05
7	0	0	11	3.0	10	58	88	190	434	73	.30	.04
8	0	0	5.7	4.4	10	78	79	132	278	60	.18	.03
9	0	0	4.0	5.4	10	84	97	100	229	57	.17	.02
10	0	0	3.1	11	12	82	72	91	257	61	.16	.04
11	0	0	2.5	743	11	88	59	121	323	60	.14	.03
12	0	0	2.4	586	11	82	75	206	366	58	.14	.03
13	0	0	2.2	205	18	87	128	325	399	58	.14	38
14	0	0	1.9	107	69	83	178	458	323	59	.14	40
15	0	0	1.5	71	51	82	206	556	223	55	.12	11
16	0	0	.94	52	34	59	215	611	192	19	.10	3.9
17	0	0	1.6	43	24	40	152	618	175	.25	.10	1.7
18	0	0	3.4	38	20	32	95	677	132	.18	.10	.66
19	0	0	4.7	32	20	28	65	699	187	.16	.09	.22
20	0	0	5.8	28	21	25	63	710	137	.14	.08	.06
21	0	0	6.7	26	22	23	85	764	174	20	.07	0
22	0	0	5.8	24	23	21	120	784	177	79	.06	0
23	0	0	5.4	23	24	20	91	642	177	46	.07	0
24	0	0	5.4	22	22	24	69	555	199	28	.07	0
25	0	0	6.4	21	19	40	67	613	203	21	.07	0
26	0	0	7.3	19	17	50	151	737	183	18	.06	0
27	0	0	7.6	17	18	43	423	763	161	15	.07	0
28	0	.01	7.3	17	16	36	370	657	144	13	.07	0
29	0	.08	6.7	17	---	31	289	499	135	9.9	.06	0
30	0	1.6	5.6	16	---	25	298	357	125	7.5	.06	0
31	0	---	4.7	16	---	23	---	307	---	5.6	.06	---
TOTAL	.01	1.69	252.64	2164.5	553	1383	3873	14460	7731	1416.73	16.82	96.05
MEAN	.0003	.056	8.15	69.8	19.8	44.6	129	466	258	45.7	.54	3.20
MAX	.01	1.6	.32	743	69	88	423	784	492	111	4.4	40
MIN	0	0	.94	2.3	10	17	25	91	107	.14	.06	0
AC-FT	.02	3.4	501	4290	1100	2740	7680	28680	15330	2810	33	191
CAL YR 1978	TOTAL	41906.42	MEAN	115	MAX	826	MIN	0	AC-FT	83120		
WTR YR 1979	TOTAL	31948.44	MEAN	87.5	MAX	784	MIN	0	AC-FT	63370		

11428000 RUBICON RIVER AT RUBICON SPRINGS, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°01'10", long 120°14'46", in SW¼NE¼ sec.31, T.14 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 200 ft (61 m) downstream from Rubicon Springs, 0.7 mi (1.1 km) upstream from Miller Creek, and 7 mi (11 km) west of Meeks Bay.

DRAINAGE AREA.--31.4 mi² (81.3 km²).

PERIOD OF RECORD.--February 1910 to March 1914 (published as "at Rubicon Springs"), October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,052.97 ft (1,844.945 m) National Geodetic Vertical Datum of 1929. Feb. 1, 1910, to Mar. 31, 1914, nonrecording gage or water-stage recorder at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records fair to Jan. 10, good thereafter. Low summer flow, beginning in 1950, augmented by release from streamflow maintenance dams on Lakes Clyd, Lois, Middle Velma, and Schmidell, total controlled capacity, 555 acre-ft (684,000 m³). Flow below 1,200 ft³/s (34.0 m³/s) controlled by Rubicon diversion dam 5.5 mi (8.8 km) upstream. Diversion to Rubicon-Rockbound tunnel began Dec. 26, 1963 (station 11427940). See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE (adjusted for diversion to Rubicon-Rockbound tunnel).--26 years (water years 1911-13, 1957-79), 118 ft³/s (3,342 m³/s), 85,490 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Feb. 1, 1963, gage height, 14.28 ft (4.353 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-conveyance computation of maximum flow; no flow at times in some years prior to construction of Rubicon diversion dam in 1963 and 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1955 reached a stage of 13.0 ft (3.96 m) from floodmarks, present site and datum, discharge, 9,270 ft³/s (263 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,660 ft³/s (75.3 m³/s) Jan. 11, gage height, 7.93 ft (2.417 m); minimum discharge, 0.32 ft³/s (0.009 m³/s) Sept. 30.

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	5.9	2.0	12	10	9.5	12	20	59	17	7.5	6.6	1.6
2	6.2	2.2	11	10	9.5	12	21	69	16	7.5	6.5	1.6
3	5.9	2.8	11	10	9.3	12	24	87	15	6.9	6.4	1.5
4	5.7	2.8	10	10	9.2	12	37	85	15	6.7	6.4	1.5
5	5.7	2.7	9.3	10	9.2	15	51	108	14	6.7	6.4	1.4
6	5.7	2.7	9.2	10	9.2	32	55	65	14	6.5	6.3	1.4
7	5.9	2.8	9.1	10	9.2	44	35	49	13	6.7	6.4	1.4
8	6.2	2.7	9.3	11	9.2	47	44	39	11	6.8	6.4	1.4
9	6.2	2.7	9.2	12	9.6	48	43	38	11	6.8	6.3	1.3
10	6.2	2.9	9.1	13	10	48	29	52	11	6.7	6.3	1.4
11	6.2	3.7	9.1	1090	9.9	46	30	69	11	6.7	6.3	1.4
12	6.2	3.9	9.1	89	9.8	45	42	73	10	6.7	6.2	1.4
13	6.2	4.4	9.2	31	40	48	60	80	10	6.6	6.2	1.4
14	6.2	5.3	9.1	22	81	48	65	80	9.9	6.6	6.2	1.4
15	6.2	5.3	9.0	18	26	42	69	82	9.5	6.3	6.2	1.3
16	5.9	5.8	8.9	15	19	29	64	74	9.1	6.4	6.2	1.2
17	3.2	6.3	9.5	14	16	23	45	75	9.4	6.1	5.3	1.2
18	2.0	7.8	9.3	13	14	20	31	73	9.4	6.5	5.0	1.2
19	1.8	8.1	9.7	12	14	18	26	69	8.8	6.7	4.9	1.2
20	1.8	8.6	9.5	12	13	17	29	64	8.6	6.9	4.9	1.2
21	1.8	9.4	9.9	12	13	17	40	67	8.4	7.7	5.0	1.2
22	1.8	9.2	10	12	12	16	42	56	8.3	7.4	4.9	1.0
23	1.7	9.1	10	11	12	16	36	46	8.3	6.9	4.9	.62
24	1.8	9.2	10	11	12	20	34	42	8.2	6.6	2.9	.45
25	2.0	8.8	11	11	12	27	39	42	8.1	6.6	1.9	.41
26	2.0	8.7	11	11	12	28	88	41	8.0	6.7	1.8	.39
27	2.0	8.9	11	10	12	29	121	36	8.0	6.7	1.7	.34
28	2.0	8.9	10	10	12	24	79	30	7.8	6.7	1.6	.33
29	1.8	9.0	10	9.7	---	19	71	25	7.8	6.8	2.2	.33
30	1.8	9.3	10	9.5	---	18	78	20	7.6	6.7	1.7	.32
31	2.0	---	10	9.8	---	19	---	18	---	6.6	1.6	---
TOTAL	126.0	176.0	304.5	1539.0	433.6	851	1448	1813	313.2	209.7	151.6	32.79
MEAN	4.06	5.87	9.82	49.6	15.5	27.5	48.3	58.5	10.4	6.76	4.89	1.09
MAX	6.2	9.4	12	1090	81	48	121	108	17	7.7	6.6	1.6
MIN	1.7	2.0	8.9	9.5	9.2	12	20	18	7.6	6.1	1.6	.32
AC-FT	250	349	604	3050	860	1690	2870	3600	621	416	301	65
MEAN ‡	4.07	5.92	17.9	119	35.3	72.0	177	525	268	52.5	5.43	4.30
AC-FT ‡	250	352	1100	7340	1960	4430	10550	32280	15950	3230	334	256

CAL YR 1978 TOTAL 8134.80 MEAN 22.3 MAX 140 MIN 1.7 AC-FT 16140 MEAN ‡ 137 AC-FT ‡ 99240
WTR YR 1979 TOTAL 7398.39 MEAN 20.3 MAX 1090 MIN .32 AC-FT 14670 MEAN ‡ 108 AC-FT ‡ 78040

‡ Adjusted for diversion to Rubicon-Rockbound tunnel.

SACRAMENTO RIVER BASIN

11428300 BUCK-LOON TUNNEL NEAR MEEKS BAY, CA

LOCATION (REVISED).--Lat 39°00'17", long 120°15'21", in SE¼NW¼ sec.6, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at tunnel intake near left abutment of diversion dam, 7.4 mi (11.9 km) southwest of Meeks Bay.

PERIOD OF RECORD.--November 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,425.0 ft (1,958.34 m) National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District).

REMARKS.--Records fair. Tunnel diverts water from Buck Island Lake and discharges into Loon Lake. Gates are closed at the tunnel entrance during the summer and opened each fall to raise the level of Buck Island Lake for recreation purposes. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--16 years, 129 ft³/s (3,653 m³/s), 93,460 acre-ft/yr (115 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,240 ft³/s (35.1 m³/s) Dec. 23, 1964; no flow many days in most years.

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	.33		13	5.1	20	32	36	418	368	160	5.4	.17
2	.12		31	4.4	20	29	37	316	395	147	4.1	.17
3	.01		30	3.8	18	28	40	445	453	142	3.2	.17
4	0		25	3.5	16	27	52	633	545	137	2.3	.17
5	0		33	3.5	15	28	91	749	574	129	1.5	.17
6	0		38	3.5	14	37	156	622	610	119	.19	.17
7	0		25	3.8	13	61	142	315	585	106	.19	.17
8	0		16	6.0	13	85	111	209	390	91	.19	.17
9	0		10	9.3	13	102	125	149	290	78	.19	.17
10	0		7.3	10	14	104	111	122	287	77	.19	.16
11	0		5.4	651	15	109	85	137	358	82	.19	.16
12	0		4.4	925	15	109	84	230	408	80	.19	.16
13	0		4.0	370	23	110	134	382	472	78	.19	67
14	0		3.3	172	86	112	215	573	432	79	.18	35
15	0		2.9	108	85	116	267	718	311	78	.18	23
16	0		2.4	75	64	100	301	807	265	31	.18	11
17	0		4.0	61	48	72	245	821	232	.14	.18	2.2
18	0		12	52	37	57	158	893	191	.14	.18	0
19	0		11	46	36	50	104	921	140	.15	.18	0
20	0		7.9	40	33	42	84	930	145	.15	.18	0
21	0		6.7	37	39	37	94	950	199	.15	.18	0
22	0		6.4	34	39	33	140	990	227	.67	.18	0
23	0		6.2	32	40	30	143	897	226	33	.18	0
24	0		5.9	30	35	30	108	733	251	39	.17	0
25	0		5.6	30	31	43	89	745	275	27	.17	.36
26	0		6.2	27	29	63	144	909	258	20	.17	1.5
27	0		7.0	24	27	73	520	979	227	16	.17	0
28	0		7.9	22	25	68	571	909	201	14	.17	0
29	0		7.6	20	---	54	422	725	188	11	.17	0
30	0		7.3	19	---	50	391	488	176	9.0	.17	0
31	0	---	6.4	20	---	39	---	375	---	7.0	.17	---
TOTAL	.46	0	358.8	2847.9	863	1930	5200	19110	9679	1791.40	21.18	142.07
MEAN	.015	0	11.6	91.9	30.8	62.3	173	616	323	57.8	.68	4.74
MAX	.33	0	38	925	86	116	571	990	610	160	5.4	67
MIN	0	0	2.4	3.5	13	27	36	122	140	.14	.17	0
AC-FT	.9	0	712	5650	1710	3830	10310	37900	19200	3550	42	282
CAL YR 1978	TOTAL	54915.19	MEAN 150	MAX 1070	MIN 0	AC-FT 108900						
WTR YR 1979	TOTAL	41943.81	MEAN 115	MAX 990	MIN 0	AC-FT 83200						

11428700 HELL HOLE RESERVOIR NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'54", long 120°24'50", in SE¼NW¼ sec.16, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.3 mi (0.5 km) upstream from Hell Hole Dam on Rubicon River, and 15.6 mi (25.1 km) west of Meeks Bay.

DRAINAGE AREA.--114 mi² (295 km²).

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Placer County Water Agency).

REMARKS.--Reservoir is formed by rockfill dam with earth core. Storage began Dec. 6, 1965. Usable capacity, 207,342 acre-ft (256 hm³) between elevations 4,287.65 ft (1,306.876 m), invert of river outlet and 4,630.0 ft (1,411.22 m), crest of ogee spillway. Dead storage 248 acre-ft (306,000 m³). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 209,500 acre-ft (258 hm³) June 17, 1967, elevation, 4,631.5 ft. (1,411.68 m); minimum since reservoir first filled, 37,499 acre-ft (46.2 hm³) Mar. 23, 1973, elevation, 4,428.28 ft (1,349.740 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 200,464 acre-ft (247 hm³) June 6, elevation, 4,624.26 ft (1,409.474 m); minimum, 88,233 acre-ft (109 hm³) Feb. 13, elevation, 4,507.00 ft (1,373.734 m).

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

4,340	5,220	4,500	83,025
4,360	9,835	4,550	122,720
4,380	16,250	4,600	171,865
4,400	24,160	4,650	233,420
4,450	49,610		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146653	137828	108850	96723	93393	89198	108761	140238	198858	199336	170687	138121
2	146306	136911	108923	96024	93032	89070	109224	141886	199164	199409	169516	136939
3	146010	136032	108972	95018	92473	88775	109705	143349	199409	199458	168284	135949
4	146473	134765	109029	94632	92277	88527	10318	145588	200023	199532	167410	135068
5	147116	133809	109103	94016	91671	88693	111095	148557	200220	199557	165903	134019
6	147423	132661	109005	94093	91237	89591	112459	151062	200464	199594	164667	133159
7	147413	131477	109094	94093	90789	90500	113309	152324	200453	199618	163372	132261
8	147403	130408	108566	94016	90348	91336	114061	154763	200330	199643	162312	130648
9	147373	129646	107755	93017	90045	92405	114974	156324	199986	199630	161105	128973
10	147333	127577	106809	92711	89463	93478	115723	158270	199667	199483	159917	127822
11	146769	126939	106011	99695	88957	94324	116223	160440	199470	198712	158217	126790
12	145265	126155	105407	100862	88459	95792	117067	162473	199373	197581	156434	125735
13	144056	125765	104791	100956	88233	96646	118275	165005	199225	196242	155078	124580
14	143959	124865	104111	101035	90424	97994	119471	167719	199262	195265	154028	123318
15	143949	123318	103384	101284	91032	99176	120866	170632	199042	193331	152708	122064
16	143930	121953	102938	101162	91161	100482	122046	173217	199360	191534	151569	120612
17	143920	121188	102461	100877	90918	100521	123233	175691	199986	190449	150293	119361
18	143920	121087	102064	101063	90614	101082	123746	178097	200274	189374	148677	118317
19	143893	119705	101011	101035	90500	101557	124090	180569	200034	188279	146868	117779
20	143843	119607	100325	100325	90302	101985	124348	182959	200392	186985	145658	117528
21	143826	118906	99821	99428	90454	102414	125072	185697	200392	185603	145245	117419
22	143796	117176	99114	98776	90500	102851	126033	188255	199716	183967	145069	117394
23	143756	116157	99114	98174	90500	103257	126860	189888	199471	182561	144289	117478
24	143610	115223	99145	97853	90220	103735	127621	191275	199655	181325	143833	117394
25	143194	114186	99185	97182	89818	104295	128437	192861	199851	180140	142481	117142
26	142577	113028	98753	96817	89591	104943	130559	194773	199495	179041	141331	116324
27	141905	111842	98205	96521	89364	105473	133067	196224	199250	177809	140333	115731
28	141427	110710	97736	96024	89062	106785	135251	197355	199212	176057	139812	115581
29	140731	109852	97268	95459	---	107366	137096	198063	199164	174349	140001	115981
30	139935	108875	97284	94887	---	107836	138730	198467	199260	172879	140266	116541
31	138898	---	96879	94185	---	108314	---	198552	---	171865	139454	---
MAX	147423	137828	109103	101284	93393	108314	138730	198552	200464	199643	170687	138121
MIN	138898	108875	96879	92711	88233	88527	108761	140238	198858	171865	139454	115581
†	4568.13	4533.38	4518.30	4514.82	4508.10	4532.69	4567.95	4622.70	4623.28	4600.00	4568.72	4542.68
‡	-7980	-30023	-11996	-2694	-5123	+19252	+30416	+59822	+708	-27395	-32411	-22913

CAL YR 1978 † +10444
WTR YR 1979 † -30337

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

SACRAMENTO RIVER BASIN

11428800 RUBICON RIVER BELOW HELL HOLE DAM, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'24", long 120°24'25", in NE¼NE¼ sec.21, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 600 ft (183 m) downstream from outlet of dam, and 15.3 mi (24.6 km) west of Meeks Bay.

DRAINAGE AREA.--114 mi² (295 km²).

PERIOD OF RECORD.--November 1965 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 4,231.52 ft (1,289.767 m) National Geodetic Vertical Datum of 1929 (levels by Placer County Water Agency).

REMARKS.--Flow regulated by Hell Hole Reservoir (station 11428700) beginning December 1965. Water is diverted out of the basin above the station through Buck-Loon tunnel (station 11428300). Water is diverted from Middle Fork American River basin by tunnel from French Meadows Reservoir (station 11427400) to Hell Hole Reservoir. Water is diverted from Hell Hole Reservoir through a tunnel to Middle Fork powerplant. Diversion began Sept. 8, 1966. During years when Hell Hole Dam spills, records include flow which bypasses the station. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--13 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, 2,290 ft³/s (64.8 m³/s) June 18, 1967, including flow over spillway; no flow Aug. 25 to Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67 ft³/s (1.90 m³/s) Jan. 11, gage height, 4.37 ft (1.332 m); minimum daily, 9.1 ft³/s (0.26 m³/s) Oct. 21.

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	12	19	15	14	18	17	17	23	15	22	15	11
2	12	19	15	14	19	17	17	22	14	22	15	11
3	12	19	15	14	20	17	18	22	15	22	15	11
4	12	19	15	14	20	18	18	23	17	22	15	11
5	12	19	15	14	20	20	19	24	22	22	15	10
6	12	19	15	13	19	21	20	24	22	22	14	10
7	12	19	15	13	19	19	20	26	21	22	10	11
8	12	18	15	14	19	19	20	23	21	22	9.3	12
9	12	18	15	14	19	18	20	21	21	22	9.7	11
10	12	18	15	15	19	18	20	21	20	22	9.6	11
11	11	17	15	40	19	18	20	20	20	22	9.5	11
12	9.8	17	14	22	19	18	20	21	20	22	9.7	11
13	9.8	17	14	18	21	17	20	22	20	22	9.7	11
14	9.7	17	14	17	24	18	20	22	19	21	9.7	11
15	9.7	16	14	17	18	19	21	22	19	21	9.6	11
16	9.7	16	14	16	18	18	21	22	19	21	9.8	11
17	9.6	16	15	16	17	18	20	21	19	21	9.7	11
18	9.3	15	15	15	17	18	17	22	21	21	9.7	10
19	9.3	15	15	15	17	17	17	23	23	20	9.7	10
20	9.3	15	14	15	17	17	16	22	24	20	9.5	10
21	9.1	15	14	15	17	17	16	21	24	20	9.7	10
22	9.2	15	14	15	17	17	16	21	23	20	11	10
23	9.5	14	14	15	17	17	18	18	22	20	10	10
24	9.3	14	14	14	17	17	19	17	22	20	10	10
25	9.3	14	14	14	17	17	18	17	22	18	10	10
26	9.3	14	14	14	17	17	23	17	22	16	10	10
27	9.3	13	14	14	18	22	26	17	22	16	10	10
28	9.3	13	14	14	18	21	24	16	22	16	11	10
29	9.3	13	14	14	---	19	23	15	22	16	11	10
30	9.3	13	14	13	---	18	23	15	22	16	11	10
31	10	---	14	15	---	18	---	15	---	16	11	---
TOTAL	320.1	486	448	487	517	562	587	635	615	625	338.9	316
MEAN	10.3	16.2	14.5	15.7	18.5	18.1	19.6	20.5	20.5	20.2	10.9	10.5
MAX	12	19	15	40	24	22	26	26	24	22	15	12
MIN	9.1	13	14	13	17	17	16	15	14	16	9.3	10
AC-FT	635	964	889	966	1030	1110	1160	1260	1220	1240	672	627
†	9280	30710	13900	31970	31860	5190	3130	30490	27970	39610	47100	38210

CAL YR 1978 TOTAL 6385.5 MEAN 17.5 MAX 62 MIN 7.0 AC-FT 12670

WTR YR 1979 TOTAL 5937.0 MEAN 16.3 MAX 40 MIN 9.1 AC-FT 11780

† Diversion, in acre-feet, from Hell Hole Reservoir to Middle Fork powerplant, furnished by Placer County Water Agency.

11429300 ROBBS PEAK POWERPLANT NEAR KYBURZ, CA

LOCATION.--Lat 38°53'50", long 120°22'38", in SE¼SW¼ sec.11, T.12 N., R.14 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, in powerhouse on shore of Union Valley Reservoir, 9.5 mi (15.3 km) northwest of Kyburz.

PERIOD OF RECORD.--October 1962 to current year. Prior to October 1965, published as Robbs Peak tunnel near Riverton.

GAGE.--Discharge computed from powerplant output. Altitude of gage is 4,880 ft (1,487 m), from topographic map. Prior to October 1965, water-stage recorder and concrete control in abandoned section of canal 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Tunnel diverts at South Fork Rubicon River diversion dam in NE¼ sec.27, T.13 N., R.14 E., and discharges into Union Valley Reservoir (station 11441001). Water is imported from Rubicon River basin via Rubicon-Rockbound tunnel and Buck-Loon tunnel to Loon Lake, then via Loon Lake powerplant or Gerle Creek to Robbs Peak tunnel and powerplant. The water is later used in the South Fork American River basin for power development. See schematic diagrams of Middle Fork American and Rubicon River basins and South Fork American River basin.

COOPERATION.--Records furnished by Sacramento Municipal Utility District, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--17 years, 230 ft³/s (6.514 m³/s) 166,600 acre-ft/yr (205 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,440 ft³/s (40.8 m³/s) Dec. 22-24, 1964; no flow many days each year.

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	18	0	197	0	67	254	160	479	362	6.0	0	209
2	309	0	207	328	1.0	221	323	487	309	363	0	0
3	118	0	0	366	61	203	375	542	210	338	0	0
4	119	0	194	315	0	65	542	613	254	0	0	217
5	121	0	218	300	67	236	571	637	224	285	0	0
6	143	0	207	293	0	297	666	619	249	348	226	218
7	126	0	400	3.0	45	371	519	351	505	370	208	408
8	0	0	505	298	65	413	327	318	528	0	213	286
9	117	0	359	275	0	405	557	262	513	407	255	22
10	112	0	28	281	68	440	479	304	153	303	252	0
11	141	0	208	573	15	322	434	383	332	345	230	94
12	447	0	10	625	40	405	546	464	446	261	0	232
13	304	0	170	365	95	390	573	522	27	354	207	350
14	0	214	153	146	305	407	690	557	280	250	190	16
15	0	709	175	334	216	416	459	550	524	0	221	79
16	170	76	133	382	372	363	509	531	550	222	188	0
17	164	0	42	368	384	323	508	511	450	199	295	64
18	323	0	117	362	107	168	432	539	397	390	332	22
19	163	0	118	324	64	266	496	521	128	318	247	0
20	174	43	141	246	262	269	276	497	69	0	226	0
21	65	0	151	51	327	280	255	503	113	0	197	0
22	0	0	151	318	352	311	401	578	23	0	198	0
23	0	0	187	309	322	293	350	564	0	160	224	0
24	0	0	0	328	280	299	233	468	0	102	206	0
25	0	0	0	328	100	189	288	453	267	0	262	0
26	3.0	57	149	336	317	347	517	489	370	0	0	0
27	0	0	170	325	320	382	928	460	231	0	197	0
28	0	0	161	72	328	313	642	410	219	0	221	0
29	0	0	166	281	---	320	507	367	158	0	230	0
30	0	33	0	347	---	279	505	335	166	144	223	0
31	0	---	41	335	---	279	---	336	---	62	225	---
TOTAL	3137.0	1132	4758	9214.0	4580.0	9526	14068	14650	8057	5227.0	5473	2217
MEAN	101	37.7	153	297	164	307	469	473	269	169	177	73.9
MAX	447	709	505	625	384	440	928	637	550	407	332	408
MIN	0	0	0	0	0	65	160	262	0	0	0	0
AC-FT	6220	2250	9440	18280	9080	18890	27900	29060	15980	10370	10860	4400
CAL YR 1978 TOTAL	102838.00			MEAN 282	MAX 941	MIN 0	AC-FT 204000					
WTR YR 1979 TOTAL	82039.00			MEAN 225	MAX 928	MIN 0	AC-FT 162700					

SACRAMENTO RIVER BASIN

11429350 LOON LAKE NEAR MEEKS BAY, CA

LOCATION.--Lat 38°58'59", long 120°19'22", in SE¼SW¼ sec.8, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, in powerhouse intake structure, 1.6 mi (2.6 km) southwest of right bank end of Loon Lake Dam on Gerle Creek, and 10 mi (16 km) southwest of town of Meeks Bay.

DRAINAGE AREA.--7.96 mi² (20.62 km²).

PERIOD OF RECORD.--December 1963 to current year.

REVISED RECORDS.--WDR CA-76-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District). Prior to Sept. 23, 1975, at site 1.6 mi (2.6 km) northeast on right bank end of Loon Lake Dam at same datum.

REMARKS.--Reservoir is formed by an earthfill dam completed Dec. 27, 1963. Storage began Dec. 5, 1963. Prior to September 1962, reservoir was formed by granite block dam built in 1884, capacity, 8,000 acre-ft (9.86 hm³). Usable capacity, 73,900 acre-ft (91.1 hm³) revised, between elevations 6,325 ft (1,927.9 m), invert of fishwater release valve and 6,410 ft (1,953.8 m) crest of spillway. Dead storage, 2,300 acre-ft (2.84 hm³), revised. Lake receives water from Rubicon River via Rubicon-Rockbound tunnel to Buck Island Lake and from Buck Island Lake to Loon Lake via Buck-Loon tunnel (stations 11427940, 11428300). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Middle Fork American and Rubicon River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 77,700 acre-ft (95.8 hm³) June 6, 1969, elevation, 6,411.1 ft (1,954.10 m); minimum since reservoir first filled, 3,690 acre-ft (4.55 hm³) Nov. 3, 1970, elevation, 6,330.3 ft (1,929.48 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 75,600 acre-ft (93.2 hm³) June 25, elevation, 6,409.6 ft (1,953.65 m); minimum, 20,000 acre-ft (24.7 hm³) Apr. 12, 13, elevation, 6,360.5 ft (1,938.68 m).

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

6,330	3,600
6,340	7,200
6,350	12,500
6,360	19,600
6,370	28,500
6,390	50,000
6,412	79,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58300	50600	47700	38900	31000	27700	22100	30800	70000	75100	66500	54300
2	57600	50600	47400	38200	31000	27300	21800	31800	70600	74800	66500	54200
3	57300	50500	47400	37400	31000	26900	21400	32900	71600	74400	66500	54200
4	57100	50500	47000	36800	31100	26900	20900	34600	72400	74400	66300	53800
5	56700	50500	46600	36200	31100	26500	20700	36600	73300	74000	66300	53700
6	56400	50400	46300	35500	31100	26200	20700	38100	74100	73400	65800	53200
7	56200	50400	45300	35500	31100	26000	20500	39100	74400	72800	65400	52300
8	56000	50400	44100	35100	31100	25800	20800	39700	74200	72800	64900	51800
9	55800	50400	43500	34500	31100	25600	20700	40000	74000	72100	64500	51800
10	55400	50400	43500	33900	31100	25500	20600	40400	74200	71600	64000	51600
11	55000	50400	43000	36100	31100	25700	20400	40800	74100	71000	63500	51100
12	54200	50400	43000	37900	31200	25800	20000	41500	74200	70600	63500	50400
13	53500	50400	42700	38300	31400	25700	20000	42500	75100	69900	63000	50000
14	53500	49800	42400	38800	31800	25700	20200	43800	75500	69600	62600	50000
15	53400	48200	42100	38700	32000	25600	21000	45600	75100	69600	62100	50000
16	53000	48100	41700	38300	31800	25500	22000	47500	74700	69200	61700	50000
17	52600	48100	41700	37900	31300	25200	22300	49300	74200	68800	61000	49800
18	51900	48100	41800	37200	31300	25200	22400	51400	74000	67900	60400	49600
19	51500	48100	41600	36700	31400	25100	22000	53800	74000	67200	59900	49600
20	51000	48000	41200	36400	31300	24700	22100	55400	74100	67200	59400	49600
21	51000	48000	41000	36400	30900	24400	22500	57200	74400	67200	59000	49500
22	50900	48000	40700	35800	30400	23900	22600	58900	74700	67200	58500	49500
23	50900	48000	40300	35300	29900	23500	23000	60400	75100	67000	58000	49400
24	50900	48000	40300	34800	29600	23200	23300	61500	75500	66900	57600	49400
25	50800	48000	40300	34100	29600	23200	23600	62800	75600	66900	57100	49400
26	50800	48000	40100	33500	29100	23100	24400	64400	75400	66900	57100	49300
27	50800	48000	39700	32900	28400	23000	26000	66000	75400	66900	56600	49300
28	50600	48000	39400	32900	27900	23000	27500	67400	75200	66700	56000	49300
29	50600	48000	39000	32300	---	22600	28600	68400	75200	66700	55700	49300
30	50600	47800	39000	31800	---	22400	29800	69100	75100	66700	55200	49200
31	50600	---	38900	31200	---	22100	---	69600	---	66600	54700	---
MAX	58300	50600	47700	38900	32000	27700	29800	69600	75600	75100	66500	54300
MIN	50600	47800	38900	31200	27900	22100	20000	30800	70000	66600	54700	49200
†	6390.5	6388.2	6380.3	6372.8	6369.4	6363.0	6371.4	6405.3	6409.2	6403.0	6393.7	6389.3
‡	-7700	-2800	-8900	-7700	-3300	-5800	+7700	+39800	+5500	-8500	-11900	-5500

CAL YR 1978 † +13300
WTR YR 1979 † -9100

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

11429500 GERLE CREEK BELOW LOON LAKE DAM, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°00'20", long 120°18'52", in NE¼NE¼ sec.5, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.3 mi (0.5 km) downstream from Loon Lake Dam, and 11 mi (18 km) southwest of Meeks Bay.

DRAINAGE AREA.--8.01 mi² (20.7 km²).

PERIOD OF RECORD.--July 1910 to April 1914 (fragmentary), August 1962 to current year. Prior to August 1962, published as "near Rubicon Springs."

GAGE.--Water-stage recorder and V-notch concrete weir. Altitude of gage is 6,250 ft (1,905 m), from topographic map. Prior to August 1962, nonrecording gage at site 1,400 ft (427 m) upstream at different datum.

REMARKS.--Records excellent. Beginning in 1884, flow regulated by Loon Lake (station 11429350). Original dam was dismantled during September and October 1962 to permit construction of a new earthfill dam which was completed Dec. 27, 1963. Storage began Dec. 5, 1963. Loon Lake receives water from Rubicon River via Rubicon-Rockbound tunnel to Buck Island Lake and from Buck Island Lake to Loon Lake via Buck-Loon tunnel (stations 11427940, 11428300). Diversion to Loon Lake powerplant starting August 1971, bypasses station and returns to Gerle Creek at Gerle Creek Dam. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--10 years (water years, 1911, 1963-71, prior to diversion to Loon Lake powerplant), 131 ft³/s (3.710 m³/s), 94,910 acre-ft/yr (117 hm³/yr); 8 years (water years 1972-79), 8.12 ft³/s (0.230 m³/s), 5,880 acre-ft/yr (7.25 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,240 ft³/s (91.8 m³/s), unregulated, Feb. 1, 1963, gage height, 12.65 ft (3.856 m), from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurement of maximum flow; no flow Oct. 15, 1913. Maximum discharge since construction of Loon Lake Dam in 1963, 1,050 ft³/s (29.7 m³/s) June 5, 1969, gage height, 9.03 ft (2.752 m); minimum daily, 3.6 ft³/s (0.10 m³/s) Sept. 27, 28, Nov. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft³/s (0.48 m³/s) Jan. 11, gage height, 2.21 ft (0.674 m); minimum daily, 7.5 ft³/s (0.21 m³/s) Aug. 31 to Sept. 3.

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	8.4	8.2	8.3	8.2	8.1	8.4	8.2	10	7.6	8.2	8.0	7.5
2	8.4	8.2	8.2	8.2	8.2	8.4	8.2	10	7.7	8.2	8.0	7.5
3	8.4	8.2	8.2	8.2	8.2	8.4	8.3	10	7.7	8.2	8.0	7.5
4	8.4	8.2	8.2	8.2	8.2	8.4	8.5	10	8.0	8.0	8.0	7.8
5	8.4	8.2	8.2	8.2	8.2	8.5	8.7	10	8.4	8.2	7.9	8.1
6	8.4	8.2	8.0	8.2	8.2	8.8	8.7	9.3	8.4	8.2	7.9	8.0
7	8.4	8.2	8.1	8.2	8.2	8.7	8.4	8.9	8.4	8.0	8.0	8.0
8	8.4	8.2	8.4	8.2	8.2	8.6	8.8	8.7	8.4	8.0	8.0	8.0
9	8.4	8.2	8.4	8.2	8.2	8.6	8.8	8.5	8.4	8.0	8.2	8.0
10	8.4	8.2	8.4	8.6	8.2	8.6	8.6	8.8	8.4	8.0	8.4	8.1
11	8.4	8.2	8.4	13	8.2	8.5	8.6	9.2	8.4	8.0	8.4	8.2
12	8.4	8.2	8.4	8.7	8.2	8.5	8.8	9.5	8.4	8.0	8.4	8.2
13	8.4	8.2	8.3	8.4	8.6	8.6	9.1	10	8.4	8.0	8.4	8.2
14	8.4	8.2	8.2	8.4	9.2	8.6	9.2	9.9	8.4	8.0	8.3	8.2
15	8.4	8.2	8.2	8.4	8.5	8.6	9.4	9.8	8.4	8.0	8.2	8.2
16	8.4	8.2	8.2	8.4	8.5	8.4	9.4	9.7	8.4	8.0	8.2	8.2
17	8.4	8.2	8.3	8.4	8.4	8.4	9.0	9.9	8.4	8.0	8.2	8.2
18	8.3	8.2	8.3	8.4	8.4	8.4	8.7	10	8.4	8.0	8.2	8.4
19	8.2	8.2	8.2	8.4	8.4	8.4	8.7	9.9	8.4	8.0	8.2	8.4
20	8.2	8.2	8.2	8.3	8.4	8.3	8.8	9.7	8.2	8.0	8.2	8.4
21	8.2	8.2	8.2	8.2	8.4	8.2	8.9	9.3	8.2	8.2	8.2	8.4
22	8.2	8.2	8.2	8.2	8.4	8.2	8.9	8.7	8.2	8.0	8.2	8.4
23	8.2	8.2	8.2	8.2	8.4	8.2	8.7	8.5	8.2	8.0	8.2	8.4
24	8.2	8.2	8.2	8.2	8.4	8.2	8.8	8.4	8.2	8.0	8.2	8.4
25	8.2	8.2	8.2	8.2	8.4	8.3	8.9	8.5	8.2	8.0	8.2	8.4
26	8.2	8.2	8.2	8.2	8.4	8.2	10	8.6	8.2	8.0	8.2	8.4
27	8.2	8.2	8.2	8.2	8.4	8.3	11	8.9	8.2	8.0	8.1	8.4
28	8.2	8.2	8.2	8.2	8.4	8.2	10	8.8	8.2	8.0	7.8	8.4
29	8.2	8.4	8.2	8.1	---	8.2	10	8.7	8.2	8.0	7.7	8.4
30	8.2	8.2	8.2	8.0	---	8.2	10	8.7	8.2	8.0	7.6	8.4
31	8.2	---	8.2	8.0	---	8.2	---	8.1	---	8.0	7.5	---
TOTAL	257.7	246.2	255.3	260.9	233.9	260.5	270.1	287.0	247.2	249.2	251.0	245.1
MEAN	8.31	8.21	8.24	8.42	8.35	8.40	9.00	9.26	8.24	8.04	8.10	8.17
MAX	8.4	8.4	8.4	13	9.2	8.8	11	10	8.4	8.2	8.4	8.4
MIN	8.2	8.2	8.0	8.0	8.1	8.2	8.2	8.1	7.6	8.0	7.5	7.5
AC-FT	511	488	506	517	464	517	536	569	490	494	498	486
†	6689	2176	9708	15032	5873	10582	7799	3320	13874	10709	11074	4701

CAL YR 1978 TOTAL 2793.8 MEAN 7.65 MAX 10 MIN 4.3 AC-FT 5540

WTR YR 1979 TOTAL 3064.1 MEAN 8.39 MAX 13 MIN 7.5 AC-FT 6080

† Diversion, in acre-feet, to Loon Lake powerplant, furnished by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

11430000 SOUTH FORK RUBICON RIVER BELOW GERLE CREEK, NEAR GEORGETOWN, CA

LOCATION.--Lat 38°57'17", long 120°24'02", in SW¼SW¼ sec.22, T.13 N., R.14 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank 600 ft (183 m) downstream from Gerle Creek, and 18 mi (29 km) east of Georgetown.

DRAINAGE AREA. --47.6 mi² (123 km²).

PERIOD OF RECORD.--February 1910 to June 1914 (published as Little South Fork Rubicon River below Gerle Creek near Quintette), August 1961 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,970 ft (1,515 m), from topographic map. Feb. 1, 1910, to June 21, 1914, nonrecording gage at site about 700 ft (213 m) downstream at different datum.

REMARKS.--Records good. Beginning in 1884, flow regulated by Loon Lake (station 11429350). Original dam was dismantled during September and October 1962 to permit construction of a new earthfill dam which was completed Dec. 27, 1963. Loon Lake receives water from Rubicon River via Rubicon-Rockbound tunnel to Buck Island Lake and from Buck Island Lake to Loon Lake via Buck-Loon tunnel (stations 11427940, 11428300). Prior to Dec. 3, 1961, water was diverted out of the basin in Georgetown Divide ditch. Robbs Peak tunnel 1.2 mi (1.9 km) upstream (station 11429800) began diversion of up to 1,320 ft³/s (37.4 m³/s) to Silver Creek basin October 1962. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE (unadjusted).--17 years (water years 1962-79), 18.7 ft³/s (0.530 m³/s), 13,550 acre-ft/yr (16.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Jan. 31, 1963, gage height, 12.32 ft (3.755 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurement of maximum flow; minimum, 0.8 ft³/s (0.023 m³/s) Sept. 21, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Jan. 11, gage height, 6.28 ft (1.914 m); minimum daily, 4.4 ft³/s (0.12 m³/s) Nov. 8.

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	10	8.3	8.3	5.8	4.8	6.4	9.0	12	11	10	10	10
2	10	5.9	5.5	5.0	4.7	6.0	8.8	12	11	10	9.9	10
3	10	5.7	5.2	4.8	4.7	6.1	8.4	11	11	10	9.8	10
4	10	5.7	5.3	4.6	4.7	6.2	9.1	11	11	10	9.8	10
5	10	5.7	5.5	4.6	4.8	6.6	9.9	13	11	10	9.8	10
6	10	5.7	4.9	4.5	4.9	7.3	11	13	12	10	10	10
7	10	5.2	4.9	4.6	4.9	8.2	10	14	11	10	10	10
8	10	4.4	4.9	5.7	4.9	8.6	9.8	13	11	10	10	10
9	10	4.9	16	5.3	4.9	8.8	10	13	11	10	10	9.5
10	10	5.1	4.8	5.8	5.0	9.3	9.4	13	11	10	10	9.5
11	10	5.4	4.7	214	5.0	9.7	9.3	12	11	10	10	9.9
12	10	5.3	4.6	35	5.0	9.6	9.6	12	11	10	10	10
13	10	5.4	4.6	7.4	11	9.5	10	11	10	9.7	10	10
14	10	5.5	4.7	6.5	16	9.3	10	11	11	9.1	10	10
15	10	5.4	5.2	5.9	8.6	9.8	10	10	11	8.8	10	11
16	10	6.2	5.2	5.7	7.7	9.3	11	10	11	8.6	10	10
17	10	5.4	5.2	5.6	7.0	8.2	10	10	11	9.1	11	10
18	10	5.3	5.3	5.4	6.8	7.8	8.8	10	10	9.8	11	9.7
19	10	5.3	5.4	5.3	6.6	7.4	8.5	9.7	9.9	9.8	11	9.7
20	10	6.0	5.5	5.2	6.5	7.3	8.4	9.5	10	9.8	10	9.6
21	9.9	6.0	5.7	5.1	6.6	7.3	8.5	9.5	10	10	10	9.6
22	9.7	5.5	5.5	5.0	6.6	7.5	8.7	10	9.8	10	10	9.8
23	9.6	5.4	7.1	5.0	7.2	7.6	10	10	9.8	10	10	9.8
24	9.6	5.3	5.2	5.0	6.1	8.1	10	9.8	10	10	10	9.8
25	9.6	5.3	5.0	4.9	6.2	8.5	9.4	9.6	10	10	10	9.8
26	9.6	5.4	5.0	4.9	6.2	9.3	14	11	10	10	10	9.8
27	9.6	5.3	5.2	4.9	6.1	13	15	11	10	10	10	9.8
28	9.6	5.2	5.0	4.8	6.3	12	12	10	10	10	11	9.8
29	9.6	5.3	4.9	5.2	---	10	11	11	10	10	11	9.8
30	9.6	5.4	4.9	5.1	---	9.4	11	11	10	10	11	9.8
31	9.6	---	10	5.0	---	9.1	---	11	---	10	10	---
TOTAL	306.0	165.9	179.2	401.6	179.8	263.2	300.6	344.1	316.5	304.7	315.3	296.7
MEAN	9.87	5.53	5.78	13.0	6.42	8.49	10.0	11.1	10.6	9.83	10.2	9.89
MAX	10	8.3	16	214	16	13	15	14	12	10	11	11
MIN	9.6	4.4	4.6	4.5	4.7	6.0	8.4	9.5	9.8	8.6	9.8	9.5
AC-FT	607	329	355	797	357	522	596	683	628	604	625	589
CL YR 1978	TOTAL	3314.4	MEAN	9.08	MAX	87	MIN	4.0	AC-FT	6570		
WTR YR 1979	TOTAL	3373.6	MEAN	9.24	MAX	214	MIN	4.4	AC-FT	6690		

11431800 PILOT CREEK ABOVE STUMPY MEADOWS LAKE, CA

LOCATION.--Lat 38°53'41", long 120°34'02", in NE¼NW¼ sec.18, T.12 N., R.13 E., El Dorado County, Hydrologic Unit 18020128, on right bank 2.1 mi (3.4 km) upstream from Stumpy Meadows Dam, and 12.5 mi (20.1 km) east of Georgetown.

DRAINAGE AREA.--11.7 mi² (30.3 km²).

PERIOD OF RECORD.--October 1960 to current year. Prior to October 1971, published as "above Stumpy Meadows Reservoir."

GAGE.--Water-stage recorder. Altitude of gage is 4,280 ft (1,305 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. No regulation or diversion above station. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--19 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, 2,380 ft³/s (67.4 m³/s) Dec. 23, 1964, gage height, 5.92 ft (1.804 m) in gage well, 6.6 ft (2.01 m) from floodmarks, from rating curve extended above 170 ft³/s (4.81 m³/s) on basis of slope-area measurement of maximum flow; maximum gage height, 8.05 ft (2.454 m) Jan. 31, 1963; minimum daily discharge, 0.14 ft³/s (0.004 m³/s) Aug. 16, 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)
Jan. 11	1315	*191 5.41	2.75 0.838
Feb. 14	0400	162 4.59	2.63 0.802

Minimum daily, 3.2 ft³/s (0.091 m³/s) on several days in September.

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	5.0	5.2	12	5.2	7.0	17	50	42	19	8.1	5.0	4.0
2	5.0	5.8	8.4	5.2	6.9	14	47	39	18	8.1	5.0	4.0
3	5.0	5.4	6.9	5.3	6.8	14	44	37	17	8.1	4.8	4.0
4	5.0	5.0	6.4	5.4	6.7	15	41	40	17	8.1	4.8	3.8
5	5.0	4.7	6.2	5.4	6.7	15	44	50	16	8.1	4.8	3.8
6	4.9	4.5	6.0	5.2	6.7	16	48	60	16	7.8	4.8	3.8
7	4.9	4.3	5.4	5.7	6.7	19	47	72	15	7.5	4.8	3.6
8	4.8	4.2	5.2	11	6.4	24	46	70	14	7.5	4.6	3.6
9	4.8	4.1	5.4	11	6.7	28	45	68	14	7.2	4.6	3.6
10	4.7	4.3	5.4	9.7	6.7	32	43	66	14	7.2	4.4	3.6
11	4.7	5.1	5.4	109	6.7	38	41	64	13	7.2	4.4	3.4
12	4.7	5.1	5.4	50	6.7	42	38	62	13	6.9	4.4	3.4
13	4.6	5.6	5.4	26	28	43	36	60	12	6.9	4.4	3.4
14	4.6	5.1	5.2	20	96	44	42	58	12	6.7	4.6	3.2
15	4.5	6.7	5.2	16	37	59	45	56	12	6.4	4.6	3.2
16	4.5	5.3	6.9	13	28	60	48	54	12	6.2	4.2	3.2
17	4.4	5.4	5.9	12	21	54	50	51	12	6.2	4.2	3.2
18	4.4	5.2	6.7	11	19	47	49	49	12	5.9	4.0	3.2
19	4.3	5.3	6.9	11	18	42	45	47	12	5.9	4.0	3.2
20	4.3	8.1	6.7	9.1	17	38	40	44	11	5.9	4.2	3.2
21	4.2	11	6.7	9.0	18	36	36	41	11	8.7	4.2	3.2
22	4.2	7.8	6.4	8.8	16	35	37	38	11	7.8	4.2	3.2
23	4.1	6.7	5.9	9.0	19	33	41	35	10	6.9	4.2	3.2
24	4.1	6.3	5.7	8.8	16	33	44	32	9.7	6.4	4.0	3.2
25	4.0	6.2	5.4	8.7	14	35	42	30	9.4	6.2	3.8	3.4
26	4.0	5.9	5.4	7.8	14	37	47	28	9.3	5.9	3.8	3.6
27	4.0	5.6	5.4	7.6	13	61	54	26	8.9	5.7	3.8	3.4
28	4.2	5.5	5.4	7.5	14	69	50	25	8.6	5.7	3.8	3.4
29	4.5	5.7	5.4	7.4	---	63	47	23	8.5	5.7	4.6	3.2
30	4.8	6.2	5.2	7.3	---	57	44	22	8.4	5.2	4.2	3.2
31	5.0	---	5.2	7.2	---	54	---	20	---	5.2	4.2	---
TOTAL	141.2	171.3	189.1	435.3	468.7	1174	1331	1409	375.8	211.3	135.4	103.4
MEAN	4.55	5.71	6.10	14.0	16.7	37.9	44.4	45.5	12.5	6.02	4.37	3.45
MAX	5.0	11	12	109	96	69	54	72	19	8.7	5.0	4.0
MIN	4.0	4.1	5.2	5.2	6.4	14	36	20	8.4	5.2	3.8	3.2
AC-FT	280	340	375	863	930	2330	2640	2790	745	419	269	205
CAL YR 1978	TOTAL	10427.3	MEAN 28.6	MAX 288	MIN 4.0	AC-FT 20680						
WTR YR 1979	TOTAL	6145.5	MEAN 16.8	MAX 109	MIN 3.2	AC-FT 12190						

11433040 PILOT CREEK BELOW MUTTON CANYON, NEAR GEORGETOWN, CA

LOCATION.--Lat 38°55'25", long 120°38'27", in NE¼NW¼ sec.4, T.12 N., R.12 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank 450 ft (137 m) downstream from Mutton Canyon, 500 ft (150 m) downstream from Georgetown Divide diversion dam, 2.5 mi (4.0 km) downstream from Stumpy Meadows Dam, and 10 mi (16 km) east of Georgetown.

DRAINAGE AREA.--21.1 mi² (54.6 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 3,760 ft (1,146 m), from topographic map.

REMARKS.--Records good. Flow regulated by Stumpy Meadows Lake, usable capacity, 20,000 acre-ft (24.7 hm³) completed in November 1961. Georgetown Irrigation District ditch, capacity, about 20 ft³/s (0.57 m³/s) diverts water out of Pilot Creek, 500 ft (150 m) above station. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--18 years, 26.5 ft³/s (0.750 m³/s), 19,200 acre-ft/yr (23.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s (154 m³/s) Dec. 22, 1964, gage height, 9.60 ft (2.926 m), from rating curve extended above 300 ft³/s (8.50 m³/s) on basis of slope-area measurement at gage height 5.00 ft (1.524 m); maximum gage height, 10.06 ft (3.066 m) Dec. 23, 1964; minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Sept. 24, Nov. 1-5, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft³/s (4.62 m³/s) Mar. 15, gage height, 4.38 ft (1.335 m); minimum daily, 0.78 ft³/s (0.022 m³/s) on several days during September.

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	1.0	1.0	4.1	1.2	1.5	4.3	84	74	5.4	4.4	7.3	.96
2	1.0	1.1	2.0	1.2	1.5	3.1	79	68	4.1	4.4	6.9	.96
3	1.0	1.1	1.5	1.2	1.4	3.2	76	61	2.6	4.4	6.5	.96
4	1.0	1.0	1.4	1.2	1.4	3.1	74	58	2.2	4.4	6.2	.89
5	1.0	1.0	1.4	1.2	1.4	3.0	74	70	2.2	4.3	6.1	.89
6	1.0	.98	1.4	1.2	1.4	3.2	86	82	2.1	4.3	6.1	.89
7	1.0	.96	1.3	1.4	1.4	3.7	88	122	2.6	4.3	6.1	.89
8	.99	.98	1.2	3.8	1.4	4.2	84	100	3.2	4.1	6.1	.89
9	.99	.96	1.2	3.4	1.4	4.7	88	79	3.0	3.9	6.0	.89
10	.99	1.0	1.2	2.6	1.5	5.3	86	72	2.5	3.9	5.9	.89
11	.99	1.1	1.2	45	1.5	6.1	88	68	2.3	3.9	5.9	.89
12	.97	1.1	1.2	23	1.5	8.5	89	78	2.1	3.8	5.8	.83
13	.94	1.2	1.2	14	6.4	31	84	70	2.0	5.6	5.9	.83
14	.93	1.2	1.2	3.2	15	45	79	62	2.0	7.7	5.9	.83
15	.92	1.1	1.2	3.0	3.8	120	79	58	1.9	8.8	5.8	.78
16	.93	1.2	1.2	2.7	3.0	130	88	51	1.9	8.5	5.7	.78
17	.96	1.2	1.5	2.4	2.5	102	96	47	2.2	8.2	5.6	.78
18	.94	1.2	1.5	2.2	2.5	87	84	44	2.0	8.2	5.6	.78
19	.93	1.2	1.3	2.0	2.9	77	72	41	1.8	8.1	5.6	.78
20	.94	2.8	1.3	1.9	3.0	68	66	37	1.8	8.2	5.7	.78
21	.96	3.6	1.3	1.8	3.3	59	62	34	1.7	9.6	5.7	.78
22	.94	2.1	1.3	1.7	2.7	56	61	30	1.7	8.8	4.2	.78
23	.90	1.6	1.2	1.7	2.5	53	86	24	1.7	8.4	2.2	.78
24	.90	1.4	1.2	1.7	2.4	51	79	18	1.6	8.1	1.0	.78
25	.91	1.3	1.2	1.6	2.6	52	70	16	1.6	7.9	1.0	.83
26	.91	1.3	1.2	1.6	2.9	51	84	15	1.9	7.8	.96	.83
27	.85	1.2	1.2	1.5	2.8	132	106	12	2.4	7.7	.96	.83
28	.85	1.2	1.2	1.5	4.0	130	100	11	2.4	7.7	.96	.83
29	.85	1.2	1.2	1.5	---	110	86	8.5	3.2	7.6	1.0	.78
30	.89	1.3	1.2	1.5	---	97	76	6.2	4.4	7.4	1.0	.78
31	.96	---	1.2	1.5	---	89	---	4.3	---	7.3	.96	---
TOTAL	29.34	39.58	42.9	135.4	79.6	1592.4	2454	1521.0	72.5	201.7	140.64	25.17
MEAN	.95	1.32	1.38	4.37	2.84	51.4	81.8	49.1	2.42	6.51	4.54	.84
MAX	1.0	3.6	4.1	45	15	132	106	122	5.4	9.6	7.3	.96
MIN	.85	.96	1.2	1.2	1.4	3.0	61	4.3	1.6	3.8	.96	.78
AC-FT	58	79	85	269	158	3160	4870	3020	144	400	279	50
CAL YR 1978 TOTAL	9097.62			MEAN 24.9	MAX 240	MIN .85	AC-FT 18050					
WTR YR 1979 TOTAL	6334.23			MEAN 17.4	MAX 132	MIN .78	AC-FT 12560					

11433060 SOUTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°03'04", long 120°28'14", in SW¼NE¼ sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at diversion dam, 3.3 mi (5.3 km) upstream from confluence with North and South Forks Long Canyon Creek, and 17.2 mi (27.7 km) east of Volcanoville.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,630 ft (1,411 m), from topographic map.

REMARKS.--Tunnel completed in September 1965; diversion began in February 1966. Flow is diverted from South Fork Long Canyon Creek to a tunnel from Hell Hole Reservoir to Middle Fork powerplant on the Middle Fork American River. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--14 years, 9.56 ft³/s (0.271 m³/s), 6,930 acre-ft/yr (8.54 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 251 ft³/s (7.11 m³/s) Nov. 12, 1973; no flow for part of each year.

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			.22	0	0	4.5	24	58	18			
2			0	0	0	3.8	23	55	16			
3			0	0	0	4.0	24	58	15			
4			0	0	0	4.5	26	61	14			
5			0	0	0	7.4	32	71	13			
6			0	0	0	17	37	72	11			
7			0	0	0	24	32	67	10			
8			0	0	0	28	32	55	8.7			
9			0	0	0	32	33	51	7.7			
10			0	.65	0	34	30	51	6.5			
11			0	55	0	36	31	55	5.9			
12			0	21	0	36	32	56	5.3			
13			0	9.0	13	36	37	60	4.8			
14			0	5.6	34	33	38	56	4.3			
15			0	4.3	15	34	40	58	3.8			
16			0	3.0	11	28	43	56	3.5			
17			0	2.4	8.7	24	39	56	3.8			
18			0	1.8	8.0	22	32	57	3.5			
19			0	1.2	6.8	19	30	56	3.0			
20			0	1.0	5.9	18	31	55	2.4			
21			0	.84	5.3	18	32	52	2.0			
22			0	.65	4.3	18	32	50	1.6			
23			0	.65	4.3	18	34	43	1.4			
24			0	.84	4.5	19	35	39	1.2			
25			0	.65	4.5	22	34	37	1.0			
26			0	.11	4.8	24	68	35	.65			
27			0	.10	4.0	35	79	33	.29			
28			0	.08	4.3	31	64	30	.16			
29			0	.03	---	26	59	26	0			
30			0	.01	---	24	60	23	0			
31		---	0	0	---	23	---	20	---			---
TOTAL	0	0	.22	108.91	138.4	703.2	1143	1552	168.50	0	0	0
MEAN	0	0	.007	3.51	4.94	22.7	38.1	50.1	5.62	0	0	0
MAX	0	0	.22	55	34	36	79	72	18	0	0	0
MIN	0	0	0	0	0	3.8	23	20	0	0	0	0
AC-FT	0	0	.4	216	275	1390	2270	3080	334	0	0	0
CAL YR 1978	TOTAL	7161.50	MEAN 19.6	MAX 111	MIN 0	AC-FT 14200						
WTR YR 1979	TOTAL	3814.23	MEAN 10.4	MAX 79	MIN 0	AC-FT 7570						

11433080 NORTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°02'57", long 120°28'56", in SW¼NW¼ sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank at diversion dam, 3.2 mi (5.1 km) upstream from confluence of North and South Forks Long Canyon Creek, and 16.9 mi (27.2 km) east of Volcanoville.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 4,700 ft (1,430 m), from topographic map.

REMARKS.--No regulation or diversion above station. Tunnel completed in September 1965 and diversions began in February 1966. Flow is diverted from North Fork Long Canyon Creek to a tunnel from Hell Hole Reservoir to Middle Fork powerplant on the Middle Fork American River. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--14 years, 3.62 ft³/s (0.103 m³/s), 2,620 acre-ft/yr (3.23 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 56 ft³/s (1.59 m³/s) Mar. 31, 1978; no flow for part of each year.

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		0	4.5	.32	1.5	3.8	12	32	4.7	.38		
2		0	1.5	.32	1.5	3.4	12	34	3.3	.68		
3		0	.89	.32	1.4	3.4	12	36	2.8	.68		
4		0	.68	.32	1.4	3.8	17	37	2.5	.68		
5		0	.89	.12	1.4	6.8	21	44	2.1	.11		
6		0	.45	.32	1.4	19	23	38	1.8	0		
7		0	.26	.45	1.5	24	19	32	1.6	0		
8		0	.21	.26	1.6	26	20	28	1.3	0		
9		0	.16	0	1.7	27	19	29	1.1	0		
10		0	.16	2.1	2.2	28	17	33	.96	0		
11		0	.16	24	2.2	31	18	34	.89	0		
12		0	.16	21	2.2	29	20	34	.76	0		
13		0	.12	9.0	16	46	24	32	.60	0		
14		0	.12	5.6	29	28	25	35	.45	0		
15		0	.16	4.1	13	28	26	34	.32	0		
16		0	.16	3.4	9.2	21	27	32	.16	0		
17		0	.16	3.0	7.1	18	23	32	.26	0		
18		0	.21	2.7	6.1	16	19	31	.12	0		
19		0	.21	2.2	5.4	14	18	29	.05	0		
20		.16	.21	2.2	5.0	9.8	18	27	.01	0		
21		.38	.21	2.2	4.3	7.4	18	26	0	0		
22		.21	.21	2.2	4.0	7.1	18	23	0	0		
23		.16	.21	2.2	4.1	6.9	17	19	0	0		
24		.16	.38	2.4	4.0	7.6	19	17	0	0		
25		.16	.76	2.2	4.1	8.0	19	15	0	0		
26		.16	.82	1.9	4.1	8.0	38	14	0	0		
27		.16	.82	1.7	3.8	8.0	45	12	0	0		
28		.16	.68	1.6	3.8	8.0	36	11	0	0		
29		.76	.52	1.5	---	11	33	9.0	0	0		
30		.96	.38	1.6	---	12	34	7.4	0	0		
31		---	.38	1.6	---	12	---	6.3	---	0		---
TOTAL	0	3.43	16.74	102.83	143.0	482.0	667	822.7	25.78	2.53	0	0
MEAN	0	.11	.54	3.32	5.11	15.5	22.2	26.5	.86	.082	0	0
MAX	0	.96	4.5	24	29	46	45	44	4.7	.68	0	0
MIN	0	0	.12	0	1.4	3.4	12	6.3	0	0	0	0
AC-FT	0	6.8	33	204	284	956	1320	1630	51	5.0	0	0

CAL YR 1978 TOTAL 3264.25 MEAN 8.94 MAX 56 MIN 0 AC-FT 6470
WTR YR 1979 TOTAL 2266.01 MEAN 6.21 MAX 46 MIN 0 AC-FT 4490

LOCATION.--Lat 39°01'16", long 120°30'53", in SE¼NW¼ sec.34, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 75 ft (23 m) downstream from North Fork Long Canyon, 6.5 mi (10.5 km) south of French Meadows, and 18 mi (29 km) east of Foresthill.

GAGE.--Water-stage recorder. Altitude of gage is 4,100 ft (1,250 m), from topographic map.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,690 ft³/s (133 m³/s) Dec. 23, 1964, gage height, 11.20 ft (3.414 m), from rating curve extended above 300 ft³/s (8.50 m³/s) on basis of slope-area measurements at gage heights 6.62 ft (2.018 m) and 10.27 ft (3.130 m); minimum daily, 0.08 ft³/s (0.002 m³/s) Sept. 27, 28, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 496 ft³/s (14.0 m³/s) Jan. 11, gage height, 6.33 ft (1.929 m); minimum daily, 0.61 ft³/s (0.017 m³/s) Sept. 15-17, 19-22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.2	8.8	2.8	9.2	20	48	41	17	8.4	2.5	1.1
2	1.4	1.4	4.6	2.7	8.8	19	46	38	18	8.1	2.4	1.1
3	1.3	1.2	3.4	2.7	8.2	20	44	36	17	8.0	2.3	1.1
4	1.2	1.1	3.2	2.7	8.2	21	44	35	17	7.7	2.2	1.1
5	1.2	1.1	3.3	2.7	8.2	25	45	40	17	7.4	2.1	.99
6	1.1	1.1	2.9	2.7	8.2	39	47	41	16	7.0	2.0	.89
7	1.2	1.1	2.8	2.9	8.2	49	44	58	16	6.8	2.0	.95
8	1.1	1.0	2.5	8.0	8.2	56	42	55	15	6.5	1.9	.92
9	1.0	1.0	2.3	7.4	8.6	58	42	54	15	6.2	1.8	.88
10	1.0	1.0	2.3	9.5	9.1	64	40	52	14	6.1	1.7	.82
11	1.1	1.3	2.3	180	9.4	68	41	49	14	5.6	1.6	.76
12	1.0	1.4	2.3	70	9.5	65	40	45	14	5.0	1.6	.72
13	1.0	1.8	2.3	30	29	64	39	42	13	4.7	1.5	.68
14	1.1	1.7	2.2	20	60	59	38	40	13	4.4	1.5	.65
15	1.1	1.7	2.2	15	31	72	37	37	13	4.5	1.5	.61
16	1.0	1.7	2.2	14	27	60	39	35	13	4.5	1.4	.61
17	1.1	1.7	2.7	13	23	52	39	33	13	4.2	1.4	.61
18	1.0	1.7	3.1	12	22	48	37	31	13	4.0	1.3	.64
19	1.0	1.8	2.8	11	21	44	34	30	13	3.9	1.2	.61
20	1.1	3.2	2.7	11	21	43	33	28	12	3.9	1.3	.61
21	1.1	4.2	2.6	11	20	45	32	27	12	6.0	1.4	.61
22	1.2	3.1	2.6	11	19	44	31	26	12	5.3	1.4	.61
23	.96	2.8	2.6	11	19	43	38	24	11	4.5	1.4	.73
24	1.0	2.5	2.5	11	18	44	38	23	11	3.9	1.3	.85
25	1.1	2.4	2.5	11	18	44	37	22	10	3.6	1.2	.75
26	1.1	2.3	2.6	11	19	46	49	21	9.9	3.4	1.2	.85
27	1.1	2.3	2.6	9.8	18	73	51	20	9.8	3.2	1.1	.78
28	1.1	2.2	2.7	9.2	20	77	46	19	9.3	3.0	1.1	.84
29	1.0	2.3	2.9	8.9	---	66	43	18	9.0	2.9	1.4	.82
30	1.0	2.5	6.4	8.9	---	55	41	18	8.7	2.8	1.3	.85
31	1.1	---	2.9	10	---	51	---	17	---	2.6	1.3	---
TOTAL	34.16	55.8	93.8	532.9	468.8	1534	1225	1055	395.7	158.1	49.3	24.04
MEAN	1.10	1.86	3.03	17.2	17.5	49.5	40.8	34.0	13.2	5.10	1.59	.80
MAX	1.4	4.2	8.8	180	60	77	51	58	18	8.4	2.5	1.1
MIN	.96	1.0	2.2	2.7	8.2	19	31	17	8.7	2.6	1.1	.61
AC-FT	68	111	186	1060	970	3040	2430	2090	785	314	98	48
CAL YR 1978	TOTAL	7854.66	MEAN	21.5	MAX	182	MIN	.96	AC-FT	15580		
WTR YR 1979	TOTAL	5646.60	MEAN	15.5	MAX	180	MIN	.61	AC-FT	11200		

11433200 RUBICON RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 38°59'33", long 120°43'14", in SE¼NW¼ sec.11, T.13 N., R.11 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.6 mi (1.0 km) upstream from Ralston powerhouse, 1.2 mi (1.9 km) upstream from confluence of Rubicon River and Middle Fork American River, and 5.6 mi (9.0 km) southeast of Foresthill.

DRAINAGE AREA.--315 mi² (816 km²).

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

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,200 ft (366 m), from topographic map. October 1958 to May 17, 1963, at site 2.0 mi (3.2 km) upstream, 150 ft (46 m) downstream from Ralston Bridge, and May 17, 1963, to Mar. 30, 1965, at site 2.1 mi (3.4 km) upstream, 100 ft (30 m) upstream from Ralston Bridge at datum 1,362.20 ft (415.199 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Hell Hole Reservoir (station 11428700), Loon Lake (station 11429350), and Stumpy Meadows Lake, capacity, 20,000 acre-ft (24.7 hm³). Water is imported from French Meadows Reservoir on Middle Fork American River through a tunnel to French Meadows powerplant on shore of Hell Hole Reservoir. Water is diverted from Hell Hole Reservoir through a tunnel to Middle Fork powerplant on Middle Fork American River. Robbs Peak tunnel and powerplant (station 11429800) divert water to South Fork American River basin. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (prior to construction of Hell Hole Dam).--7 years (water years 1959-65), 609 ft³/s (17.2 m³/s), 440,900 acre-ft/yr (544 hm³/yr); 14 years (water years 1966-79), 261 ft³/s (7.392 m³/s), 189,100 acre-ft/yr (233 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown, Dec. 23, 1964, gage height, 55.4 ft (16.89 m) from floodmarks, caused by overtopping of the partly constructed Hell Hole Dam; next highest peak discharge, 83,000 ft³/s (2,350 m³/s) Feb. 1, 1963, gage height, 35.0 ft (10.67 m) former site and datum; minimum daily, 10 ft³/s (0.28 m³/s) Sept. 20-27, 1962. Maximum discharge since construction of Hell Hole Dam in 1965, 15,100 ft³/s (428 m³/s) Jan. 21, 1970, gage height, 14.60 ft (4.450 m); minimum daily, 7.4 ft³/s (0.21 m³/s) Sept. 11, 12, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of December 1937, November 1950, and December 1955 had approximate discharges of 44,000 ft³/s (1,250 m³/s), 56,000 ft³/s (1,590 m³/s), and 73,000 ft³/s (2,070 m³/s), respectively, on basis of 1958-64 stage-discharge relation and U.S. Forest Service floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,360 ft³/s (66.8 m³/s) Jan. 11, gage height, 10.10 ft (3.078 m); minimum daily, 32 ft³/s (0.91 m³/s) Sept. 27-30.

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	46	40	78	50	99	447	522	544	178	89	65	42
2	46	43	93	51	99	342	492	524	171	89	60	42
3	46	46	66	52	97	318	464	502	165	86	63	40
4	46	45	57	52	96	314	447	494	159	86	62	39
5	46	44	54	52	96	323	458	533	156	86	60	39
6	46	42	54	52	96	382	503	628	153	83	60	38
7	46	42	52	52	96	469	492	811	152	81	60	37
8	44	42	50	87	96	492	468	800	147	80	58	37
9	44	42	50	147	96	492	471	705	142	80	55	37
10	44	39	57	98	96	492	461	640	138	78	53	37
11	44	39	54	1190	96	510	454	610	132	78	52	37
12	44	39	50	702	96	504	451	594	126	77	52	35
13	44	39	50	271	172	510	448	566	125	75	52	35
14	44	39	48	238	787	522	446	540	121	72	52	35
15	42	39	48	320	393	763	441	513	116	75	52	35
16	42	39	48	250	319	803	467	486	116	75	52	35
17	42	39	59	193	267	625	514	456	112	74	52	35
18	42	39	89	167	263	560	460	431	112	72	48	35
19	42	39	75	149	334	510	416	402	112	72	48	34
20	42	39	61	138	319	464	393	378	112	72	48	34
21	42	39	56	130	465	436	380	352	110	82	48	34
22	42	60	56	125	417	414	385	333	106	90	48	34
23	41	66	56	118	405	398	480	309	106	85	47	34
24	40	53	56	115	321	388	495	296	102	80	45	34
25	40	49	56	112	283	382	449	269	99	77	43	34
26	40	47	56	103	303	393	504	248	97	74	42	34
27	40	46	56	96	295	674	700	235	96	71	40	32
28	40	44	56	94	312	868	636	223	92	67	39	32
29	40	44	54	88	---	718	577	211	92	67	39	32
30	40	46	51	86	---	612	548	199	89	67	42	32
31	40	---	50	99	---	560	---	190	---	67	42	---
TOTAL	1327	1309	1796	5477	6814	15685	14422	14022	3734	2407	1579	1070
MEAN	42.8	43.6	57.9	177	243	506	481	452	124	77.6	50.9	35.7
MAX	46	66	93	1190	787	868	700	811	178	90	65	42
MIN	40	39	48	50	96	314	380	190	89	67	39	32
AC-FT	2630	2600	3560	10860	13520	31110	28610	27810	7410	4770	3130	2120
CAL YR 1978	TOTAL	105267	MEAN 288	MAX 2410	MIN 39	AC-FT 208800						
WTR YR 1979	TOTAL	69642	MEAN 191	MAX 1190	MIN 32	AC-FT 138100						

11433260 NORTH FORK OF MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'27", long 120°43'03", in NE¼NW¼ sec.35, T.14 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 1.0 mi (1.6 km) downstream from El Dorado Canyon, and 4.8 mi (7.7 km) east of Foresthill.

DRAINAGE AREA.--88.9 mi² (230.3 km²).

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (396 m), from topographic map.

REMARKS.--No storage or diversion above station. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--14 years, 240 ft³/s (6.797 m³/s), 173,900 acre-ft/yr (214 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Jan. 21, 1970, gage height, 12.80 ft (3.901 m) in gage well, 13.5 ft (4.11 m) from floodmarks; minimum daily, 7.1 ft³/s (0.20 m³/s) Sept. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,590 ft³/s (130 m³/s) Jan. 11, gage height, 9.04 ft (2.755 m); minimum daily, 20 ft³/s (0.57 m³/s) Nov. 10, Sept. 30.

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	24	23	95	32	60	378	440	671	192	49	30	34
2	24	24	68	32	65	300	415	600	180	48	30	32
3	24	24	38	33	55	274	399	625	171	48	30	30
4	24	23	32	33	54	271	400	659	163	47	30	28
5	24	22	31	33	54	304	457	779	154	45	30	28
6	23	21	30	33	55	435	596	863	148	44	30	27
7	23	21	26	34	55	669	519	963	139	44	30	26
8	23	21	25	66	55	776	491	862	131	43	30	26
9	23	21	27	135	55	788	507	800	126	42	30	25
10	23	20	28	91	57	801	468	711	120	41	30	25
11	23	21	27	2220	61	867	460	666	112	41	29	25
12	23	23	28	869	62	835	437	655	104	40	29	25
13	22	28	28	426	187	779	463	664	100	39	30	23
14	22	28	27	303	942	759	493	680	97	38	30	23
15	21	25	27	317	499	888	503	670	93	37	30	22
16	21	24	27	236	387	826	525	645	91	36	30	22
17	21	24	34	175	301	662	518	598	91	35	30	22
18	21	25	42	144	289	562	448	585	93	35	29	22
19	21	24	37	122	331	490	394	567	89	34	29	22
20	21	39	32	110	305	429	376	540	84	34	29	22
21	21	80	31	102	370	391	366	514	80	42	31	22
22	21	51	32	97	334	371	371	472	76	45	31	21
23	21	36	32	92	319	349	430	412	73	39	31	21
24	21	30	32	89	256	355	452	368	69	37	30	21
25	21	28	33	90	234	375	443	342	63	35	30	22
26	21	27	33	78	265	405	581	337	57	34	29	22
27	21	26	33	75	263	710	932	318	55	33	29	22
28	21	26	33	67	286	779	810	285	53	32	30	22
29	21	25	33	55	---	627	733	251	52	32	32	21
30	21	28	32	66	---	529	689	224	50	32	35	20
31	21	---	31	71	---	474	---	206	---	31	35	---
TOTAL	682	838	1064	6326	6256	17458	15116	17532	3106	1212	938	723
MEAN	22.0	27.9	34.3	204	223	563	504	566	104	39.1	30.3	24.1
MAX	24	80	95	2220	942	888	932	963	192	49	35	34
MIN	21	20	25	32	54	271	366	206	50	31	29	20
AC-FT	1350	1660	2110	12550	12410	34630	29980	34770	6160	2400	1860	1430
CAL YR 1978 TOTAL	107115		MEAN 293	MAX 2770	MIN 20	AC-FT 212500						
WTR YR 1979 TOTAL	71251		MEAN 195	MAX 2220	MIN 20	AC-FT 141300						

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 39°00'23", long 120°45'40", in NW¼NW¼ sec.4, T.13 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 1.7 mi (2.7 km) downstream from Oxbow powerhouse, and 3.2 mi (5.1 km) east of Foresthill.

DRAINAGE AREA.--524 mi² (1,357 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,060 ft (323 m), from topographic map. Prior to Oct. 22, 1965, at site 3.2 mi (5.1 km) downstream at different datum.

REMARKS.--Flow regulated by French Meadows Reservoir, Hell Hole Reservoir, Loon Lake (stations 11427400, 11428700, 11429350), Stumpy Meadows Lake, usable capacity, 20,000 acre-ft (24.7 hm³), and Ralston and Oxbow powerplants. Robbs Peak tunnel (station 11429800) and Georgetown Divide ditch, capacity, about 25 ft³/s (0.71 m³/s) divert water out of basin above station. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records collected by Placer County Water Agency, under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--21 years, 1,046 ft³/s (29.62 m³/s), 757,800 acre-ft/yr (934 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310,000 ft³/s (8,780 m³/s) Dec. 23, 1964, gage height, 69.0 ft (21.03 m) from floodmarks, site and datum then in use, caused by overtopping of the partly constructed Hell Hole Dam on the Rubicon River, from rating curve extended above 28,000 ft³/s (793 m³/s) on basis of slope-area measurement at gage height 38.0 ft (11.58 m) and slope-conveyance study at gage height 69.0 ft (21.03 m) at site and datum then in use; next highest peak, 113,000 ft³/s (3,200 m³/s) Feb. 1, 1963, gage height, 38.00 ft (11.582 m) site and datum then in use; minimum, 35 ft³/s (0.99 m³/s) Oct. 10, 20, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,930 ft³/s (281 m³/s) Jan. 11, gage height, 12.00 ft (3.658 m); minimum daily, 59 ft³/s (1.67 m³/s) Nov. 18.

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	128	305	752	210	857	1450	1200	1660	1240	187	1000	799
2	343	714	128	493	820	1370	1260	1580	1240	193	1000	729
3	304	508	173	704	927	1330	1080	1590	1230	184	1020	621
4	79	601	84	346	742	1340	1130	1630	1210	180	521	754
5	80	748	81	442	919	1150	1180	1240	1210	183	926	911
6	211	264	83	118	847	906	1480	1660	1200	319	1010	816
7	80	604	76	124	854	1260	1360	1970	1190	364	1010	785
8	110	845	600	697	866	1450	1170	1860	1180	88	922	927
9	78	255	624	1050	844	1450	1340	1750	1180	88	994	931
10	112	448	600	903	924	1450	1220	1440	1180	493	993	905
11	522	870	556	5170	918	1580	1320	1400	1160	894	993	926
12	671	409	420	2640	918	1550	1070	1380	1140	1030	987	885
13	564	291	480	1470	1210	1480	1080	1340	740	1030	990	977
14	243	856	473	1250	2390	1530	1110	1510	637	1020	993	960
15	68	1040	507	1230	1320	1920	1130	1620	715	1020	995	792
16	64	742	343	1270	1310	1920	1270	1660	398	983	995	832
17	64	362	461	924	1270	1520	1430	1970	267	1000	997	899
18	64	59	574	880	1320	1320	1300	1920	394	955	994	928
19	64	60	609	882	1380	1360	1240	1880	528	955	979	706
20	64	727	513	1110	1350	952	1130	1830	270	1000	995	541
21	64	974	421	1100	1420	972	945	1790	353	1060	606	480
22	64	409	526	1060	1390	939	905	1740	672	1070	483	471
23	64	976	123	1010	1380	798	1170	1660	481	1070	782	390
24	64	240	131	923	1320	822	1060	1630	226	1040	722	494
25	191	769	133	981	1300	905	1030	1550	219	1040	675	544
26	349	584	373	849	1320	948	1240	1550	429	990	758	879
27	472	661	431	804	1320	1540	1790	1520	431	1000	769	778
28	309	564	428	890	1340	1910	1610	1460	277	1030	670	539
29	365	326	390	907	---	1610	1450	1440	262	1030	292	123
30	496	678	94	937	---	1330	1590	1400	190	1030	262	65
31	707	---	366	903	---	1340	---	1300	---	1000	740	---
TOTAL	7058	16889	11553	32277	32776	41402	37290	49930	21849	23526	26073	21387
MEAN	228	563	373	1041	1171	1336	1243	1611	728	759	841	713
MAX	707	1040	752	5170	2390	1920	1790	1970	1240	1070	1020	977
MIN	64	59	76	118	742	798	905	1240	190	88	262	65
AC-FT	14000	33500	22920	64020	65010	82120	73960	99040	43340	46660	51720	42420
CAL YR 1978	TOTAL	438494	MEAN	1201	MAX	7230	MIN	59	AC-FT	869800		
WTR YR 1979	TOTAL	322010	MEAN	882	MAX	5170	MIN	59	AC-FT	638700		

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)	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)
MAR 06...	1230	874	48	7.8	8.0	12.0	<1	>3	24	8	7.5	1.3
MAY 31...	1630	1260	33	7.6	10.0	11.2	<1	>3	17	4	5.3	.8
JUL 30...	1000	1010	34	7.2	10.0	11.2	<1	K3	12	0	3.7	.7

DATE	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- 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 SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 06...	2.3	17	.2	--	.5	19	4.9	1.3	.0	12	34
MAY 31...	2.0	20	.2	2.8	.8	13	2.9	1.1	.1	9.8	30
JUL 30...	1.6	21	.2	2.4	.8	15	.6	1.0	.0	11	30

DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
MAR 06...	39	.05	.02	--	.00	.25	.25	.27	.00	--	--
MAY 31...	31	.04	.01	.03	.01	.10	.11	.12	.01	.005	.00
JUL 30...	28	.04	.02	.00	.00	.15	.15	.17	.00	.000	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE- RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE- RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 06...	1230	140	100	40	80	--	10	0	--	0	.9
MAY 31...	1630	--	--	30	100	90	10	10	10	0	1.0
JUL 30...	1000	40	10	30	90	80	10	20	10	10	1.1

K Results based on colony count outside the acceptable range (non-ideal colony count).

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

> Actual value is known to be greater than the value shown.

SACRAMENTO RIVER BASIN

11433400 CANYON CREEK NEAR GEORGETOWN, CA

LOCATION.--Lat 38°56'03", long 120°52'21", in SW¼NW¼ sec.33, T.13 N., R.10 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.7 mi (1.1 km) downstream from West Canyon, and 2.6 mi (4.2 km) northwest of Georgetown.

DRAINAGE AREA.--12.5 mi² (32.4 km²)

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,995 ft (608 m), from topographic map.

REMARKS.--Records good. Small diversions above station for irrigation and domestic purposes. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--13 years, 17.3 ft³/s (0.490 m³/s), 12,530 acre-ft/yr (15.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Jan. 21, 1970, gage height, 11.01 ft (3.356 m); minimum daily, 0.03 ft³/s (0.001 m³/s) Aug. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.81 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	1230	*634 18.0	9.48 2.890	Feb. 21	1500	176 4.98	7.00 2.134
Feb. 18	2100	188 5.32	7.07 2.155	Mar. 1	0030	292 8.27	7.88 2.402

Minimum daily, 1.4 ft³/s (0.040 m³/s) Sept. 19-22.

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	1.7	7.0	13	5.6	7.7	154	20	13	6.7	4.2	2.4	2.1
2	1.7	6.0	10	5.3	7.8	71	18	13	7.1	4.1	2.3	1.9
3	2.0	4.3	6.6	5.0	8.1	53	18	12	7.4	4.1	2.3	1.9
4	1.7	4.0	5.4	5.1	8.8	44	17	12	7.1	4.3	2.2	1.7
5	1.7	3.9	5.2	5.1	8.9	37	16	16	6.9	4.6	2.1	1.7
6	1.6	2.6	4.6	5.1	8.9	33	21	17	6.3	4.2	2.1	1.6
7	1.6	2.3	4.2	5.6	8.9	31	20	20	5.9	4.0	2.3	1.6
8	1.6	2.4	3.8	15	8.8	29	19	19	5.8	3.9	2.5	1.5
9	1.6	2.5	3.5	18	8.7	26	18	14	5.7	3.7	2.3	1.5
10	1.6	3.5	3.7	12	8.7	23	18	12	6.8	3.7	2.2	1.5
11	1.6	3.9	3.8	240	8.6	22	18	11	6.7	3.7	2.2	1.5
12	1.6	4.5	3.5	40	8.4	21	15	10	6.6	3.6	2.2	1.6
13	1.6	6.8	3.5	21	36	20	13	12	6.6	3.4	2.4	2.1
14	1.6	5.9	3.6	38	77	19	14	12	6.6	3.3	2.7	2.1
15	1.6	5.1	3.5	92	31	45	16	11	6.4	3.2	2.7	2.0
16	1.6	5.2	3.5	47	56	52	17	11	6.4	3.1	2.7	2.7
17	1.7	5.3	6.9	27	34	37	20	10	6.9	3.0	2.7	2.8
18	1.8	5.3	11	22	67	29	18	9.6	7.2	3.4	2.6	1.9
19	1.8	5.3	7.5	18	100	26	17	9.4	6.8	2.9	2.4	1.4
20	1.8	12	6.3	14	75	24	17	9.1	5.7	3.1	2.5	1.4
21	1.9	20	5.2	13	149	22	14	8.9	5.2	3.7	3.0	1.4
22	1.9	13	4.7	12	114	21	13	8.6	5.0	3.9	3.0	1.4
23	1.8	8.8	4.8	10	107	20	15	8.4	4.8	4.4	2.8	1.5
24	1.8	6.5	4.3	11	60	19	15	8.9	4.7	3.9	2.6	1.8
25	1.8	5.3	4.0	10	44	18	13	7.8	4.6	3.3	2.1	2.0
26	1.9	4.8	3.9	9.7	46	18	16	9.8	4.5	3.3	1.9	2.3
27	2.2	4.5	4.5	8.8	38	30	18	7.8	4.5	3.0	1.8	2.4
28	5.0	4.4	5.5	8.6	71	34	15	7.7	4.8	2.9	1.8	2.4
29	5.4	4.3	5.4	7.5	---	26	14	7.4	4.3	2.7	2.1	2.5
30	5.9	4.1	5.4	8.3	---	22	13	7.2	4.2	2.6	2.0	2.8
31	6.1	---	5.5	8.2	---	21	---	7.0	---	2.5	2.1	---
TOTAL	69.2	173.5	166.3	747.9	1207.3	1047	496	342.6	178.2	109.7	73.0	57.0
MEAN	2.23	5.78	5.36	24.1	43.1	33.8	16.5	11.1	5.94	3.54	2.35	1.90
MAX	6.1	20	13	240	149	154	21	20	7.4	4.6	3.0	2.8
MIN	1.6	2.3	3.5	5.0	7.7	18	13	7.0	4.2	2.5	1.8	1.4
AC-FT	137	344	330	1480	2390	2080	984	680	353	218	145	113

CAL YR 1978 TOTAL 5782.3 MEAN 15.8 MAX 224 MIN 1.6 AC-FT 11470
WTR YR 1979 TOTAL 4667.7 MEAN 12.8 MAX 240 MIN 1.4 AC-FT 9260

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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 AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 06...	1230	874	48	7.8	8.0	12.0	<1	>3	24	8	7.5	1.3
MAY 31...	1630	1260	33	7.6	10.0	11.2	<1	>3	17	4	5.3	.8
JUL 30...	1000	1010	34	7.2	10.0	11.2	<1	K3	12	0	3.7	.7

DATE	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 CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 06...	2.3	17	.2	--	.5	19	4.9	1.3	.0	12	34
MAY 31...	2.0	20	.2	2.8	.8	13	2.9	1.1	.1	9.8	30
JUL 30...	1.6	21	.2	2.4	.8	15	.6	1.0	.0	11	30

DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
MAR 06...	39	.05	.02	--	.00	.25	.25	.27	.00	--	--
MAY 31...	31	.04	.01	.03	.01	.10	.11	.12	.01	.005	.00
JUL 30...	28	.04	.02	.00	.00	.15	.15	.17	.00	.000	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 06...	1230	140	100	40	80	--	10	0	--	0	.9
MAY 31...	1630	--	--	30	100	90	10	10	10	0	1.0
JUL 30...	1000	40	10	30	90	80	10	20	10	10	1.1

K Results based on colony count outside the acceptable range (non-ideal colony count).

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

> Actual value is known to be greater than the value shown.

11433400 CANYON CREEK NEAR GEORGETOWN, CA

LOCATION.--Lat 38°56'03", long 120°52'21", in SW¼NW¼ sec.33, T.13 N., R.10 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.7 mi (1.1 km) downstream from West Canyon, and 2.6 mi (4.2 km) northwest of Georgetown.

DRAINAGE AREA.--12.5 mi² (32.4 km²)

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,995 ft (608 m), from topographic map.

REMARKS.--Records good. Small diversions above station for irrigation and domestic purposes. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--13 years, 17.3 ft³/s (0.490 m³/s), 12,530 acre-ft/yr (15.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Jan. 21, 1970, gage height, 11.01 ft (3.356 m); minimum daily, 0.03 ft³/s (0.001 m³/s) Aug. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.81 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	1230	*634 18.0	9.48 2.890	Feb. 21	1500	176 4.98	7.00 2.134
Feb. 18	2100	188 5.32	7.07 2.155	Mar. 1	0030	292 8.27	7.88 2.402

Minimum daily, 1.4 ft³/s (0.040 m³/s) Sept. 19-22.

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	1.7	7.0	13	5.6	7.7	154	20	13	6.7	4.2	2.4	2.1
2	1.7	6.0	10	5.3	7.8	71	18	13	7.1	4.1	2.3	1.9
3	2.0	4.3	6.6	5.0	8.1	53	18	12	7.4	4.1	2.3	1.9
4	1.7	4.0	5.4	5.1	8.8	44	17	12	7.1	4.3	2.2	1.7
5	1.7	3.9	5.2	5.1	8.9	37	16	16	6.9	4.6	2.1	1.7
6	1.6	2.6	4.6	5.1	8.9	33	21	17	6.3	4.2	2.1	1.6
7	1.6	2.3	4.2	5.6	8.9	31	20	20	5.9	4.0	2.3	1.6
8	1.6	2.4	3.8	15	8.8	29	19	19	5.8	3.9	2.5	1.5
9	1.6	2.5	3.5	18	8.7	26	18	14	5.7	3.7	2.3	1.5
10	1.6	3.5	3.7	12	8.7	23	18	12	6.8	3.7	2.2	1.5
11	1.6	3.9	3.8	240	8.6	22	18	11	6.7	3.7	2.2	1.5
12	1.6	4.5	3.5	40	8.4	21	15	10	6.6	3.6	2.2	1.6
13	1.6	6.8	3.5	21	36	20	13	12	6.6	3.4	2.4	2.1
14	1.6	5.9	3.6	38	77	19	14	12	6.6	3.3	2.7	2.1
15	1.6	5.1	3.5	92	31	45	16	11	6.4	3.2	2.7	2.0
16	1.6	5.2	3.5	47	56	52	17	11	6.4	3.1	2.7	2.7
17	1.7	5.3	6.9	27	34	37	20	10	6.9	3.0	2.7	2.8
18	1.8	5.3	11	22	67	29	18	9.6	7.2	3.4	2.6	1.9
19	1.8	5.3	7.5	18	100	26	17	9.4	6.8	2.9	2.4	1.4
20	1.8	12	6.3	14	75	24	17	9.1	5.7	3.1	2.5	1.4
21	1.9	20	5.2	13	149	22	14	8.9	5.2	3.7	3.0	1.4
22	1.9	13	4.7	12	114	21	13	8.6	5.0	3.9	3.0	1.4
23	1.8	8.8	4.8	10	107	20	15	8.4	4.8	4.4	2.8	1.5
24	1.8	6.5	4.3	11	60	19	15	8.9	4.7	3.9	2.6	1.8
25	1.8	5.3	4.0	10	44	18	13	7.8	4.6	3.3	2.1	2.0
26	1.9	4.8	3.9	9.7	46	18	16	9.8	4.5	3.3	1.9	2.3
27	2.2	4.5	4.5	8.8	38	30	18	7.8	4.5	3.0	1.8	2.4
28	5.0	4.4	5.5	8.6	71	34	15	7.7	4.8	2.9	1.8	2.4
29	5.4	4.3	5.4	7.5	---	26	14	7.4	4.3	2.7	2.1	2.5
30	5.9	4.1	5.4	8.3	---	22	13	7.2	4.2	2.6	2.0	2.8
31	6.1	---	5.5	8.2	---	21	---	7.0	---	2.5	2.1	---
TOTAL	69.2	173.5	166.3	747.9	1207.3	1047	496	342.6	178.2	109.7	73.0	57.0
MEAN	2.23	5.78	5.36	24.1	43.1	33.8	16.5	11.1	5.94	3.54	2.35	1.90
MAX	6.1	20	13	240	149	154	21	20	7.4	4.6	3.0	2.8
MIN	1.6	2.3	3.5	5.0	7.7	18	13	7.0	4.2	2.5	1.8	1.4
AC-FT	137	344	330	1480	2390	2080	984	680	353	218	145	113

CAL YR 1978 TOTAL 5782.3 MEAN 15.8 MAX 224 MIN 1.6 AC-FT 11470
WTR YR 1979 TOTAL 4667.7 MEAN 12.8 MAX 240 MIN 1.4 AC-FT 9260

11433400 CANYON CREEK NEAR GEORGETOWN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1966 to December 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder from July 1966 to December 21, 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 23.5°C July 22, 1966; minimum recorded, 0.0°C Dec. 7, 8, 1978.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 14.5°C Oct. 1-3; minimum recorded, 0.0°C Dec. 7, 8.

TEMPERATURE (DEG. C) OF WATER, OCTOBER TO DECEMBER 1978

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	12.0	9.0	7.0	8.0	6.0						
2	14.5	11.5	9.5	8.0	5.5	4.0						
3	14.5	11.5	9.0	7.0	4.5	3.0						
4	14.0	11.5	9.5	7.0	4.5	3.0						
5	14.0	11.5	9.0	7.0	4.5	3.0						
6	14.0	11.5	9.0	6.5	2.5	1.5						
7	13.5	10.5	9.5	7.0	2.0	0.0						
8	13.5	10.5	8.5	6.5	2.0	0.0						
9	13.5	10.5	8.0	6.0	2.5	1.0						
10	13.5	10.5	7.5	6.5	3.0	1.5						
11	13.0	10.5	7.5	5.0	4.0	1.5						
12	13.0	10.5	5.5	4.0	4.5	2.5						
13	13.0	10.5	6.0	5.0	4.0	2.5						
14	13.0	10.5	5.0	4.0	3.5	2.0						
15	13.0	10.0	4.5	3.0	3.0	1.5						
16	13.0	10.0	6.5	4.5	2.5	1.0						
17	13.0	10.0	6.0	4.0	4.0	3.0						
18	12.5	10.0	5.5	3.5	4.5	3.0						
19	13.0	10.0	6.0	4.0	4.5	3.0						
20	12.0	9.5	7.0	6.0	3.0	2.0						
21	11.5	9.5	7.0	6.5	2.0	2.0						
22	11.5	8.5	6.5	6.0	---	---						
23	11.5	8.5	6.0	5.0	---	---						
24	11.0	8.5	5.5	4.0	---	---						
25	11.0	8.0	5.5	3.5	---	---						
26	11.0	8.0	4.5	3.5	---	---						
27	10.5	8.0	4.5	3.0	---	---						
28	10.5	8.0	5.0	3.0	---	---						
29	9.5	7.5	6.5	5.0	---	---						
30	9.0	7.0	7.0	5.0	---	---						
31	8.5	7.5	---	---	---	---						
MONTH	14.5	7.0	9.5	3.0	---	---						

11433420 MAINE BAR CANYON CREEK NEAR GREENWOOD, CA

LOCATION.--Lat 38°55'34", long 120°56'51", in NW¼NW¼ sec.2, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, on right bank 2.8 mi (4.5 km) northwest of Greenwood, and 4.5 mi (7.2 km) northeast of Cool.

DRAINAGE AREA.--0.76 mi² (1.97 km²).

PERIOD OF RECORD.--March to September 1972 (discharge measurements only), October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,520 ft (463 m), from topographic map.

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

AVERAGE DISCHARGE.--7 years, 0.84 ft³/s (0.024 m³/s), 609 acre-ft/yr (750,900 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 115 ft³/s (3.26 m³/s) Jan. 5, 1978, gage height, 1.95 ft (0.594 m); no flow for many days each year.

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)	
Jan. 11	1100	*69	1.95	1.55	0.472
Feb. 21	0730	43	1.22	1.28	0.390
Mar. 1	0300	29	0.821	1.10	0.335

Minimum, no flow many days.

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	0	.03	.56	.05	.49	11	.94	.26	.04	.31	.02	.05
2	0	.03	.14	.05	.64	7.3	.83	.21	.04	.03	.02	.05
3	0	.02	.07	.05	.53	2.5	.73	.19	.03	.03	.02	.05
4	0	.02	.05	.07	.44	1.7	.64	.17	.04	.03	.02	.05
5	0	.02	.06	.10	.40	1.3	.59	.41	.03	.03	.02	.05
6	0	.01	.05	.07	.36	1.1	.91	.33	.03	.03	.02	.07
7	0	.01	.03	.15	.33	.92	.64	.40	.03	.03	.02	.05
8	0	.01	.03	1.6	.30	.81	.51	.32	.03	.02	.02	.05
9	0	.01	.03	.71	.28	.71	.46	.25	.03	.03	.01	.05
10	0	.02	.03	1.3	.27	.64	.39	.20	.03	.03	.01	.05
11	0	.02	.03	22	.24	.71	.36	.16	.02	.03	.02	.05
12	0	.03	.03	2.6	.24	.70	.34	.14	.02	.02	.02	.05
13	0	.17	.05	1.1	3.0	.68	.32	.14	.02	.02	.03	.05
14	0	.05	.05	3.6	5.0	.69	.29	.24	.03	.02	.03	.05
15	0	.03	.05	5.3	1.9	2.1	.26	.11	.03	.02	.03	.06
16	0	.03	.05	2.4	4.7	2.3	.31	.11	.04	.01	.03	.06
17	0	.02	.48	1.4	2.0	1.6	.50	.10	.05	.01	.03	.06
18	0	.02	.59	1.1	4.2	1.3	.40	.08	.05	.01	.02	.06
19	0	.06	.26	.72	4.9	1.1	.29	.08	.05	.01	.03	.06
20	.01	.87	.16	.58	5.9	.94	.26	.09	.04	.01	.05	.06
21	.01	1.4	.12	.50	14	.85	.24	.10	.04	.05	.05	.06
22	.01	.97	.11	.42	10	.84	.24	.10	.03	.05	.05	.06
23	0	.32	.08	.36	6.0	.71	.39	.09	.03	.03	.04	.06
24	0	.13	.07	.36	2.9	.61	.32	.08	.03	.02	.05	.06
25	.01	.08	.07	.34	1.8	.55	.26	.07	.03	.02	.06	.06
26	.01	.07	.07	.28	1.8	.74	1.0	.07	.03	.02	.05	.06
27	.01	.05	.07	.24	1.2	2.9	.67	.07	.05	.02	.05	.06
28	0	.05	.07	.24	4.2	3.1	.39	.08	.02	.02	.04	.06
29	.01	.05	.07	.24	---	1.9	.32	.07	.02	.02	.06	.06
30	.01	.05	.06	.32	---	1.4	.27	.06	.02	.02	.06	.06
31	.02	---	.05	.64	---	1.1	---	.04	---	.02	.05	---
TOTAL	.10	4.65	3.64	48.89	78.02	54.80	14.07	4.82	.98	1.02	1.03	1.68
MEAN	.003	.16	.12	1.58	2.79	1.77	.47	.16	.033	.033	.033	.056
MAX	.02	1.4	.59	22	14	11	1.0	.41	.05	.31	.06	.07
MIN	0	.01	.03	.05	.24	.55	.24	.04	.02	.01	.01	.05
AC-FT	.2	9.2	7.2	97	155	109	28	9.6	1.9	2.0	2.0	3.3

CAL YR 1978 TOTAL 491.96 MEAN 1.35 MAX 72 MIN 0 AC-FT 976
WTR YR 1979 TOTAL 213.70 MEAN .59 MAX 22 MIN 0 AC-FT 424

11433500 MIDDLE FORK AMERICAN RIVER NEAR AUBURN, CA

LOCATION.--Lat 38°55'05", long 121°00'51", in NE¼SW¼ sec.6, T.12 N., R.9 E., Placer County, Hydrologic Unit 18020128, on right bank at Mountain Quarry Co. plant, 1.4 mi (2.2 km) upstream from mouth, and 3.3 mi (5.3 km) northeast of Auburn.

DRAINAGE AREA.--614 mi² (1,590 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1911 to current year. Prior to October 1934, published as "near East Auburn."

REVISED RECORDS.--WSP 861: 1928. WSP 1315-A: 1913-15, 1919, 1921, 1923(M), 1929(M), 1930. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 552.35 ft (168.356 m) National Geodetic Vertical Datum of 1929 (levels by Murray Engineers). Prior to December 1930, nonrecording gages near present site at different datums. December 1930 to Mar. 1, 1963, water-stage recorder at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by French Meadows Reservoir (station 11427400), Hell Hole Reservoir (station 11428700), Loon Lake (station 11429350), Stumpy Meadows Lake, usable capacity, 20,000 acre-ft (24.7 hm³), diversion dams on Rubicon and Little Rubicon Rivers, and Ralston and Oxbow powerplants. Robbs Peak powerplant (station 11429300) diverts water out of basin. See schematic diagram of Middle Fork American and Rubicon River basin.

AVERAGE DISCHARGE.--68 years, 1,304 ft³/s (36.93 m³/s), 944,700 acre-ft/yr (1.16 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 253,000 ft³/s (7,160 m³/s) Dec. 23, 1964, gage height, 60.4 ft (18.41 m) from floodmarks, from rating curve extended above 69,000 ft³/s (1,950 m³/s) on basis of slope-area measurement of maximum flow (caused by overtopping of the partly constructed Hell Hole Dam); next highest peak, 121,000 ft³/s (3,430 m³/s) Feb. 1, 1963, gage height, 43.1 ft (13.14 m) from floodmarks, site and datum then in use; minimum, 20 ft³/s (0.57 m³/s) Sept. 6, 1931, Sept. 19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,140 ft³/s (259 m³/s) Jan. 11, gage height, 13.88 ft (4.231 m); minimum daily, 69 ft³/s (1.95 m³/s) Oct. 24, 25.

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	205	819	1050	250	818	2740	1320	1300	1260	202	962	782
2	175	446	228	279	824	2020	1250	1410	1240	192	992	720
3	308	577	179	648	910	1780	1190	1240	1230	189	974	641
4	213	576	114	404	779	1680	1150	1260	1220	186	863	707
5	83	593	91	294	825	1590	1190	910	1210	192	582	896
6	99	795	89	395	829	1140	1380	1530	1210	176	995	819
7	85	306	87	115	825	1420	1330	1840	1200	557	993	764
8	78	761	81	344	863	1620	1250	2100	1190	122	926	915
9	103	792	601	1090	806	1680	1270	1910	1180	102	982	910
10	78	181	530	879	822	1620	1500	1530	1180	373	983	896
11	276	815	567	5240	902	1710	1360	1410	1170	687	977	902
12	640	723	443	3090	842	1720	1420	1250	1150	1050	980	888
13	632	185	457	1650	1190	1610	1270	1170	898	1060	976	949
14	534	667	348	1480	2820	1680	1280	1060	620	1040	978	950
15	212	1040	499	1690	1700	2020	1280	1210	700	1040	977	806
16	75	610	354	1490	1700	2370	1290	1240	617	1010	974	788
17	70	852	383	1150	1550	1860	1550	1960	313	1040	975	876
18	70	150	574	932	1610	1580	1540	1930	383	983	975	920
19	70	77	554	859	2040	1510	1360	1920	439	983	963	791
20	70	359	562	1100	1850	1420	1300	1850	438	1000	970	414
21	70	1170	412	1080	2650	1040	1160	1810	293	1070	652	567
22	70	582	498	1050	2390	1070	990	1760	519	1100	617	435
23	70	1080	262	974	2260	1060	1170	1700	581	1070	581	339
24	69	374	118	966	1840	1020	1290	1600	417	1060	790	510
25	69	531	113	920	1640	1030	1160	1580	229	1030	673	490
26	411	1020	199	832	1620	1060	1160	1560	280	970	705	761
27	179	373	399	788	1570	1610	1180	1530	450	1010	804	837
28	596	1020	387	838	1680	2210	1270	1470	418	1020	670	574
29	103	332	401	872	---	1900	1210	1430	241	1020	511	348
30	534	383	198	870	---	1580	1240	1380	262	1020	98	90
31	551	---	179	911	---	1420	---	1350	---	1010	595	---
TOTAL	6798	18189	10957	33480	40155	49770	38310	47200	22538	23564	25693	21285
MEAN	219	606	353	1080	1434	1605	1277	1523	751	760	829	710
MAX	640	1170	1050	5240	2820	2740	1550	2100	1260	1100	995	950
MIN	69	77	81	115	779	1020	990	910	229	102	98	90
AC-FT	13480	36080	21730	66410	79650	98720	75990	93620	44700	46740	50960	42220
CAL YR 1978	TOTAL	458799	MEAN	1257	MAX	7730	MIN	69	AC-FT	910000		
WTR YR 1979	TOTAL	337939	MEAN	926	MAX	5240	MIN	69	AC-FT	670300		

11433500 MIDDLE FORK AMERICAN RIVER NEAR AUBURN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-67, 1977 to current year.
 CHEMICAL ANALYSES: Water years 1958-66, 1977 to current year.
 BIOLOGICAL DATA: Water year 1979.
 SEDIMENT RECORDS: Water years 1957-67.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (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 AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 05...	1330	1650	60	7.8	9.5	12.2	2	<1	<1	28	13	7.5
MAY 30...	1330	1370	39	7.4	13.0	10.5	5	K3	K3	16	0	4.6
JUL 27...	1430	1040	38	7.7	14.0	10.2	--	K5	K9	13	2	3.8

DATE	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 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 05...	2.2	2.3	15	.2	--	.5	26	6.8	2.7	.0	11	44
MAY 30...	1.0	1.6	22	.2	2.3	.7	16	3.3	1.1	.1	9.9	27
JUL 27...	.8	1.7	21	.2	2.4	.7	16	1.1	1.1	.0	11	28

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
MAR 05...	42	.06	0	.01	.00	.00	.06	.06	.07	.00	.000	.00
MAY 30...	32	.04	--	.01	.00	.01	.07	.08	.09	.02	.005	.00
JUL 27...	27	.04	0	.00	.00	.01	.15	.16	.16	.05	.000	.00

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS GD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)
MAR 05...	1330	0	0	0	0	0	70	60	8	1	0
MAY 30...	1330	0	0	0	0	0	--	--	8	0	0
JUL 27...	1430	--	--	--	--	--	30	20	10	--	--

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
MAR 05...	1	0	0	0	7	2	70	60	10	7
MAY 30...	1	0	0	0	8	0	70	60	10	16
JUL 27...	--	--	--	--	--	--	90	80	10	--

See footnotes at end of table.

11433500 MIDDLE FORK AMERICAN RIVER NEAR AUBURN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	LEAD, SUS- PENDE 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 RECov- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)
MAR 05...	7	0	0	0	0	.0	.0	.0	3	3
MAY 30...	16	0	10	10	0	.3	.1	.2	4	4
JUL 27...	--	--	10	6	--	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECov- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECov- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
MAR 05...	0	0	0	0	10	0	10	2.6	1.4	.1
MAY 30...	0	0	0	0	20	20	0	1.0	--	--
JUL 27...	--	--	--	--	--	--	--	1.4	--	--

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.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 27...	1430	1040	14.0	3	8.4	55

11433800 NORTH FORK AMERICAN RIVER BELOW AUBURN DAMSITE, NEAR AUBURN, CA

LOCATION.--Lat 38°52'20", long 121°03'18", in SE¼SW¼ sec.23, T.12 N., R.8 E., Placer County, Hydrologic Unit 18020128, on right bank 1,080 ft (329 m) upstream from Knickerbocker Creek, and 2.0 mi (3.2 km) southeast of Auburn.

DRAINAGE AREA.--973 mi² (2,520 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service).

REMARKS.--Records good. Natural flow of stream affected by many reservoirs and diversions (see REMARKS for stations 11427000, 11433500).

AVERAGE DISCHARGE.--7 years, 1,729 ft³/s (49.0 m³/s), 1,253,000 acre-ft/yr (1.54 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,100 ft³/s (966 m³/s) Jan. 17, 1974, gage height, 79.37 ft (24.192 m); minimum daily, 51 ft³/s (1.44 m³/s) July 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,800 ft³/s (532 m³/s) Jan. 11, gage height, 73.29 ft (22.339 m); minimum daily, 111 ft³/s (3.14 m³/s) Oct. 25.

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	263	921	1200	339	1110	5460	2430	3440	2190	422	1070	880
2	175	435	485	339	1140	3810	2330	3120	2130	416	1090	814
3	376	635	303	706	1210	3020	2240	3410	2110	392	1060	723
4	301	607	250	483	1090	2760	2180	3720	2120	398	1060	794
5	135	616	192	364	1100	2630	2340	3530	2070	389	440	986
6	137	929	190	476	1130	2270	2790	4790	2010	377	1080	920
7	147	283	177	204	1130	2790	2740	4330	1930	344	1090	854
8	125	777	162	497	1170	3200	2510	4350	1790	333	1090	999
9	149	926	646	1430	1110	3240	2550	3760	1730	278	1090	998
10	125	193	601	1130	1100	3110	2540	3140	1700	458	1100	982
11	237	797	629	9990	1200	3270	2340	2870	1680	786	1100	987
12	667	788	516	5460	1130	3290	2380	2860	1660	1180	1100	967
13	672	318	516	2730	1540	3050	2350	3020	1460	1200	1100	1020
14	579	641	411	2340	5470	3020	2520	3340	1790	1170	1060	1020
15	340	1080	554	3060	3310	3550	2560	3720	1110	1160	1060	890
16	122	676	421	2530	2840	4430	2650	3900	1020	1140	1060	861
17	114	918	465	1810	2580	3460	2930	4130	732	1100	1060	943
18	114	286	733	1440	2460	2900	2620	4370	740	1100	1060	991
19	114	142	693	1270	3440	2670	2270	4740	794	1110	1050	885
20	114	364	663	1470	2930	2570	2180	4790	814	1120	1050	462
21	114	1440	501	1410	4750	2020	2040	4630	631	1190	780	639
22	114	846	573	1360	4430	1960	1940	4590	808	1230	736	527
23	114	1260	364	1260	4260	1950	2150	4280	899	1190	596	431
24	112	589	208	1220	3140	1880	2340	3840	760	1180	893	515
25	111	530	202	1240	2570	1910	2160	3600	536	1150	776	565
26	401	1090	278	1150	2500	1960	2310	3540	492	1090	806	826
27	206	438	479	1060	2430	2980	4500	3510	738	1120	906	926
28	670	1100	465	1120	2460	4350	3940	3240	701	1120	792	655
29	174	406	479	1130	---	3600	3290	2870	477	1130	643	477
30	511	428	306	1100	---	2920	3160	2550	492	1130	200	165
31	555	---	246	1220	---	2600	---	2360	---	1120	578	---
TOTAL	8088	20459	13908	51338	64730	92630	77280	114340	38114	27523	28576	23702
MEAN	261	682	449	1656	2312	2988	2576	3688	1270	888	922	790
MAX	672	1440	1200	9990	5470	5460	4500	4790	2190	1230	1100	1020
MIN	111	142	162	204	1090	1880	1940	2360	477	278	200	165
AC-FT	16040	40580	27590	101800	128400	183700	153300	226800	75600	54590	56680	47010
CAL YR 1978	TOTAL	804259	MEAN	2203	MAX	15400	MIN	111	AC-FT	1595000		
WTR YR 1979	TOTAL	560688	MEAN	1536	MAX	9990	MIN	111	AC-FT	1112000		

11433800 NORTH FORK AMERICAN RIVER BELOW AUBURN DAMSITE, NEAR AUBURN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSIS: Water years 1978 to current year.

BIOLOGICAL DATA: Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (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)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 05...	0830	2650	72	7.5	8.0	12.3	2	K5	K12	41	13	11
MAY 30...	0930	2540	41	7.7	14.0	10.6	2	K2	17	13	0	5.2
JUL 27...	1100	1130	41	7.8	17.0	10.0	--	K8	K5	16	0	4.7

DATE	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 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 05...	3.3	2.6	12	.2	--	.5	28	6.8	2.0	.0	13	54
MAY 30...	.1	1.6	20	.2	2.1	.5	13	2.9	.9	.1	9.7	34
JUL 27...	1.1	1.8	18	.2	2.6	.8	19	.6	1.1	.0	11	28

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)
MAR 05...	56	.07	0	.04	.04	.01	.10	.11	.15	.00	.001	.00
MAY 30...	29	.05	--	.02	.00	.09	.07	.16	.18	.01	.002	.00
JUL 27...	33	.04	0	.00	.00	.00	.06	.06	.06	.06	.000	.00

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)
MAR 05...	0830	1	0	0	0	0	60	40	20	1	0
MAY 30...	0930	0	0	0	0	0	--	--	10	0	0
JUL 27...	1100	--	--	--	--	--	30	20	9	--	--

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL 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)
MAR 05...	1	0	0	0	12	4	200	180	20	13
MAY 30...	1	10	10	0	13	0	140	130	10	42
JUL 27...	--	--	--	--	--	--	60	50	10	--

11433800 NORTH FORK AMERICAN RIVER BELOW AUBURN DAMSITE, NEAR AUBURN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	LEAD, SUS- PENDE 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 RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)
MAR 05...	11	2	0	0	10	.0	.0	.0	4	2
MAY 30...	42	0	20	20	0	.1	.1	.0	4	4
JUL 27...	--	--	10	5	5	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
MAR 05...	2	0	0	0	30	10	20	1.3	1.0	.1
MAY 30...	0	0	0	0	30	30	0	.8	--	--
JUL 27...	--	--	--	--	--	--	--	1.3	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 27...	1100	1130	17.0	2	6.1	61

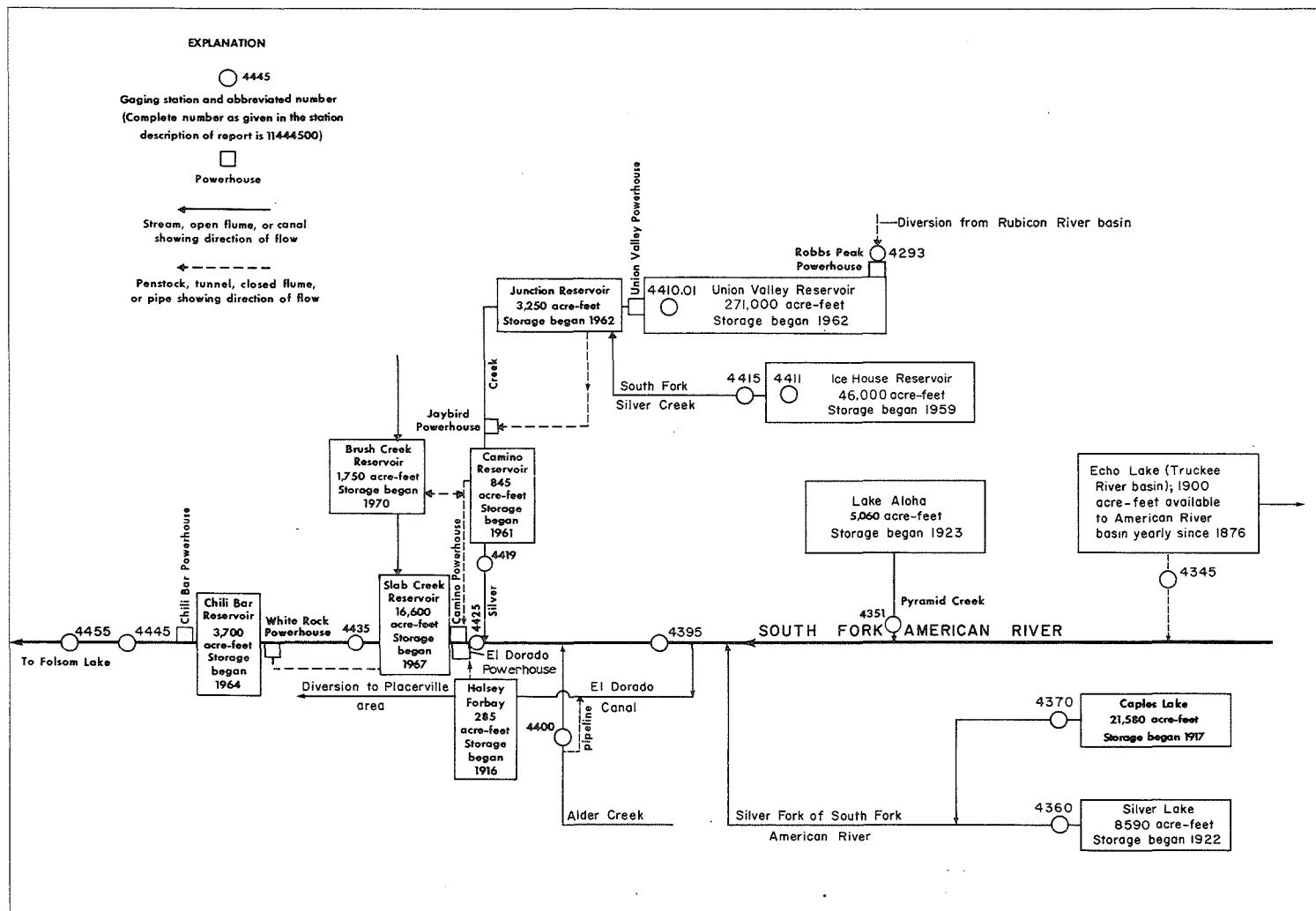


FIGURE 11.—Schematic diagram showing diversions and storage in South Fork American River basin.

SACRAMENTO RIVER BASIN

11434500 ECHO LAKE CONDUIT NEAR PHILLIPS, CA

LOCATION.--Lat 38°49'52", long 120°02'12", in NW¼ sec.6, T.11 N., R.18 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank in Berkeley Municipal Camp, 0.5 mi (0.8 km) downstream from intake, and 2.4 mi (3.9 km) northeast of Phillips.

PERIOD OF RECORD.--August 1923 to current year. Prior to October 1974 diversion seasons only. Monthly discharge only for July 1933, published in WSP 1315-A. Published as Echo Lake flume near Vade prior to 1943 and as Echo Lake conduit near Vade for seasons 1944-53.

GAGE.--Water-stage recorder. Altitude of gage is 7,420 ft (2,262 m), from topographic map. Prior to July 16, 1929, nonrecording gage at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Conduit diverts from Echo Lake, capacity, 1,900 acre-ft (2.34 hm³) in Truckee River basin into basin of South Fork American River for power and irrigation. See schematic diagram of South Fork American 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 daily discharge, 31 ft³/s (0.88 m³/s) Sept. 10, 1963, Sept. 13-15, 1971, Sept. 16, 17, 1978; no flow for most of each year.

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	0	0										0
2	0	0										0
3	0	0										0
4	0	17										12
5	0	26										27
6	0	25										26
7	0	25										26
8	0	24										26
9	0	23										26
10	0	22										26
11	0	21										26
12	0	19										26
13	18	18										26
14	27	17										25
15	26	15										25
16	12	14										15
17	.97	16										25
18	.83	17										24
19	.54	15										24
20	.38	15										23
21	.24	15										22
22	.16	14										21
23	.11	13										9.0
24	.07	12										.18
25	.05	11										0
26	.03	10										0
27	.02	9.3										0
28	.01	8.6										0
29	.01	8.0										0
30	0	3.4										0
31	0	---										---
TOTAL	86.42	433.3	0	0	0	0	0	0	0	0	0	460.18
MEAN	2.79	14.4	0	0	0	0	0	0	0	0	0	15.3
MAX	27	26	0	0	0	0	0	0	0	0	0	27
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	171	859	0	0	0	0	0	0	0	0	0	913
CAL YR 1978	TOTAL 879.72	MEAN 2.41	MAX 31	MIN 0	AC-FT 1740							
WTR YR 1979	TOTAL 979.90	MEAN 2.68	MAX 27	MIN 0	AC-FT 1940							

11435100 PYRAMID CREEK AT TWIN BRIDGES, CA

LOCATION.--Lat 38°48'57", long 120°06'58", in NW¼SW¼ sec.9, T.11 N., R.17 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 0.5 mi (0.8 km) northeast of Twin Bridges, and 2.2 mi (3.5 km) west of Phillips.

DRAINAGE AREA.--8.76 mi² (22.69 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,320 ft (1,926 m), from topographic map.

REMARKS.--Flow regulated by Lake Aloha, capacity, 5,060 acre-ft (6.24 hm³); no contents Sept. 30, 1978, and Sept. 30, 1979. Lake of the Woods, Ropi Lake, and Toem Lakes (unknown capacities) are also regulated at times. See schematic diagram of South Fork American 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.--9 years, 37.5 ft³/s (1.062 m³/s), 27,170 acre-ft/yr (33.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 858 ft³/s (24.3 m³/s) June 26, 1971, gage height, 4.62 ft (1.408 m), from rating curve extended above 160 ft³/s (4.53 m³/s); minimum daily, 0.20 ft³/s (0.006 m³/s) Nov. 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 416 ft³/s (11.8 m³/s) Jan. 11, gage height, 3.50 ft (1.067 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Sept. 30.

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	4.6	2.5	15	6.3	14	11	16	62	132	23	55	52
2	4.6	2.9	12	5.8	14	11	16	64	133	24	60	51
3	4.5	2.8	11	5.8	14	11	17	83	126	24	62	49
4	4.4	2.9	8.8	6.3	14	11	23	99	134	22	65	46
5	4.4	2.9	11	6.2	14	12	34	103	131	21	67	42
6	4.3	2.9	11	6.1	14	19	36	71	141	19	67	39
7	4.2	2.9	8.2	6.1	14	25	26	50	114	18	65	35
8	4.1	2.9	7.7	7.1	14	28	29	42	88	16	64	30
9	4.1	2.8	6.3	8.0	14	31	28	35	87	16	63	22
10	4.1	2.8	4.9	11	13	33	22	35	97	28	63	13
11	4.0	2.9	4.8	220	12	33	21	50	109	46	62	8.0
12	4.0	3.0	4.8	78	8.8	31	25	110	115	47	61	6.0
13	3.9	3.9	4.8	40	9.5	30	39	139	115	46	61	4.9
14	3.9	4.3	4.9	26	13	27	49	180	97	45	67	4.3
15	3.8	4.7	4.8	22	12	26	54	196	79	43	66	3.8
16	3.8	4.7	5.1	19	12	21	50	199	76	42	65	3.5
17	3.7	4.9	5.0	18	12	19	36	210	74	46	64	3.3
18	3.5	4.9	15	17	12	18	25	221	62	48	63	3.1
19	3.4	4.6	26	17	12	17	23	238	44	53	61	2.9
20	3.3	4.8	25	16	11	16	22	232	43	61	60	2.8
21	3.1	5.8	18	15	12	16	27	202	47	112	49	2.7
22	3.0	6.1	7.3	15	12	15	30	204	43	82	15	2.5
23	2.8	6.3	6.7	15	12	15	30	165	44	70	9.8	2.4
24	2.7	6.3	6.8	15	12	16	23	164	46	64	8.6	2.3
25	2.5	6.6	7.1	14	11	20	24	192	43	61	8.2	2.2
26	2.4	5.7	7.2	14	11	19	43	204	40	60	8.2	2.1
27	2.4	5.6	7.1	14	11	17	78	200	35	59	8.0	2.0
28	2.3	6.0	6.9	14	11	18	65	182	32	58	8.2	2.0
29	2.2	9.3	6.8	14	---	16	60	149	30	57	8.7	1.9
30	2.2	14	6.7	14	---	15	70	130	27	56	10	1.8
31	2.4	---	6.7	14	---	15	---	128	---	56	47	---
TOTAL	108.6	142.7	283.4	699.7	345.3	612	1041	4339	2384	1423	1441.7	443.5
MEAN	3.50	4.76	9.14	22.6	12.3	19.7	34.7	140	79.5	45.9	46.5	14.8
MAX	4.6	14	26	220	14	33	78	238	141	112	67	52
MIN	2.2	2.5	4.8	5.8	8.8	11	16	35	27	16	8.0	1.8
AC-FT	215	243	562	1390	685	1210	2060	8610	4730	2820	2860	880
CAL YR 1978 TOTAL	17099.3		MEAN 46.8	MAX 238	MIN 2.2	AC-FT 33920						
WTR YR 1979 TOTAL	13263.9		MEAN 36.3	MAX 238	MIN 1.8	AC-FT 26310						

11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, CA

LOCATION.--Lat 38°40'17", long 120°07'18", in SW¼ sec. 32, T.10 N., R.17 E., Amador County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 1,000 ft (305 m) downstream from Silver Lake Dam, and 3.5 mi (5.6 km) southwest of Kirkwood.

DRAINAGE AREA.--15.2 mi² (39.4 km²).

PERIOD OF RECORD.--September 1922 to current year. Records for water year 1923 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS. WDR CA-75-4: 1927(M), 1929(M), 1932(M), 1937-38(M), 1940-45(M), 1950-53(M), 1955-58(M), 1963(M), 1965(M), 1967(M), 1969-70(M), 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 7,199.5 ft (2,194.41 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Silver Lake 1,000 ft (305 m) upstream, capacity, 3,840 acre-ft (4.73 hm³) at spillway level and 8,590 acre-ft (10.6 hm³) with 11 ft (3.4 m) of flashboards; contents in Silver Lake were 5,310 acre-ft (6.55 hm³) Sept. 30, 1978, and 2,950 acre-ft (3.64 hm³) Sept. 30, 1979. Some water, in addition to that released through dam and over spillway, escapes from Silver Lake through porous rock formation. See schematic diagram of South Fork American 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.--57 years, 34.0 ft³/s (0.963 m³/s), 24,630 acre-ft/yr (30.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) Nov. 21, 1950, gage height, 6.03 ft (1.838 m), from rating curve extended above 430 ft³/s (12.2 m³/s); no flow many days in February, March 1948, Jan. 13, 14, 1954, Nov. 3, 1959, to Feb. 5, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 333 ft³/s (9.43 m³/s) May 23, gage height, 3.66 ft (1.116 m); minimum daily, 0.71 ft³/s (0.020 m³/s) Mar. 23-25.

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	1.7	1.7	46	19	16	3.2	.94	94	141	3.4	1.8	3.9
2	1.6	1.7	44	19	16	3.4	1.4	68	112	3.0	1.8	3.9
3	1.5	1.7	43	19	16	3.5	1.8	69	113	2.4	2.4	3.9
4	1.5	15	41	19	25	3.6	2.0	73	106	2.4	2.8	29
5	1.4	27	40	17	26	3.7	2.2	76	105	2.4	2.4	76
6	2.1	15	39	9.4	26	3.9	2.4	77	120	2.4	2.0	71
7	3.0	3.4	39	4.0	25	3.2	2.6	77	129	2.3	2.8	69
8	3.0	16	39	4.7	24	3.2	2.8	77	113	2.2	3.6	75
9	3.0	69	39	5.1	24	3.4	2.8	77	100	2.2	3.6	86
10	3.0	68	39	4.7	23	3.6	2.8	77	98	2.0	3.6	95
11	3.0	66	39	17	20	3.6	2.8	77	77	1.8	3.6	104
12	2.9	64	34	30	21	3.9	2.8	77	46	1.8	3.6	102
13	2.8	62	30	32	20	4.1	3.0	84	47	1.7	3.6	105
14	2.8	61	27	32	19	3.9	3.2	112	50	4.0	3.5	101
15	2.8	63	26	32	18	4.1	3.4	155	50	5.3	3.4	79
16	2.8	67	26	16	17	4.1	3.2	190	50	3.6	3.3	42
17	2.8	65	21	1.3	16	4.2	4.3	219	49	3.5	3.2	59
18	2.7	64	21	1.2	14	4.1	16	245	29	3.1	3.2	58
19	2.6	63	20	1.3	4.6	2.6	27	281	6.2	4.7	3.2	57
20	2.6	61	19	1.3	2.9	.73	34	304	3.6	4.2	3.2	57
21	2.6	60	19	1.2	3.0	.82	37	318	3.5	2.4	3.2	56
22	2.6	59	19	1.2	3.7	.82	48	333	3.4	2.5	3.2	54
23	2.5	57	19	7.8	3.5	.71	53	327	3.5	2.3	3.2	33
24	2.3	56	19	16	3.2	.71	37	311	9.9	2.2	3.0	1.7
25	2.3	54	19	16	9.5	.71	29	251	39	2.2	2.8	1.4
26	2.2	53	19	16	3.2	.88	36	233	38	2.4	2.8	1.4
27	2.2	52	19	16	3.2	1.4	67	261	13	2.4	3.5	1.4
28	2.2	50	19	16	3.2	1.1	93	265	14	2.4	4.5	1.4
29	2.2	49	19	16	---	1.0	106	234	8.9	2.4	4.2	1.3
30	1.9	47	19	16	---	.94	118	203	3.6	2.1	4.1	1.2
31	1.8	---	19	16	---	1.1	---	187	---	1.8	4.0	---
TOTAL	74.4	1391.5	881	423.2	411.0	80.22	745.44	5432	1681.6	83.5	99.1	1429.5
MEAN	2.40	46.4	28.4	13.7	14.7	2.59	24.8	175	56.1	2.69	3.20	47.7
MAX	3.0	69	46	32	26	4.2	118	333	141	5.3	4.5	105
MIN	1.4	1.7	19	1.2	2.9	.71	.94	68	3.4	1.7	1.8	1.2
AC-FT	148	2760	1750	839	815	159	1480	10770	3340	166	197	2840

CAL YW 1978 TOTAL 16416.16 MEAN 45.0 MAX 289 MIN .60 AC-FT 32560
WTR YW 1979 TOTAL 12732.46 MEAN 34.9 MAX 333 MIN .71 AC-FT 25250

11437000 CAPLES LAKE OUTLET NEAR KIRKWOOD, CA

LOCATION.--Lat 38°42'29", long 120°03'00", in SW¼SW¼ sec.18, T.10 N., R.18 E., Alpine County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 500 ft (152 m) downstream from main dam and outlet gate of Caples Lake, and 1.3 mi (2.1 km) east of Kirkwood.

DRAINAGE AREA.--13.5 mi² (35.0 km²).

PERIOD OF RECORD.--September 1922 to current year. Records for water year 1945 incomplete, yearly estimate published in WSP 1315-A. Prior to October 1969, published as Twin Lakes Outlet near Kirkwood.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and concrete control for outlet, and water-stage recorder for spillway. Altitude of gage is 7,700 ft (2,347 m), from topographic map.

REMARKS.--Flow regulated by Caples Lake 500 ft (152 m) upstream, capacity, 19,750 acre-ft (24.4 hm³) at spillway level and 21,580 acre-ft (26.6 hm³) with 3 ft (0.9 m) of flashboards; contents in Caples Lake were 20,000 acre-ft (24.7 hm³) Sept. 30, 1978, and 14,500 acre-ft (17.9 hm³) Sept. 30, 1979. There was no flow over Caples Lake spillway during current year. No diversion above station. See schematic diagram of South Fork American 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 (including flow over Caples Lake spillway).--57 years, 36.5 ft³/s (1.034 m³/s), 26,440 acre-ft/yr (32.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum combined daily discharge for outlet and spillway, 669 ft³/s (18.9 m³/s) June 3, 1969; minimum daily, 0.1 ft³/s (0.003 m³/s) Mar. 25-31, 1944, Nov. 27, 28, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum combined daily discharge for outlet and spillway, 194 ft³/s (5.49 m³/s) May 31; minimum daily, 0.39 ft³/s (0.011 m³/s) Jan. 15, 16.

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	3.8	3.0	26	103	25	33	2.2	3.6	178	54	54	69
2	3.7	3.2	31	100	25	33	2.6	3.8	167	49	53	84
3	3.6	3.1	71	99	25	32	3.0	4.1	161	46	51	88
4	3.5	39	84	96	25	32	3.0	4.1	150	45	49	55
5	3.3	71	84	105	25	15	3.1	3.9	146	44	47	3.0
6	3.2	59	82	110	32	3.6	3.1	3.8	150	42	50	2.9
7	3.1	46	83	107	44	3.6	3.1	3.8	153	40	53	2.9
8	3.0	46	86	104	44	3.7	3.2	3.7	150	33	51	2.9
9	2.9	46	84	107	44	3.8	3.2	3.7	149	28	49	2.9
10	2.8	45	61	98	44	3.8	3.1	3.8	148	24	51	2.9
11	2.7	45	65	43	44	3.7	3.1	3.9	138	16	52	2.9
12	2.6	45	90	.55	45	3.8	3.2	4.0	128	13	52	2.9
13	3.1	45	96	.42	45	3.6	3.4	4.3	127	19	51	3.0
14	3.6	45	97	.40	45	3.3	3.4	4.4	128	26	52	8.1
15	3.5	45	96	.39	45	3.3	3.4	4.5	122	31	52	34
16	3.4	45	105	.39	44	3.3	3.4	4.5	116	35	54	43
17	3.3	45	105	3.9	44	3.3	3.3	4.6	101	34	59	64
18	3.1	45	91	6.7	44	3.3	3.2	4.7	87	27	60	65
19	3.0	45	90	16	44	2.3	3.1	4.7	50	27	59	68
20	2.9	51	89	26	44	1.3	3.2	4.8	21	26	64	70
21	2.8	56	87	26	44	1.3	3.3	5.0	24	28	88	72
22	2.6	56	87	26	45	1.3	3.3	46	16	24	118	75
23	2.4	56	84	26	45	1.3	3.3	73	8.7	27	118	39
24	2.0	56	82	26	45	1.3	3.3	73	20	29	127	3.3
25	2.0	56	84	25	45	1.3	3.3	93	47	25	126	3.3
26	1.9	55	98	26	11	1.8	3.4	120	62	32	126	3.3
27	2.7	61	108	25	19	2.2	3.7	126	64	37	124	3.3
28	3.7	72	108	25	32	2.2	3.7	131	64	40	122	3.3
29	3.5	71	107	25	---	2.2	3.8	153	60	46	118	3.2
30	3.3	60	105	25	---	2.2	3.9	182	57	49	97	2.9
31	3.1	---	104	25	---	2.2	---	194	---	52	58	---
TOTAL	94.1	1416.3	2670	1406.75	1063	214.0	97.3	1278.7	2992.7	1048	2285	883.0
MEAN	3.04	47.2	86.1	45.4	38.0	6.90	3.24	41.2	99.8	33.8	73.7	29.4
MAX	3.8	72	108	110	45	33	3.9	194	178	54	127	88
MIN	1.9	3.0	26	.39	11	1.3	2.2	3.6	8.7	13	47	2.9
AC-FT	187	2810	5300	2790	2110	424	193	2540	5940	2080	4530	1750

CAL YR 1978 TOTAL 13523.70 MEAN 37.1 MAX 285 MIN 1.2 AC-FT 26820
WTR YR 1979 TOTAL 15448.95 MEAN 42.3 MAX 194 MIN .39 AC-FT 30640

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA

LOCATION.--Lat 38°45'49", long 120°19'39", in SW¼SW¼ sec.29, T.11 N., R.15 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank beside U.S. Highway 50, 0.8 mi (1.3 km) downstream from Silver Fork of South Fork, and 1.9 mi (3.1 km) southwest of Kyburz.

DRAINAGE AREA.--193 mi² (500 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to December 1907, October 1922 to current year. Prior to October 1956, records for river and El Dorado Canal published separately; combined flow only, October 1956 to September 1960.

REVISED RECORDS.--WSP 1445: 1923(M), 1925(M), 1927(M), 1928 (river only), 1935-37(M). WSP 1515: 1928 (combined). WSP 1931: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder for canal diversion. Altitude of gage is 3,840-ft (1,170 m), from topographic map. Prior to Oct. 1, 1962, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Flow at low and medium stages greatly regulated by four reservoirs since beginning of record, total capacity, 37,100 acre-ft (45.7 hm³). See schematic diagram of South Fork American River basin. For records of combined discharge of river and canal, 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: 57 years (water years 1923-79), 285 ft³/s (8.071 m³/s), 206,500 acre-ft/yr (255 hm³/yr).
Combined river and diversion: 57 years (water years 1923-79), 401 ft³/s (11.36 m³/s), 290,500 acre-ft/yr (358 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 17,400 ft³/s (493 m³/s) Dec. 23, 1964, gage height, 10.92 ft (3.328 m), from rating curve extended above 6,300 ft³/s (178 m³/s) on basis of contracted-opening measurement at gage height 10.40 ft (3.170 m); minimum daily, 0.13 ft³/s (0.004 m³/s) Nov. 26, 1977. Combined flow, maximum discharge, 17,500 ft³/s (496 m³/s) Dec. 23, 1964; minimum daily, 10 ft³/s (0.28 m³/s) Oct. 17, 19, 1929.

EXTREMES FOR CURRENT YEAR. River only, 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. 11	1500	*3440	97.4	6.84	2.085	May 21	2115	3280	92.9	6.74	2.054
May 4	2045	2070	58.6	5.84	1.780	May 26	2145	2810	79.6	6.42	1.957
May 15	2145	2590	73.3	6.26	1.908	May 29	0015	2060	58.3	5.83	1.777
May 19	2100	3070	86.9	6.60	2.012						

Minimum daily discharge, 2.9 ft³/s (0.082 m³/s) Dec. 24, 25, Feb. 2, 4.

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	43	8.5	33	53	7.0	19	132	1170	1310	85	4.6	6.5
2	43	8.1	5.4	35	2.9	12	133	1050	1220	72	4.5	8.2
3	43	7.1	9.2	7.5	5.8	9.5	143	1390	1220	67	5.4	12
4	42	4.6	22	3.6	2.9	21	190	1580	1240	61	4.7	12
5	41	17	34	5.4	4.0	37	313	1640	1190	54	5.4	25
6	42	4.3	13	4.8	4.2	79	449	1370	1210	44	4.9	16
7	42	4.5	40	4.5	8.1	168	333	1070	1090	36	6.5	9.1
8	42	4.8	55	12	6.1	207	368	886	875	26	7.2	8.2
9	41	8.9	58	16	4.8	235	433	759	779	11	5.1	8.1
10	41	5.4	37	21	6.4	285	323	761	778	9.6	4.7	8.0
11	41	5.4	3.6	1720	6.1	319	302	883	784	18	4.6	7.8
12	38	5.4	4.6	723	5.4	294	312	1120	714	13	4.4	9.2
13	28	5.1	7.0	246	49	318	478	1460	699	6.7	4.4	7.7
14	12	5.3	3.9	150	213	311	619	1650	613	4.7	5.1	8.0
15	11	5.0	3.6	99	84	316	705	1870	514	10	6.0	7.5
16	10	5.6	5.9	57	58	242	759	1960	462	6.4	4.9	8.9
17	9.2	4.8	29	24	30	185	596	2010	443	5.7	6.2	4.4
18	9.6	4.5	7.9	7.3	29	161	433	2170	384	5.5	7.5	7.2
19	9.6	4.5	5.1	5.3	32	141	369	2300	274	5.3	7.6	6.9
20	9.6	4.8	4.9	13	23	117	368	2320	199	6.6	7.8	7.0
21	9.6	17	36	8.7	22	105	414	2450	195	54	10	6.6
22	7.3	7.2	19	8.7	21	95	511	2400	180	148	29	6.6
23	6.7	4.8	6.9	5.4	15	86	493	2120	153	40	10	6.6
24	7.8	4.5	2.9	6.9	14	98	440	1950	157	22	12	27
25	7.6	5.4	2.9	6.5	15	142	422	2000	180	8.4	10	31
26	6.7	6.7	4.5	4.3	16	172	696	2140	208	6.1	7.9	27
27	6.7	5.9	10	18	3.4	228	1440	2130	158	5.9	7.6	26
28	6.4	5.4	3.4	14	10	205	1220	1910	142	4.9	7.7	25
29	6.4	14	3.3	24	---	159	1180	1660	127	4.7	7.2	24
30	7.1	34	31	39	---	139	1270	1470	99	4.8	7.0	24
31	8.1	---	47	24	---	126	---	1380	---	4.7	4.3	---
TOTAL	678.4	228.5	593.1	3366.9	698.1	5031.5	15844	51029	17597	851.0	224.2	391.5
MEAN	21.9	7.62	19.1	109	24.9	162	528	1646	587	27.5	7.23	13.1
MAX	43	34	58	1720	213	319	1440	2450	1310	148	29	31
MIN	6.4	4.3	2.9	3.6	2.9	9.5	132	759	99	4.7	4.3	4.4
AC-FT	1350	453	1180	6680	1380	9980	31430	101200	34900	1690	445	777

CAL YR 1978 TOTAL 132511.03 MEAN 363 MAX 2270 MIN .73 AC-FT 262800
WTR YR 1979 TOTAL 45533.20 MEAN 204 MAX 2450 MIN 2.4 AC-FT 191500

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SOUTH FORK AMERICAN RIVER
AND EL DORADO CANAL NEAR KYBURZ, CA., WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	38	192	172	147	165	271	1320	1470	251	168	148
2	47	41	126	159	134	155	276	1200	1380	238	164	168
3	47	40	146	150	139	158	287	1540	1380	233	168	177
4	46	38	186	149	131	169	338	1730	1400	227	168	174
5	45	129	199	151	128	185	463	1790	1350	218	170	191
6	45	154	161	164	138	228	591	1510	1370	208	167	182
7	42	106	169	162	155	311	474	1210	1250	201	172	168
8	42	100	176	168	157	346	514	1030	1030	190	172	165
9	41	146	181	173	156	375	581	903	937	171	168	170
10	41	165	176	175	159	425	465	906	936	171	164	168
11	41	165	128	1850	156	459	443	1030	942	182	164	170
12	38	163	161	854	155	434	457	1270	872	175	162	171
13	42	163	172	381	197	458	623	1610	857	168	162	159
14	53	157	166	285	357	451	764	1800	773	167	169	162
15	59	151	163	234	229	454	850	2020	675	174	171	148
16	58	167	158	196	203	377	902	2110	623	169	167	170
17	45	161	190	158	175	320	735	2160	604	168	168	123
18	38	160	160	150	174	296	578	2320	545	162	172	170
19	36	158	164	141	177	276	515	2450	435	156	168	171
20	35	161	177	147	167	252	515	2470	360	170	165	173
21	35	181	158	156	167	242	561	2600	356	220	176	171
22	33	171	151	150	166	234	658	2550	343	314	193	173
23	31	164	146	141	159	229	637	2270	317	206	164	169
24	32	161	143	155	157	243	584	2110	321	188	178	48
25	33	155	142	155	160	287	568	2160	346	171	176	31
26	33	156	145	142	161	315	840	2300	374	162	173	27
27	33	151	170	156	128	361	1580	2290	324	169	172	26
28	31	166	165	155	153	335	1370	2070	308	165	174	25
29	32	178	159	158	---	295	1330	1820	293	166	173	24
30	32	198	172	170	---	277	1420	1630	264	169	172	24
31	34	---	175	154	---	264	---	1540	---	165	133	---
TOTAL	1247	4244	5077	7711	4685	9376	20188	55719	22435	5894	5233	4046
MEAN	40.2	141	164	249	167	302	673	1797	748	190	169	135
MAX	59	198	199	1850	357	459	1588	2600	1470	314	193	191
MIN	31	38	126	141	128	155	271	903	264	156	133	24
AC-FT	2470	8420	10070	15290	9290	18600	40040	110500	44500	11690	10380	8030
CAL YR 1978	TOTAL	180851	MEAN 495	MAX	2420	MIN 31	AC-FT	358700				
WTR YR 1979	TOTAL	145855	MEAN 400	MAX	2600	MIN 24	AC-FT	289300				

SACRAMENTO RIVER BASIN

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

WATER TEMPERATURES: Water years 1966 to January 1979 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1966 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder August 1966 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C July 16-18, 1972; minimum recorded, 0.0°C on many days in most years.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 14.5°C Oct. 1-4; minimum recorded, 0.0°C on many days during December and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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 CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAY 31...	1330	1280	23	5.7	9.0	10.5	K1	K3	7	3	1.9	.5
JUL 30...	1300	4.7	32	7.4	22.5	8.3	K5	K8	11	0	3.0	.8

DATE	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 CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAY 31...	1.6	30	.3	2.5	.9	4	2.7	1.5	.1	8.9	18
JUL 30...	2.7	33	.4	3.6	.9	12	.5	3.3	.0	11	28

DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTH0, DIS- SOLVED (MG/L AS P)
MAY 31...	21	.02	.02	.03	.02	.15	.17	.19	.01	.008	.00
JUL 30...	29	.04	.00	.00	.00	.28	.28	.28	.00	.010	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY 31...	1330	--	--	40	160	150	10	10	10	0	1.8
JUL 30...	1300	30	20	10	60	30	30	0	0	5	2.0

K Results based on colony count outside the acceptable range (non-ideal colony count).

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	12.0	6.5	5.0	4.5	2.5	0.0	0.0				
2	14.5	11.5	6.0	5.0	2.5	1.5	0.0	0.0				
3	14.5	11.5	6.0	4.0	1.5	0.5	0.5	0.0				
4	14.5	11.5	6.5	4.5	2.5	0.5	1.0	0.5				
5	14.0	11.5	6.5	4.5	3.0	1.0	2.0	1.0				
6	13.5	11.0	7.0	5.0	1.0	0.0	1.5	1.0				
7	13.0	10.0	7.5	6.0	0.0	0.0	2.0	1.5				
8	13.0	9.5	7.0	5.5	0.0	0.0	2.5	0.5				
9	13.0	10.0	6.5	5.0	0.0	0.0	2.0	1.0				
10	13.0	10.0	6.0	4.5	0.5	0.0	2.5	1.5				
11	13.0	9.5	4.5	3.5	1.0	0.5	2.0	0.5				
12	13.0	10.0	3.5	1.5	1.0	0.5	2.0	1.5				
13	12.5	10.0	3.5	1.5	1.0	0.5	1.5	0.5				
14	12.5	10.0	2.5	1.5	1.0	1.0	2.0	0.5				
15	12.5	10.0	1.5	1.0	1.0	0.5	1.0	0.5				
16	12.0	9.5	4.0	1.5	1.0	0.5	0.5	0.0				
17	12.0	9.0	3.5	3.0	1.0	0.0	0.5	0.0				
18	11.5	9.5	3.5	2.5	0.5	0.0	1.0	0.5				
19	11.0	9.0	4.0	2.5	0.5	0.0	0.5	0.0				
20	10.5	8.5	5.5	4.0	0.5	0.0	0.5	0.0				
21	10.0	8.0	5.0	2.5	0.0	0.0	2.0	0.5				
22	9.5	8.0	3.0	2.5	0.5	0.0	1.0	0.5				
23	9.0	7.0	3.0	2.0	0.5	0.0	1.0	0.5				
24	8.5	6.5	2.0	1.5	0.5	0.5	1.5	0.5				
25	8.5	6.5	1.5	1.0	0.5	0.5	1.0	0.5				
26	8.5	6.5	1.5	0.5	0.5	0.5	0.5	0.0				
27	8.0	6.5	2.0	0.5	0.5	0.5	0.5	0.0				
28	8.0	6.5	2.5	1.0	1.0	0.5	0.5	0.0				
29	7.5	6.0	5.0	2.0	0.5	0.5	0.5	0.0				
30	6.5	5.5	4.5	3.5	0.5	0.0	0.5	0.0				
31	6.5	5.0	---	---	0.0	0.0	0.5	0.0				
MONTH	14.5	5.0	7.5	0.5	4.5	0.0	2.5	0.0				

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	12.0	6.5	5.0	4.5	2.5	0.0	0.0				
2	14.5	11.5	6.0	5.0	2.5	1.5	0.0	0.0				
3	14.5	11.5	6.0	4.0	1.5	0.5	0.5	0.0				
4	14.5	11.5	6.5	4.5	2.5	0.5	1.0	0.5				
5	14.0	11.5	6.5	4.5	3.0	1.0	2.0	1.0				
6	13.5	11.0	7.0	5.0	1.0	0.0	1.5	1.0				
7	13.0	10.0	7.5	6.0	0.0	0.0	2.0	1.5				
8	13.0	9.5	7.0	5.5	0.0	0.0	2.5	0.5				
9	13.0	10.0	6.5	5.0	0.0	0.0	2.0	1.0				
10	13.0	10.0	6.0	4.5	0.5	0.0	2.5	1.5				
11	13.0	9.5	4.5	3.5	1.0	0.5	2.0	0.5				
12	13.0	10.0	3.5	1.5	1.0	0.5	2.0	1.5				
13	12.5	10.0	3.5	1.5	1.0	0.5	1.5	0.5				
14	12.5	10.0	2.5	1.5	1.0	1.0	2.0	0.5				
15	12.5	10.0	1.5	1.0	1.0	0.5	1.0	0.5				
16	12.0	9.5	4.0	1.5	1.0	0.5	0.5	0.0				
17	12.0	9.0	3.5	3.0	1.0	0.0	0.5	0.0				
18	11.5	9.5	3.5	2.5	0.5	0.0	1.0	0.5				
19	11.0	9.0	4.0	2.5	0.5	0.0	0.5	0.0				
20	10.5	8.5	5.5	4.0	0.5	0.0	0.5	0.0				
21	10.0	8.0	5.0	2.5	0.0	0.0	2.0	0.5				
22	9.5	8.0	3.0	2.5	0.5	0.0	1.0	0.5				
23	9.0	7.0	3.0	2.0	0.5	0.0	1.0	0.5				
24	8.5	6.5	2.0	1.5	0.5	0.5	1.5	0.5				
25	8.5	6.5	1.5	1.0	0.5	0.5	1.0	0.5				
26	8.5	6.5	1.5	0.5	0.5	0.5	0.5	0.0				
27	8.0	6.5	2.0	0.5	0.5	0.5	0.5	0.0				
28	8.0	6.5	2.5	1.0	1.0	0.5	0.5	0.0				
29	7.5	6.0	5.0	2.0	0.5	0.5	0.5	0.0				
30	6.5	5.5	4.5	3.5	0.5	0.0	0.5	0.0				
31	6.5	5.0	---	---	0.0	0.0	0.5	0.0				
MONTH	14.5	5.0	7.5	0.5	4.5	0.0	2.5	0.0				

11440000 ALDER CREEK NEAR WHITE HALL, CA

LOCATION.--Lat 38°45'19", long 120°22'17", in NE¼SE¼ sec.35, T.11 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 0.9 mi (1.4 km) upstream from mouth, and 2.2 mi (3.5 km) south-east of White Hall.

DRAINAGE AREA.--22.1 mi² (57.2 km²).

PERIOD OF RECORD.--October 1922 to current year (includes diversions by pipeline).

REVISED RECORDS.--WSP 1215: 1928(M). WSP 1445: 1925(M), 1929, 1935-36(M), 1938(M), 1940-43(M), 1945(M).

GAGE.--Water-stage recorder. Broad-crested weir with V-notch since Aug. 28, 1964. Altitude of gage is 3,840 ft (1,170 m), from topographic map. Prior to July 23, 1924, nonrecording gage at same site and datum.

REMARKS.--Records include flow diverted 1,300 ft (396 m) above station by pipeline into El Dorado Canal from Oct. 13 to June 13.

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 (including diversions by pipeline).--57 years, 37.2 ft³/s (1.054 m³/s), 26,950 acre-ft/yr (33.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only, maximum discharge, 5,500 ft³/s (156 m³/s) Dec. 23, 1955, gage height, 8.40 ft (2.560 m), from floodmarks, from rating curve extended above 600 ft³/s (17.0 m³/s); no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Creek only, peak discharges above base of 170 ft³/s (4.8 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. 11	1530	*351	9.94	3.76	1.146	May 4	1000	184	5.21	3.21	0.978
Apr. 27	2230	253	7.16	3.46	1.055	May 6	1415	238	6.74	3.41	1.039
Apr. 30	0330	210	5.95	3.31	1.009	May 16	1630	174	4.93	3.17	.966

Minimum daily discharge, 0.06 ft³/s (0.002 m³/s) many days.

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	2.5	2.4	7.5	4.0	11	26	90	202	50	7.1	2.7	1.8
2	2.6	2.8	7.3	4.0	11	26	90	178	45	6.9	2.5	1.8
3	2.5	2.8	5.4	4.0	11	26	89	177	41	6.9	2.5	1.8
4	1.7	2.9	5.3	4.2	11	28	94	188	38	6.7	2.4	1.8
5	1.9	2.8	5.1	4.2	11	32	108	202	35	6.3	2.3	1.8
6	2.1	2.8	5.0	4.2	8.1	47	130	233	32	6.3	2.1	1.5
7	2.1	2.8	4.2	4.2	7.7	68	128	228	29	5.7	2.3	1.5
8	2.1	2.8	3.8	7.6	7.3	85	131	202	26	5.7	2.4	1.5
9	2.1	2.8	3.8	6.9	7.3	96	134	175	23	5.6	2.1	1.5
10	2.1	3.1	3.8	7.3	7.5	109	124	157	21	5.1	2.1	1.5
11	2.2	4.3	3.8	184	7.9	122	118	146	19	5.1	2.1	1.3
12	2.3	4.4	3.8	114	7.8	124	118	145	17	5.0	2.1	1.3
13	3.5	4.4	3.7	63	46	125	128	150	16	4.6	2.1	1.3
14	2.2	4.1	3.7	46	125	124	137	161	11	4.5	2.1	1.3
15	2.2	4.0	3.7	37	79	131	145	171	11	4.1	2.1	1.3
16	2.2	3.8	3.5	29	64	127	154	179	12	4.1	2.1	1.3
17	2.7	3.8	3.6	25	52	111	149	180	12	3.7	2.1	1.3
18	3.5	3.7	3.2	23	46	101	132	174	12	3.7	2.1	1.3
19	2.9	3.7	3.1	20	43	91	119	169	11	3.6	1.8	1.3
20	2.2	3.7	3.1	17	40	83	113	164	9.9	3.5	1.8	1.3
21	2.2	5.8	3.1	16	36	79	111	157	8.9	4.7	2.1	1.3
22	2.2	4.6	3.1	15	29	76	114	149	8.2	5.8	2.1	1.3
23	2.2	4.6	3.1	14	29	72	120	141	8.7	4.5	1.8	1.3
24	2.2	4.4	3.4	15	28	73	121	128	10	4.0	1.8	1.3
25	2.2	4.3	3.8	15	29	79	121	105	9.5	3.7	1.8	1.3
26	2.2	3.8	4.3	16	28	87	147	99	8.9	3.3	1.8	1.3
27	2.2	3.8	4.4	16	26	126	239	89	8.5	3.2	1.8	1.3
28	2.2	3.7	4.4	16	26	122	229	76	8.1	3.2	1.5	1.3
29	2.2	3.7	4.5	18	---	107	210	65	7.7	3.1	1.8	1.3
30	2.2	3.7	4.5	14	---	99	206	57	7.4	2.8	2.1	1.3
31	2.4	---	4.6	12	---	94	---	56	---	2.8	2.1	---
TOTAL	72.0	110.2	129.6	775.0	834.6	2696	4049	4703	556.8	145.3	64.5	42.5
MEAN	2.32	3.67	4.18	25.0	29.8	87.0	135	152	18.6	4.69	2.08	1.42
MAX	3.5	5.8	7.5	184	125	131	239	233	50	7.1	2.7	1.8
MIN	1.7	2.4	3.1	4.0	7.3	26	89	56	7.4	2.8	1.5	1.3
AC-FT	143	219	257	1540	1660	5350	8030	9330	1100	288	128	84
CAL YR 1978	TOTAL	20046.5	MEAN 54.9	MAX 332	MIN 1.5	AC-FT	39760					
WTR YR 1979	TOTAL	14179.1	MEAN 38.8	MAX 239	MIN 1.3	AC-FT	28120					

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA

LOCATION.--Lat 38°51'49", long 120°26'15", in NW¼NW¼ sec.29, T.12 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, in valve control house near left bank at Union Valley Dam on Silver Creek, 0.7 mi (1.1 km) upstream from Little Silver Creek, and 6.6 mi (10.6 km) north of Riverton.

DRAINAGE AREA.--83.7 mi² (216.8 km²).

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District).

REMARKS.--Reservoir is formed by earthfill dam completed in December 1962. Storage began in May 1962. Usable capacity, 270,300 acre-ft (333 hm³) between elevations 4,645.0 ft (1,415.80 m), minimum operating level and 4,870.0 ft (1,484.38 m), top of radial spillway gates. Dead storage, 7,000 acre-ft (8.63 hm³). Reservoir receives water from the South Fork Rubicon River via Robbs Peak powerplant (station 11429800). Water is used for power development in the South Fork American River basin. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Middle Fork American and Rubicon River basins and South Fork American River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 279,100 acre-ft (344 hm³) July 9, 1974, revised (based on revised capacity table), elevation, 4,870.6 ft (1,484.56 m); minimum since reservoir first filled, 18,300 acre-ft (22.6 hm³) Jan. 13, 1977, elevation, 4,683.3 ft (1,427.47 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 276,100 acre-ft (340 hm³) June 26-29, elevation, 4,869.6 ft (1,484.25 m); minimum, 159,200 acre-ft (196 hm³) Feb. 12, elevation, 4,822.4 ft (1,469.87 m).

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

4,680	17,000	4,780	90,000
4,700	25,000	4,800	118,900
4,720	35,300	4,820	154,400
4,740	48,800	4,840	197,400
4,760	66,800	4,870	277,300

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202900	204600	179500	173000	164200	160600	181900	214700	264200	275800	248700	220500
2	203600	204600	179000	172100	163600	160600	181900	216700	264500	275500	246800	220200
3	203900	204600	179000	171700	163200	160400	183000	219200	265900	274900	245400	219700
4	204100	204100	179000	171100	163200	160800	183900	222500	266200	274900	243800	218700
5	204300	203400	178600	170700	162400	160800	185500	226200	266200	274600	243500	216900
6	204600	202400	178400	170000	161800	161000	187300	229600	266200	274100	242100	215700
7	204800	201200	178000	170000	161200	161600	187700	231700	267100	273500	241000	214900
8	205100	200000	177100	169600	160600	162400	189100	233000	267400	273500	240000	213900
9	205100	198600	176400	169200	159800	163200	190000	234300	267700	273200	238900	213400
10	205300	197400	176400	169000	159400	164400	190500	235400	268200	272600	237800	211700
11	205800	196700	176200	173400	159600	165700	190900	237000	268500	272000	236500	210000
12	206500	196000	175800	176400	159200	166900	191200	238600	269700	271100	235900	208200
13	206800	194600	175400	176900	159800	167900	192100	241600	270000	270300	234600	206500
14	205300	193500	174900	177700	160800	169200	193200	244300	271100	269400	233300	204100
15	205300	192800	174500	177300	160800	170700	195300	247000	272300	269100	231700	202400
16	205100	190500	174100	176900	161000	171300	196500	249800	273800	268000	230600	202200
17	204800	189300	174500	176600	161000	171500	197700	252300	274900	266800	231100	201200
18	205100	188000	174500	176400	161600	172800	198100	254800	275500	266200	231700	199300
19	204800	187700	174300	176000	162000	173200	198400	256200	275800	265400	232200	197700
20	204600	186800	173800	175600	161800	173600	198400	257400	275800	263900	232200	195800
21	204600	185700	173400	175800	161800	174100	198400	258800	275800	262500	231100	193900
22	204600	184600	173200	174900	161800	174100	199300	260200	275500	262500	230100	192100
23	204600	184300	173200	173600	161600	174300	200000	261100	275500	261400	228800	191200
24	204600	183900	173200	172100	161400	174900	200300	261900	275800	259900	227700	189800
25	204600	183900	173200	170900	161600	175600	200300	262500	275800	258200	226700	188000
26	204600	183900	173200	169600	161400	176400	201900	263600	276100	256500	226400	186100
27	204600	182800	173200	168100	161000	178200	205600	264500	276100	254800	225400	184300
28	204600	181700	173000	168400	160800	178800	208000	265100	276100	253200	224600	182300
29	204600	180400	173000	167500	---	179700	210500	264800	276100	253200	223600	180600
30	204600	179300	173000	166500	---	180400	212700	264500	275800	251800	222500	180400
31	204600	---	173000	165200	---	181200	---	263900	---	250400	221800	---
MAX	206800	204600	179500	177700	164200	181200	212700	265100	276100	275800	248700	220500
MIN	202900	179300	173000	165200	159200	160400	181900	214700	264200	250400	221800	180400
†	4843.0	4832.0	4829.1	4825.4	4823.2	4832.9	4846.3	4865.4	4869.5	4860.6	4849.9	4832.5
‡	+1700	-25300	-6300	-7800	-4400	+20400	+31500	+51200	+11900	-25400	-28600	-41400

CAL YR 1978 ‡ a +99920

WTR YR 1979 ‡ a -22500

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

‡ Change in contents, in acre-feet.

a Computed on basis of revised capacity table put into use October 1, 1978.

SACRAMENTO RIVER BASIN

11441100 ICE HOUSE RESERVOIR NEAR KYBURZ, CA

LOCATION.--Lat 38°49'26", long 120°21'34", in SE¼SW¼ sec.1, T.11 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on left bank at Ice House Dam on South Fork Silver Creek, 0.5 mi (0.8 km) upstream from Peavine Creek, and 4.8 mi (7.7 km) northwest of Kyburz.

DRAINAGE AREA.--27.2 mi² (70.4 km²).

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

REVISED RECORDS.--WSP 1931: 1960.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District).

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 15, 1959. Usable capacity, 45,800 acre-ft (56.5 hm³) between elevations 5,327.5 ft (1,623.82 m), centerline of fishwater outlet, and 5,450.0 ft (1,661.16 m), top of spillway gates. Dead storage, 160 acre-ft (197,000 m³). Reservoir is used to store water for power development. See schematic diagram of South Fork American River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 46,400 acre-ft (57.2 hm³) June 27, 1971, elevation, 5,450.6 ft (1,661.34 m); minimum since reservoir first filled, 1,740 acre-ft (2.15 hm³) Oct. 5-9, 1962, elevation, 5,349.85 ft (1,630.634 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,400 acre-ft (56.0 hm³) June 25 to July 2, elevation, 5,449.2 ft (1,660.92 m); minimum, 23,400 acre-ft (28.9 hm³) Apr. 6, elevation, 5,411.9 ft (1,649.55 m).

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

5,349	1,600	5,400	17,600
5,350	1,760	5,420	27,400
5,360	3,840	5,440	39,200
5,380	9,600	5,451	46,700

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34900	25600	25800	26200	26800	23800	26700	29700	44200	45400	42300	37000
2	34200	25600	25800	26200	26700	23900	26300	30000	44400	45400	42200	37000
3	33300	25600	25900	26200	26600	24000	25400	30500	44600	45300	42000	36900
4	32500	25700	26000	26200	26400	24000	24600	31100	44700	45200	41800	36900
5	31600	25700	25900	26200	26200	24000	23800	31600	44900	45100	41700	36800
6	30800	25700	25900	26200	26100	24200	23400	32200	45100	45100	41700	36800
7	30100	25700	25900	26200	25900	24200	23600	32500	45100	44900	41600	36800
8	29600	25700	25900	26200	25800	24200	23600	32700	45100	44800	41600	36800
9	28800	25700	26000	26300	25600	24400	23700	32800	45000	44700	41600	36700
10	28000	25700	26000	26400	25400	24500	23800	32900	45000	44600	41600	36700
11	27200	25600	26000	27200	25200	24600	23800	33300	45000	44600	41500	36700
12	26600	25600	26000	27600	25200	24800	24000	33700	45000	44400	41500	36600
13	26100	25600	26000	27800	25200	24900	24200	34200	45100	44400	41400	36600
14	26000	25600	26000	27900	25300	25000	24500	34800	45200	44200	41300	36600
15	26000	25700	26000	28000	25200	25200	24800	35600	45300	44100	41300	36600
16	26000	25700	26000	28100	25000	25200	25100	36400	45200	43900	41100	36500
17	26000	25700	26000	28200	25000	25400	25400	37300	45200	43800	40100	36500
18	26000	25700	26100	28200	24900	25400	25600	38300	45200	43700	39100	36500
19	26000	25600	26100	28200	24800	25600	25700	39400	45300	43600	38100	36400
20	26000	25600	26200	28300	24700	25600	25900	40400	45200	43500	37400	36400
21	26000	25700	26200	28400	24600	25700	26100	41200	45200	43500	37300	36400
22	25900	25700	26200	28400	24500	25800	26300	41700	45200	43500	37300	36300
23	25900	25800	26200	28200	24400	25800	26500	42100	45300	43500	37300	36300
24	25900	25700	26200	28000	24200	25900	26700	42400	45300	43300	37300	36300
25	25800	25700	26200	27900	24100	26000	26800	42900	45400	43200	37200	36200
26	25800	25800	26200	27800	24000	26100	27200	43300	45400	43100	37200	36200
27	25800	25800	26200	27600	23800	26200	27800	43700	45400	42900	37100	36100
28	25800	25800	26200	27400	23800	26400	28400	43900	45400	42800	37100	36100
29	25800	25800	26200	27300	---	26400	28800	44000	45400	42700	37000	36100
30	25700	25800	26200	27200	---	26600	29300	44000	45400	42600	37000	36100
31	25600	---	26200	27000	---	26600	---	44100	---	42400	37000	---
MAX	34900	25800	26200	28400	26800	26600	29300	44100	45400	45400	42300	37000
MIN	25600	25600	25800	26200	23800	23800	23400	29700	44200	42400	37000	36100
†	5416.4	5416.7	5417.5	5419.2	5412.8	5418.4	5423.7	5447.4	5449.2	5444.9	5436.6	5435.1
‡	-9900	+200	+400	+800	-3200	+2800	+2700	+14800	+1300	-3000	-5400	-900

CAL YR 1978 † +12700

WTR YR 1979 † +600

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

‡ Change in contents, in acre-feet.

11441500 SOUTH FORK SILVER CREEK NEAR ICE HOUSE, CA

LOCATION.--Lat 38°49'08", long 120°21'51", in NW¼NW¼ sec.12, T.11 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 300 ft (91 m) upstream from Peavine Creek, 0.4 mi (0.6 km) downstream from Ice House Dam, and 4.8 mi (7.7 km) northwest of Kyburz.

DRAINAGE AREA.--27.5 mi² (71.2 km²).

PERIOD OF RECORD.--October 1924 to current year.

REVISED RECORDS.--WSP 1395: 1928, 1938. WSP 1635: Drainage area at former site.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,290 ft (1,612 m), from topographic map. Prior to Oct. 1, 1959, at site 0.3 mi (0.5 km) upstream at different datum.

REMARKS.--Records excellent. Flow regulated by Ice House Reservoir beginning in December 1959 (station 11441100). See schematic diagram of South Fork American River basin.

AVERAGE DISCHARGE (adjusted for change in contents in Ice House Reservoir).--55 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, 3,940 ft³/s (112 m³/s) Dec. 23, 1955, gage height, 6.71 ft (2.045 m) site and datum then in use, from rating curve extended above 540 ft³/s (15.3 m³/s) on basis of slope-area measurement at gage height 6.69 ft (2.039 m); no flow Oct. 31 to Nov. 9, 1958. Maximum discharge since construction of Ice House Dam in 1959, 1,800 ft³/s (51.0 m³/s) Jan. 22, 1970, gage height, 5.66 ft (1.725 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of flow over dam of peak flow; minimum daily, 1.2 ft³/s (0.03 m³/s) Mar. 17-19, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 513 ft³/s (14.5 m³/s) Aug. 17, gage height, 4.51 ft (1.375 m); minimum daily, 5.9 ft³/s (0.167 m³/s) Nov. 3-7.

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	324	9.3	8.0	7.2	106	7.3	8.0	55	166	52	77	13
2	357	6.1	7.2	7.5	106	7.2	257	89	158	67	77	13
3	412	5.9	7.0	7.5	106	7.4	497	89	158	80	76	13
4	426	5.9	6.9	7.0	105	7.4	497	89	158	80	75	13
5	425	5.9	7.1	7.1	105	7.5	493	90	158	80	75	13
6	421	5.9	6.9	7.2	105	7.7	360	91	158	80	40	13
7	370	5.9	6.9	7.4	105	7.9	29	91	158	81	13	13
8	280	6.1	6.9	7.7	105	7.9	54	91	158	80	13	13
9	373	6.1	6.9	7.6	105	7.9	54	92	158	80	13	13
10	432	6.1	6.9	8.0	105	8.1	54	91	158	80	13	14
11	410	6.1	6.9	14	105	8.1	40	91	158	80	13	14
12	394	6.1	6.9	8.9	63	8.1	8.6	91	130	79	13	14
13	243	6.1	7.1	7.8	7.7	8.1	8.6	91	81	80	13	13
14	13	6.1	7.1	7.7	39	8.1	8.4	92	78	80	13	13
15	13	6.1	6.9	7.5	98	8.2	8.4	93	80	80	13	13
16	14	6.1	7.0	7.5	98	7.9	8.3	93	80	80	123	13
17	13	6.1	7.0	7.5	98	7.8	7.5	93	80	79	506	14
18	11	6.1	7.1	7.5	98	7.8	7.4	93	80	78	503	14
19	11	6.1	6.9	7.6	98	7.7	7.3	94	80	78	501	14
20	12	6.4	7.0	7.7	98	7.6	7.3	94	80	78	340	14
21	13	6.9	7.1	7.7	98	7.7	7.3	158	67	78	15	14
22	13	6.7	7.1	39	100	7.8	7.3	256	52	78	15	14
23	13	6.8	7.2	101	105	8.0	7.9	256	52	78	14	14
24	13	6.9	7.4	101	105	8.0	7.8	257	52	78	13	14
25	13	6.9	7.4	105	104	8.1	7.5	257	52	78	13	14
26	13	6.9	7.2	108	105	8.1	8.0	258	52	79	13	14
27	13	6.9	7.2	107	104	8.5	7.8	259	52	79	13	14
28	13	6.9	7.3	107	68	8.2	7.5	259	52	80	13	14
29	13	7.1	7.2	106	---	8.0	7.5	260	52	77	13	14
30	13	7.1	7.5	106	---	8.1	11	260	52	77	13	14
31	13	---	7.4	106	---	7.9	---	228	---	77	13	---
TOTAL	5097	193.6	220.6	1151.6	2644.7	244.1	2494.4	4501	3050	2411	2658	407
MEAN	164	6.45	7.12	37.1	94.5	7.87	83.1	145	102	77.8	85.7	13.6
MAX	432	9.3	8.0	108	106	8.5	497	260	166	81	506	14
MIN	11	5.9	6.9	7.0	7.7	7.2	7.3	55	52	52	13	13
AC-FT	10110	384	438	2280	5250	484	4950	8930	6050	4780	5270	807

CAL YR 1978 TOTAL 27311.7 MEAN 74.8 MAX 432 MIN 4.9 AC-FT 54170 MEAN ‡ 94.2 AC-FT ‡ 66870
WTR YR 1979 TOTAL 25073.0 MEAN 68.7 MAX 506 MIN 5.9 AC-FT 49730 MEAN ‡ 69.5 AC-FT ‡ 50330

‡ Adjusted for change in contents in Ice House Reservoir.

SACRAMENTO RIVER BASIN

11441900 SILVER CREEK BELOW CAMINO DIVERSION DAM, CA

LOCATION.--Lat 38°49'26", long 120°32'18", on line between secs.4 and 5, T.11 N., R.13 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 300 ft (91 m) downstream from Round Tent Canyon, 0.4 mi (0.6 km) downstream from diversion dam, and 5 mi (8 km) northeast of Pollock Pines.

DRAINAGE AREA, --171 mi² (443 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2,754.06 ft (839.438 m) National Geodetic Vertical Datum of 1929 (Sacramento Municipal Utility District bench mark).

REMARKS.--Records good. Flow is regulated by Ice House Reservoir (station 11441100) since 1959, Union Valley Reservoir (station 11441001) since 1962, Junction and Camino reservoirs, and diversions to Camino powerplant since 1961. See schematic diagram of South Fork American River basin.

AVERAGE DISCHARGE (unadjusted).--19 years, 80.7 ft³/s (2.285 m³/s), 58,470 acre-ft/yr (72.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s (547 m³/s) Jan. 31, 1963, gage height, 11.28 ft (3.438 m) in gage well, 11.9 ft (3.63 m) from floodmarks, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 2.0 ft³/s (0.057 m³/s) Mar. 7, 8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 677 ft³/s (19.2 m³/s) Jan. 11, gage height, 4.95 ft (1.509 m); minimum daily, 8.7 ft³/s (0.25 m³/s) Nov. 2.

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	21	13	13	10	12	23	24	13	16	16	15	15
2	21	8.7	11	10	12	21	22	14	16	16	15	15
3	21	9.0	11	10	12	21	21	15	16	16	16	15
4	21	9.4	11	11	12	22	20	16	16	16	15	15
5	21	9.4	11	10	12	23	20	17	16	16	15	15
6	22	9.4	10	10	12	27	22	18	15	16	16	15
7	22	10	10	11	12	32	21	25	15	16	16	15
8	22	10	10	13	12	36	20	27	15	16	16	15
9	22	10	10	12	11	38	20	27	15	15	16	15
10	21	10	10	13	12	40	19	25	15	15	16	15
11	21	11	10	127	12	41	19	23	15	15	16	15
12	20	11	10	38	12	41	18	21	15	15	15	15
13	20	11	10	26	20	39	17	20	15	15	15	15
14	20	11	10	22	42	35	16	19	15	15	15	15
15	20	11	10	21	30	47	15	19	15	15	15	15
16	20	11	10	19	26	45	15	18	15	15	15	15
17	20	11	11	18	23	38	16	17	15	15	15	15
18	20	11	11	16	23	34	15	15	15	15	15	16
19	20	11	11	14	22	29	14	15	15	15	15	16
20	20	11	11	14	22	24	13	14	15	16	15	16
21	20	12	11	14	23	22	13	14	15	16	15	15
22	20	11	11	14	22	21	13	14	15	16	15	15
23	20	11	11	13	21	20	16	14	15	16	15	16
24	20	11	11	13	20	20	16	14	15	16	15	16
25	20	11	10	13	19	20	15	15	15	16	15	16
26	20	11	10	13	21	20	17	15	15	16	15	15
27	20	11	10	12	21	27	19	15	16	16	15	15
28	20	11	10	13	21	35	17	14	16	16	16	15
29	20	11	10	12	---	32	16	15	16	15	16	15
30	20	11	10	12	---	29	14	16	16	15	16	15
31	20	---	10	12	---	26	---	16	---	16	15	---
TOTAL	635	319.9	325	566	519	928	523	540	459	483	474	456
MEAN	20.5	10.7	10.5	18.3	18.5	29.9	17.4	17.4	15.3	15.6	15.3	15.2
MAX	22	13	13	127	42	47	24	27	16	16	16	16
MIN	20	8.7	10	10	11	20	13	13	15	15	15	15
AC-FT	1260	635	645	1120	1030	1840	1040	1070	910	958	940	904
WTR YR 1978	TOTAL	7160.0	MEAN 19.6	MAX 103	MIN 7.2	AC-FT 14200						
CAL YR 1979	TOTAL	6227.9	MEAN 17.1	MAX 127	MIN 8.7	AC-FT 12350						

11442500 SOUTH FORK AMERICAN RIVER BELOW SILVER CREEK, NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°47'37", long 120°37'02", in NE¼NE¼ sec.22, T.11 N., R.12 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 350 ft (107 m) upstream from El Dorado powerhouse, 2.4 mi (3.9 km) downstream from Silver Creek, and 2.8 mi (4.5 km) northwest of Pollock Pines.

DRAINAGE AREA.--449 mi² (1,163 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to December 1923 (published as "below Silver Creek"), November 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,862.79 ft (567.778 m) National Geodetic Vertical Datum of 1929. Aug. 11 to Dec. 16, 1923, nonrecording gage at same site at different datum.

REMARKS.--Records good. Flow regulated by storage, diversions, and powerplants. See schematic diagram of South Fork American River basin.

AVERAGE DISCHARGE (unadjusted).--9 years, 378 ft³/s (10.70 m³/s), 273,900 acre-ft/yr (33.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,200 ft³/s (629 m³/s) Jan. 21, 1970, gage height, 15.22 ft (4.639 m); minimum daily, 9.6 ft³/s (0.27 m³/s) Oct. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,740 ft³/s (134 m³/s) Jan. 11, gage height, 10.65 ft (3.246 m); minimum daily, 22 ft³/s (0.62 m³/s) Nov. 8, 9.

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	75	56	79	73	79	266	426	1510	1360	141	30	30
2	74	52	69	88	54	213	405	1180	1250	127	30	28
3	72	53	33	81	42	197	394	1520	1250	115	30	29
4	71	51	30	40	47	204	424	1760	1260	108	30	32
5	71	40	44	30	45	234	535	1890	1210	101	30	32
6	69	50	53	30	41	323	749	1820	1230	89	29	45
7	72	23	37	32	41	499	652	1470	1140	77	29	37
8	69	22	76	57	43	613	642	1250	951	67	29	31
9	69	22	117	86	45	677	737	1080	851	56	31	30
10	68	27	116	58	43	672	623	1040	838	43	30	30
11	68	27	63	2240	46	746	572	1090	857	40	28	30
12	68	27	32	1300	44	723	550	1280	785	47	28	29
13	64	30	29	531	96	712	678	1530	782	42	28	30
14	63	28	28	378	839	692	842	1810	714	38	28	29
15	39	26	26	300	420	806	927	2010	622	32	28	29
16	44	25	24	207	327	743	1010	2150	565	36	29	29
17	72	26	38	142	226	577	931	2160	534	34	29	28
18	65	25	74	100	211	518	736	2270	496	32	29	29
19	56	25	65	72	252	457	624	2420	390	32	29	27
20	52	29	39	62	233	386	601	2430	310	31	30	28
21	51	48	66	65	298	362	608	2500	282	37	30	29
22	55	50	65	58	259	333	725	2530	267	208	31	29
23	55	36	44	52	242	305	767	2260	256	97	50	28
24	51	29	35	51	191	299	727	2050	254	61	33	41
25	45	27	28	52	169	345	701	2050	243	46	32	52
26	42	27	28	46	203	401	794	2180	285	37	32	48
27	42	26	29	48	189	591	1670	2210	249	33	31	45
28	42	27	34	56	179	737	1580	2010	213	32	30	44
29	41	26	26	52	---	586	1440	1780	195	31	32	42
30	45	31	23	76	---	498	1480	1540	164	30	32	42
31	52	---	37	118	---	447	---	1430	---	30	31	---
TOTAL	1822	991	1487	6581	4904	15162	23550	56210	19803	1930	948	1012
MEAN	58.8	33.0	48.0	212	175	489	785	1813	660	62.3	30.6	33.7
MAX	75	56	117	2240	839	806	1670	2530	1360	208	50	52
MIN	39	22	23	30	41	197	394	1040	164	30	28	27
AC-FT	3610	1970	2950	13050	9730	30070	46710	111500	39280	3830	1880	2010
†	12970	29580	19900	44050	30120	26310	43430	53740	25070	40910	41010	45810
††	78	7530	8470	7690	8360	9840	9420	9440	8140	7620	7400	5730

CAL YR 1978 TOTAL 185527 MEAN 508 MAX 2440 MIN 22 AC-FT 368000
WTR YR 1979 TOTAL 134400 MEAN 368 MAX 2530 MIN 22 AC-FT 266600

† Diversions, in acre-feet, to Camino powerplant, furnished by Sacramento Municipal Utility District.
†† Diversions, in acre-feet, to El Dorado powerplant, furnished by Pacific Gas and Electric Co.

11442500 SOUTH FORK AMERICAN RIVER BELOW SILVER CREEK, NEAR POLLOCK PINES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF A6AR (COLS. PER 100 ML)	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)
MAR 08...	1100	634	52	7.6	7.0	11.9	K1	K4	21	5	6.1	1.3
MAY 31...	1100	1420	28	7.1	11.0	10.7	K3	K7	10	0	3.0	.6
JUL 30...	1100	30	50	7.2	20.0	8.2	<5	--	17	4	5.0	1.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM+ POTAS- SIUM AD- SORP- TION RATIO	POTAS- SIUM, 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 S04)	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)
MAR 08...	3.8	28	.4	--	.8	16	2.1	4.4	.0	16	--
MAY 31...	1.2	19	.2	2.0	.8	11	2.1	1.6	.1	9.2	18
JUL 30...	3.4	29	.4	4.1	.7	18	.8	4.8	.0	13	39

DATE	SOLIDS, SUM OF CONSTI- TUENTS, 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
MAR 08...	44	.04	.07	.07	.01	.21	.22	.29	.01	.001	.00
MAY 31...	25	.02	.02	.02	.02	.11	.13	.15	.01	.003	.00
JUL 30...	37	.05	.00	.00	.00	.30	.30	.30	.01	.000	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 08...	1100	80	40	40	570	--	30	20	--	0	3.2
MAY 31...	1100	--	--	40	170	160	10	10	10	0	2.9
JUL 30...	1100	40	30	9	70	50	20	20	10	6	1.9

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.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT CHARGE, DIS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 30...	1100	30	20.0	2	.16	60

LOCATION.--Lat 38°46'23", long 120°42'02", in NE¼SW¼ sec.25, T.11 N., R.11 E., El Dorado County, Hydrologic Unit 18020129, on right bank 500 ft (152 m) downstream from Slab Creek Dam, 500 ft (152 m) upstream from Iowa Canyon Creek, and 2.8 mi (4.5 km) northwest of Camino.

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for October 1922, published in WSP 1315-A. Records for the river and the American River flume, published separately October 1922 to September 1956, October 1962 to December 1964 when flume was destroyed. Records of river and flume combined October 1956 to September 1962.

GAGE.--Water-stage recorder. Altitude of gage is 1,620 ft (494 m), from topographic map. See WSP 2131 for history of changes prior to Oct. 12, 1966.

AVERAGE DISCHARGE.--37 years (water years 1923-59, prior to extensive regulation and transbasin diversion in South Fork American River basin), 961 ft³/s (27.22 m³/s), 695,700 acre-ft/yr (858 hm³/yr), combined flow of South Fork American River and American River flume; 8 years (water years 1960-67, transition period prior to bypass to White Rock powerplant), 1,062 ft³/s (30.08 m³/s), 769,400 acre-ft/yr (949 hm³/yr); 12 years (water years 1968-79), 117 ft³/s (3.313 m³/s) 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,800 ft³/s (1,410 m³/s) Dec. 23, 1955, gage height, 32.6 ft (9.94 m) from floodmarks, site and datum then in use, from rating curve extended above 24,000 ft³/s (680 m³/s) on basis of computation of maximum flow over dam; minimum daily, 1.3 ft³/s (0.037 m³/s) Aug. 24, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 848 ft³/s (24.0 m³/s) Jan. 11, gage height, 9.41 ft (2.868 m); minimum daily, 16 ft³/s (0.45 m³/s) Mar. 10, 17, 18.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	27	21	20	22	23	71	64	65	62	30	29
2	35	21	21	20	22	23	71	61	65	63	29	29
3	34	21	20	20	22	23	71	62	65	50	29	29
4	34	21	21	20	22	23	70	63	65	30	29	29
5	35	20	21	20	22	23	71	63	64	30	29	29
6	35	21	21	20	22	23	71	62	57	30	29	29
7	35	20	21	20	22	23	70	62	58	30	29	29
8	35	20	21	21	22	23	70	62	60	30	29	29
9	35	20	21	20	22	21	70	62	60	30	29	29
10	34	20	22	21	22	16	71	62	61	30	29	29
11	34	19	22	153	22	17	69	62	60	31	29	29
12	35	19	22	72	22	17	69	62	62	32	29	29
13	35	19	21	20	22	17	69	63	63	32	29	29
14	35	19	20	20	22	17	70	64	62	32	29	29
15	35	19	20	21	22	17	69	64	63	31	29	29
16	35	20	20	20	22	17	68	64	62	31	29	29
17	36	21	20	20	22	16	68	63	60	31	29	29
18	36	21	20	19	22	16	69	62	59	31	29	29
19	36	20	20	21	22	17	67	63	61	31	29	29
20	36	21	20	21	23	17	68	64	61	31	30	29
21	36	21	20	21	23	18	67	65	60	31	30	29
22	36	20	20	21	23	17	68	67	60	31	30	29
23	36	20	20	21	23	17	68	67	60	31	30	29
24	36	21	20	21	23	17	66	67	60	31	30	29
25	36	21	20	21	22	17	66	67	61	31	30	29
26	36	21	20	21	22	17	65	66	62	31	30	29
27	36	21	20	21	22	18	66	66	62	31	31	29
28	36	21	20	21	22	18	65	66	63	31	30	29
29	36	21	20	22	---	18	64	65	63	31	30	29
30	36	21	20	22	---	18	64	65	62	31	30	29
31	36	---	20	22	---	31	---	64	---	31	30	---
TOTAL	1096	617	635	823	621	595	2051	1978	1846	1039	913	870
MEAN	35.4	20.6	20.5	26.5	22.2	19.2	68.4	63.8	61.5	33.5	29.5	29.0
MAX	36	27	22	153	23	31	71	67	65	63	31	29
MIN	34	19	20	19	22	16	64	61	57	30	29	29
AC-FT	2170	1220	1260	1630	1230	1180	4070	3920	3660	2060	1810	1730
CAL YR 1978	TOTAL	13937.8	MEAN	38.2	MAX	81	MIN	9.2	AC-FT	27650		
WTR YR 1979	TOTAL	13084.0	MEAN	35.8	MAX	153	MIN	16	AC-FT	25950		

SACRAMENTO RIVER BASIN

11444500 SOUTH FORK AMERICAN RIVER NEAR PLACERVILLE, CA

LOCATION.--Lat 38°46'16", long 120°48'55", in NE¼SW¼ sec.25, T.11 N., R.10 E., El Dorado County, Hydrologic Unit 18020129, on right bank 700 ft (213 m) downstream from Chili Bar Dam, 0.5 mi (0.8 km) upstream from Big Canyon, and 2.5 mi (4.0 km) north of Placerville.

DRAINAGE AREA.--598 mi² (1,549 km²).

PERIOD OF RECORD.--August 1911 to July 1920, July 1964 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 931.05 ft (283.784 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.). Aug. 11, 1911, to July 31, 1920, nonrecording gage 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Flow regulated by storage, diversions, and powerplants. See schematic diagram of South Fork American 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 extensive regulation and transbasin diversion).--9 years (water years 1912-20), 1,132 ft³/s (32.06 m³/s), 820,100 acre-ft/yr (1.01 km³/yr); 15 years (water years 1965-79), 1,393 ft³/s (39.45 m³/s), 1,009,000 acre-ft/yr (1.24 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,300 ft³/s (1,340 m³/s) Dec. 23, 1964, gage height, 17.4 ft (5.30 m) from floodmarks, from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of computations of flow over dam of maximum flow; minimum daily, 0.2 ft³/s (0.006 m³/s) Nov. 12, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,120 ft³/s (145 m³/s) Jan. 11; minimum daily, 100 ft³/s (2.83 m³/s) Nov. 1.

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	390	100	660	267	845	1680	921	2630	2400	650	1140	1140
2	732	106	629	465	702	1470	1500	2580	2300	1020	1140	640
3	475	131	400	910	621	1050	2090	1950	1860	955	1500	338
4	398	126	637	898	305	1070	1760	2080	2110	789	1240	1070
5	405	136	740	897	958	1450	1790	2560	2370	1160	530	1070
6	396	894	425	768	648	1400	2030	2590	2390	1240	1000	1000
7	413	1110	995	338	908	1280	1860	2540	2020	1230	1000	1040
8	457	690	1100	612	567	1320	1730	2490	1970	677	1060	1130
9	375	823	495	874	775	1680	1430	2160	1970	534	1010	431
10	435	1020	458	972	721	1440	1800	2380	1430	721	1070	762
11	456	516	300	5120	295	1300	2280	1970	1700	621	926	1390
12	861	720	720	4520	1240	1440	1810	2270	964	1140	557	1440
13	970	701	540	3110	1290	1700	1750	1760	760	1070	727	1230
14	400	1060	593	1210	1310	1720	1800	2560	1110	1080	1070	881
15	286	2100	622	1600	1380	1700	1680	2970	1170	494	1130	1030
16	277	533	542	1150	1700	2060	2250	3420	1130	645	1170	515
17	159	806	709	1150	1680	2000	2010	3840	919	1080	626	409
18	108	1060	470	1210	730	1460	1980	3820	822	1140	702	1000
19	108	648	899	1300	1110	1250	1800	3640	141	967	740	973
20	128	840	500	1480	1320	1400	1920	3670	1160	1030	818	998
21	219	762	579	753	2290	1270	1800	3720	1090	1250	930	1070
22	316	978	589	1220	1820	1310	1700	3780	1150	505	978	1010
23	150	552	472	1650	1840	1240	1460	3860	1150	1150	827	459
24	124	295	304	1210	1980	1110	2330	3950	518	1160	838	797
25	113	150	508	1410	849	438	1840	3940	191	1240	974	1030
26	111	154	590	1460	1760	1210	2010	3930	438	1140	497	1110
27	110	890	510	1600	1500	1220	2660	3920	618	1180	596	889
28	108	921	465	365	1380	1310	2610	3920	799	932	1130	1090
29	106	877	501	1330	---	1740	2060	3790	821	601	842	1070
30	104	890	323	1480	---	1730	2440	3190	820	1010	1160	528
31	102	---	411	1250	---	1040	---	3160	---	1140	1090	---
TOTAL	9792	20589	17686	42579	32524	43488	57101	95040	38291	29551	29018	27540
MEAN	316	686	571	1374	1162	1403	1903	3066	1276	953	936	918
MAX	970	2100	1100	5120	2290	2060	2660	3950	2400	1250	1500	1440
MIN	102	100	300	267	295	438	921	1760	141	494	497	338
AC-FT	19420	40840	35080	84460	64510	86260	113300	188500	75950	58610	57560	54630
CAL YR 1978 TOTAL	503057	MEAN	1378	MAX	4730	MIN	100	AC-FT	997800			
WTR YR 1979 TOTAL	443199	MEAN	1214	MAX	5120	MIN	100	AC-FT	879100			

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA

LOCATION.--Lat 38°49'07", long 120°56'45", in NW¼SW¼ sec.11, T.11 N., R.9 E., El Dorado County, Hydrologic Unit 18020129, on left bank 0.4 mi (0.6 km) downstream from Greenwood Creek, 2.4 mi (3.9 km) northwest of Lotus, and 3.3 mi (5.3 km) northwest of Coloma.

DRAINAGE AREA.--673 mi² (1,743 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1931: Drainage area. WDR CA-75-4: 1964, 1966, 1970.

GAGE.--Water-stage recorder. Altitude of gage is 635 ft (194 m), from topographic map.

REMARKS.--Records good. Flow regulated by storage, diversions, and powerplants. See schematic diagram of South Fork American River basin.

AVERAGE DISCHARGE.--11 years (water years 1952-62, prior to extensive regulation and transbasin diversion), 1,109 ft³/s (31.41 m³/s), 802,900 acre-ft/yr (990 hm³/yr); 17 years (water years 1963-79), 1,403 ft³/s (39.73 m³/s), 1,016,000 acre-ft/yr (1.25 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,800 ft³/s (2,030 m³/s) Dec. 23, 1955, gage height, 21.37 ft (6.514 m); minimum daily, 14 ft³/s (0.40 m³/s) July 13, 15-18, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1862 and prior to beginning of record, 20.4 ft (6.22 m) from floodmarks, Nov. 21, 1950, discharge, 64,500 ft³/s (1,830 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,500 ft³/s (326 m³/s) Jan. 11, gage height, 10.95 ft (3.338 m); minimum daily, 102 ft³/s (2.89 m³/s) Nov. 1.

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	406	102	700	307	1030	3220	889	2530	2270	629	1080	1150
2	748	116	641	390	767	2080	1450	2650	2250	864	1110	516
3	490	147	418	1010	645	1400	2080	1900	1940	953	1300	318
4	414	142	660	862	384	1240	1870	1960	2000	759	1370	1090
5	422	152	757	847	918	1480	1790	2520	2260	986	581	1090
6	412	910	438	826	729	1660	1980	2640	2340	1190	856	1020
7	429	1130	1010	331	889	1300	1930	2510	2130	1190	958	1060
8	473	706	1180	775	600	1360	1880	2500	1910	867	970	1160
9	391	839	502	982	812	1750	1430	2110	1920	522	975	447
10	451	1040	464	1060	740	1490	1730	2450	1440	691	1010	787
11	472	529	307	5270	331	1370	2230	2030	1500	597	796	1410
12	881	736	748	4610	1000	1490	1980	2160	1330	769	505	1460
13	1160	717	563	3130	1370	1740	1790	1920	478	1310	672	1240
14	413	1080	603	1210	1650	1760	1750	2320	1240	965	662	904
15	302	2170	634	1670	1540	1850	1710	2840	1050	568	1060	1040
16	293	552	577	1170	2000	2230	2090	3370	1160	552	1090	530
17	175	821	767	1170	1860	2180	2060	3810	941	1010	589	421
18	126	1070	541	1240	1220	1690	2010	3800	879	1050	660	1010
19	126	663	746	1310	1770	1300	1890	3640	160	937	687	984
20	144	856	739	1490	1600	1620	1870	3640	839	973	772	1010
21	234	788	619	768	3390	1250	1910	3710	1230	1070	902	1080
22	331	994	609	1040	2810	1370	1770	3770	966	724	924	1010
23	166	568	490	1470	2510	1310	1280	3840	1270	811	776	468
24	140	314	328	1240	2310	1330	2320	3940	568	1300	787	810
25	129	174	327	1420	1290	543	1950	3930	204	1070	910	1050
26	128	176	599	1470	1750	1090	1860	3920	386	1140	465	1120
27	128	908	527	1680	1650	1370	2610	3920	524	1030	581	892
28	127	942	473	569	1800	1530	2590	3910	786	1060	1050	1100
29	125	896	510	1110	---	1850	2140	3840	812	595	820	1080
30	122	897	373	1510	---	1900	2430	3160	792	830	1080	541
31	120	---	332	1280	---	1330	---	3200	---	1010	1030	---
TOTAL	10478	21135	18182	43217	39365	49083	57269	94440	37575	28022	27028	27798
MEAN	338	705	587	1394	1406	1583	1909	3046	1253	904	872	927
MAX	1160	2170	1180	5270	3390	3220	2610	3940	2340	1310	1370	1460
MIN	120	102	307	307	331	543	889	1900	160	522	465	318
AC-FT	20780	41920	36060	85720	78080	97360	113600	187300	74530	55580	53610	55140
CAL YR 1978 TOTAL	536585			1470	MAX 6400	MIN 102	AC-FT 1064000					
WTR YR 1979 TOTAL	453592			MEAN 1243	MAX 5270	MIN 102	AC-FT 899700					

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-68, 1970 to current year.

CHEMICAL ANALYSES: Water years 1958-66, 1978 to current year.

BIOLOGICAL DATA: Water year 1979.

WATER TEMPERATURES: Water years 1960-68, 1970 to current year.

SEDIMENT RECORDS: Water years 1957-62.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1959 to September 1968, February 1970 to current year.

INSTRUMENTATION.--Temperature recorder December 1959 to September 1968, and since February 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 29.5°C July 20, 1960, Aug. 12, 22, 1977; minimum recorded, 1.0°C on several days in 1960 and 1962.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 19.5°C June 26; minimum recorded, 2.5°C Jan. 1, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-HF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L GAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 05...	1500	1850	55	7.2	8.5	12.1	3	K4	1	23	9	6.2
MAY 30...	1530	3170	37	7.4	12.0	10.7	4	K6	K9	13	6	4.1
JUL 27...	1600	1610	27	6.9	15.5	9.8	--	13	3	8	0	2.1

DATE	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 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 SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 05...	1.8	2.6	19	.2	--	.4	20	6.1	3.2	.1	10	--
MAY 30...	.6	1.3	20	.2	2.0	.7	10	1.9	.9	.1	8.0	24
JUL 27...	.6	1.7	37	.3	2.6	.9	9	.5	1.4	.1	8.1	24

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHORUS, DIS- SOLVED (MG/L AS P)
MAR 05...	39	.04	66	.08	.07	.00	.14	.14	.22	.00	.002	.00
MAY 30...	22	.03	--	.03	.01	.03	.08	.11	.14	.00	.002	.00
JUL 27...	21	.02	0	.00	.00	.00	.41	.41	.41	.01	.000	.00

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDED RECOV. (UG/L AS HE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)
MAR 05...	1500	0	0	0	0	0	40	30	6	1	1
MAY 30...	1530	0	0	0	0	0	--	--	10	0	0
JUL 27...	1600	--	--	--	--	--	20	10	10	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
MAR 05...	0	0	0	0	5	4	140	120	20	4
MAY 30...	1	0	0	0	8	3	120	100	20	5
JUL 27...	--	--	--	--	--	--	180	100	80	--

DATE	LEAD, SUS- PENDE 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 RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)
MAR 05...	4	0	0	0	0	.0	.0	.0	1	1
MAY 30...	5	0	20	20	0	.2	.2	.0	0	0
JUL 27...	--	--	20	10	7	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL SOLVED (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
MAR 05...	0	0	0	0	10	10	0	2.4	2.4	.2
MAY 30...	0	0	0	0	20	10	10	1.3	--	--
JUL 27...	--	--	--	--	--	--	--	2.2	--	--

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	14.0	12.0	10.5	8.0	7.0	4.0	2.5	5.0	4.0	7.0	6.0
2	16.0	14.0	13.5	11.5	7.5	6.0	4.0	3.0	5.5	4.0	7.0	5.5
3	15.5	13.0	13.0	11.0	7.0	6.0	4.5	3.5	5.0	3.0	7.0	6.0
4	16.0	14.0	12.5	10.5	7.5	6.0	5.0	4.5	5.5	3.5	8.0	6.0
5	16.0	13.5	13.0	11.0	7.5	6.0	4.5	4.0	5.0	4.0	8.0	6.0
6	15.5	13.5	13.0	11.0	6.0	5.0	4.5	3.5	5.0	3.5	8.0	5.5
7	15.5	13.0	12.5	10.5	6.5	4.5	4.5	4.0	5.5	4.0	8.5	6.5
8	15.5	13.0	12.0	10.5	6.5	5.0	5.0	4.5	6.0	3.5	8.5	6.5
9	15.5	13.0	11.5	10.0	6.0	4.5	5.5	4.5	6.0	4.5	8.5	6.5
10	15.5	13.0	10.5	9.5	6.5	5.5	5.5	4.5	5.5	4.0	9.0	6.5
11	15.5	13.0	10.0	9.0	6.5	5.0	8.5	5.5	6.0	4.5	9.0	7.0
12	15.0	13.0	9.0	8.0	6.5	6.0	7.5	5.5	5.5	4.5	9.0	7.0
13	14.5	12.5	9.5	9.0	7.0	5.0	5.5	5.0	5.0	4.5	8.0	7.0
14	15.0	12.5	9.5	8.0	7.0	5.0	6.5	5.0	6.5	5.0	8.0	7.0
15	15.5	14.0	9.0	8.0	6.5	5.0	7.0	6.0	6.5	5.0	8.0	7.0
16	15.0	13.5	9.5	8.0	6.0	4.5	6.5	5.5	6.0	5.0	8.0	7.5
17	16.0	13.5	9.0	8.0	6.5	6.0	6.0	5.0	6.0	4.5	9.0	7.0
18	16.5	13.5	8.5	7.5	6.5	6.0	5.5	5.0	6.5	5.0	8.5	7.0
19	15.5	14.5	8.5	7.5	6.5	5.5	5.5	4.0	7.0	5.5	9.5	7.0
20	15.5	13.5	8.5	8.5	6.0	5.0	5.0	4.0	6.5	5.5	8.5	7.0
21	16.0	13.5	9.0	8.0	6.0	4.5	6.0	4.0	6.5	6.0	8.0	7.0
22	15.5	13.0	9.0	8.0	6.0	4.5	5.5	4.0	6.0	5.5	8.0	7.0
23	14.5	12.0	8.5	7.5	5.0	5.0	5.0	4.0	7.0	6.0	9.5	7.0
24	14.0	12.0	8.5	7.5	6.0	5.0	4.5	4.0	7.0	5.0	9.5	7.0
25	14.5	12.0	8.0	6.5	5.5	5.0	5.0	4.0	7.5	5.0	10.5	7.0
26	14.5	12.0	8.0	6.0	5.5	4.5	5.0	3.5	7.5	5.5	10.0	8.0
27	14.5	12.0	7.5	6.0	5.0	4.5	5.0	3.5	6.5	5.0	9.0	7.5
28	14.5	12.0	8.0	6.5	5.0	4.0	5.0	3.0	6.0	5.0	9.5	8.0
29	14.0	12.0	8.0	7.0	5.0	4.5	4.5	2.5	---	---	9.0	7.5
30	13.0	11.0	7.5	6.5	5.0	4.0	4.5	3.5	---	---	9.5	7.5
31	12.0	11.0	---	---	4.0	3.5	5.0	4.0	---	---	10.5	7.0
MONTH	16.5	11.0	13.5	6.0	8.0	3.5	8.5	2.5	7.5	3.0	10.5	5.5

SACRAMENTO RIVER BASIN

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 27...	1600	1610	15.5	4	17	78

11446200 FOLSOM LAKE NEAR FOLSOM, CA

LOCATION.--Lat 38°42'29", long 121°09'22", in NW¼NE¼ sec.24, T.10 N., R.7 E., Sacramento County, Hydrologic Unit 18020128, near center of dam on American River, 0.7 mi (1.1 km) downstream from South Fork American River, and 2.3 mi (3.7 km) northeast of Folsom.

DRAINAGE AREA.--1,861 mi² (4,820 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1955 to current year. Prior to October 1959, published as Folsom Reservoir near Folsom.

REVISED RECORDS.--WSP 1931: Drainage area.

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 concrete gravity-type dam with rolled-earth-wing dams, auxiliary dams, and dikes, completed May 14, 1956; storage began Feb. 25, 1955. Total capacity, 1,010,300 acre-ft (1.25 km³) between elevations 205.5 ft (62.64 m) invert of lower tier of river outlets and 466.0 ft (142.04 m) gross pool elevation, all of which is available for release. Spillway design flood pool elevation, 475.4 ft (144.90 m), capacity, 1,120,200 acre-ft (1.38 km³). Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of South Fork American River basin.

COOPERATION.--Records furnished by Water and Power Resources Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,024,400 acre-ft (1.26 km³) June 15, 1963, elevation, 467.23 ft (142.412 m); minimum since storage pool first filled, 140,600 acre-ft (173 hm³) Nov. 20, 21, 1977, elevation, 347.57 ft (105.939 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 992,700 acre-ft (1.22 km³) May 21, elevation, 464.46 ft (141.567 m); minimum, 621,300 acre-ft (766 hm³) Nov. 5, elevation, 428.26 ft (130.534 m).

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

345	133,100	400	393,300
350	148,000	420	548,300
360	181,900	440	732,900
370	222,300	460	942,600
380	270,700	480	1,176,000
390	327,800		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	694900	626900	640700	640600	682200	727000	834400	966800	969800	905700	851300	793100
2	690300	625200	640800	639900	683800	731700	837700	971700	968200	902800	850000	793200
3	685900	624000	640400	641000	685500	733100	841600	974800	966300	900000	849100	792200
4	681400	622600	640100	641900	686700	733200	846000	978700	964100	897000	848800	791900
5	676200	621300	639800	642600	688600	732100	850000	983300	963500	894300	846000	793200
6	671500	621900	638900	643300	690600	730900	855500	988300	964100	892000	843800	794000
7	666600	621900	638500	642700	692600	730100	860700	991300	964100	890400	842600	793300
8	661000	622400	639400	644100	694100	735300	865400	990500	962800	888000	840800	792400
9	655700	623300	639400	647500	696100	741200	868600	987000	962800	883800	839500	789600
10	653600	623000	639800	650800	697800	746300	871900	983100	962100	880600	838200	786000
11	651800	623300	639500	683300	699000	751800	876200	978600	961300	877900	836900	782500
12	652100	623900	639800	692900	701100	757500	880900	977100	961500	876300	834800	780400
13	652500	623800	639500	691200	706600	762900	884700	976300	958700	876300	832600	778600
14	652900	624300	639400	686100	720400	768400	889200	976000	956400	875100	831200	775500
15	651800	628100	639800	685300	729900	776000	893500	977800	954000	873600	829900	772400
16	650300	628200	640300	679500	740400	786000	898600	980600	952000	871300	827900	768200
17	648600	629100	641100	672200	746300	789500	905300	984800	948000	870400	823700	763100
18	646800	629100	642000	664300	746100	790000	910500	989100	944800	869200	819300	759800
19	645000	629300	642900	659500	749500	788200	914300	991700	940200	868100	815500	756400
20	643200	630000	644100	656400	747400	787600	918200	992500	936700	867100	811800	751600
21	641700	632600	644600	655100	755000	789600	921800	992700	934700	865300	807300	747700
22	640200	635300	645100	655300	759700	792100	924200	992200	932400	862900	804300	743600
23	638400	637300	644800	658300	748800	794500	923400	991200	930900	860600	800500	738500
24	636600	637200	643900	660900	731300	796500	923100	989600	928500	859700	797400	733900
25	635000	636500	643000	664100	711100	797300	922800	987600	924300	859000	795500	729600
26	633600	636600	642700	666700	700500	799200	925600	985800	920500	858200	792700	726400
27	632100	636200	642700	669900	700700	804800	935500	984200	917500	857100	791800	723200
28	631700	638100	642700	671100	706500	814500	944700	982300	914800	856100	792500	719100
29	629800	638500	642700	673000	---	821800	951300	979600	911800	854200	792700	715100
30	628600	638500	642200	676700	---	828200	958700	976600	908800	852600	792000	710400
31	627600	---	641100	679700	---	832100	---	973200	---	851800	792400	---
MAX	694900	638500	645100	692900	759700	832100	958700	992700	969800	905700	851300	794000
MIN	627600	621300	638500	639900	682200	727000	834400	966800	908800	851800	791800	710400
†	428.95	430.13	430.41	434.52	437.30	449.75	461.44	462.73	456.93	451.62	445.92	437.70
‡	-72500	+10900	+2600	+38600	+26800	+125600	+126600	+14500	-64400	-57000	-59400	-82000
††	3390	1060	630	410	770	1650	2960	6120	8020	7290	6530	5230

CAL YR 1978 ‡ +382300

WTR YR 1979 ‡ +10300

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SACRAMENTO RIVER BASIN

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

WATER-QUALITY RECORDS

FOLSOM LAKE SITE NO. 2 ON NORTH FORK ARM, NEAR FOLSOM, CA

LOCATION.--Lat 38°44'38", long 121°07'57", Placer County, at Granite Bay 5.0 mi (8.0 km) northeast of Folsom Post Office.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMPLING DEPTH (M) <u>1/</u>	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)
MAR							
01...	1345	.50	54	7.7	9.9	11.6	105
01...	1346	1.0	54	7.6	9.8	11.8	106
01...	1347	2.0	54	7.7	9.7	12.1	109
01...	1348	3.0	54	7.6	9.6	12.2	109
01...	1349	4.0	54	7.7	9.6	12.3	110
01...	1350	5.0	54	7.6	9.5	12.3	110
01...	1351	6.0	54	7.6	9.4	12.3	110
01...	1352	7.0	54	7.6	9.4	12.4	111
01...	1353	8.0	54	7.6	9.3	12.3	109
01...	1354	9.0	56	7.5	9.3	12.2	109
01...	1355	10.0	56	7.6	9.3	12.1	108
01...	1356	11.0	57	7.6	9.2	12.0	106
01...	1357	12.0	57	7.5	9.2	11.9	106
01...	1358	13.0	58	7.6	9.1	11.8	104
01...	1359	14.0	58	7.5	9.1	11.7	104
01...	1400	15.0	59	7.4	9.0	11.7	103
01...	1401	16.0	61	7.5	8.8	11.6	102
01...	1402	17.0	65	7.5	8.5	11.6	101
01...	1403	18.0	66	7.5	8.3	11.6	101
01...	1404	19.0	70	7.5	8.1	11.4	99
01...	1405	20.0	70	7.5	8.2	11.3	98
01...	1406	21.0	70	7.5	8.1	11.2	97
01...	1407	22.0	70	7.5	8.1	11.3	98
01...	1408	23.0	70	7.5	8.0	11.3	97
01...	1409	24.0	72	7.5	8.0	11.2	97
01...	1410	25.0	72	7.5	7.9	11.2	96
01...	1411	26.0	72	7.5	7.9	11.2	96
01...	1412	27.0	72	7.5	7.9	11.1	95
01...	1413	28.0	72	7.5	7.9	11.1	95
01...	1414	29.0	72	7.5	7.9	11.1	95
01...	1415	30.0	72	7.5	7.9	11.1	95
01...	1416	31.0	72	7.5	7.8	11.1	95
01...	1417	32.0	72	7.5	7.8	11.1	95
01...	1418	33.0	72	7.5	7.8	11.1	95
01...	1419	34.0	72	7.5	7.8	11.0	94
01...	1420	35.0	72	7.5	7.8	11.0	94
01...	1421	36.0	72	7.5	7.8	11.0	94
01...	1422	37.0	72	7.5	7.8	11.0	94
01...	1423	38.0	72	7.5	7.8	11.0	94
01...	1424	39.0	72	7.5	7.8	11.0	94
01...	1425	40.0	72	7.5	7.8	11.0	94
01...	1426	41.0	72	7.5	7.8	11.0	94
01...	1427	42.0	72	7.5	7.8	11.0	94
01...	1428	43.0	72	7.5	7.8	11.0	94
01...	1429	44.0	72	7.6	7.8	11.0	94
01...	1430	45.0	72	7.6	7.8	11.0	94
01...	1431	46.0	72	7.6	7.8	11.0	94
01...	1432	47.0	72	7.6	7.8	11.0	94
01...	1433	48.0	72	7.4	7.8	11.0	94
JUN							
13...	1545	.50	59	7.7	23.8	8.1	98
13...	1546	1.0	59	7.7	23.8	8.1	98
13...	1547	2.0	59	7.7	23.8	8.2	99
13...	1548	3.0	59	7.7	23.7	8.2	99
13...	1549	4.0	59	7.7	23.6	8.2	99
13...	1550	5.0	59	7.7	23.5	8.2	99
13...	1551	6.0	59	7.6	23.0	8.3	99
13...	1552	7.0	58	7.6	22.7	8.4	100
13...	1553	8.0	57	7.6	21.6	8.6	100
13...	1554	9.0	54	7.5	21.1	8.6	99
13...	1555	10.0	52	7.4	19.7	8.8	98
13...	1556	11.0	47	7.4	18.1	9.0	97
13...	1557	12.0	46	7.3	17.6	9.0	96
13...	1558	13.0	46	7.3	17.2	8.9	95
13...	1559	14.0	46	7.3	16.5	9.0	94
13...	1600	15.0	46	7.2	16.2	9.0	94
13...	1601	16.0	46	7.2	15.9	8.9	92
13...	1602	17.0	46	7.1	15.4	8.8	90
13...	1603	18.0	47	7.1	14.1	8.8	87
13...	1604	19.0	46	7.1	14.0	8.8	87
13...	1605	20.0	46	7.1	13.6	8.8	87
13...	1606	21.0	46	7.0	13.5	8.8	86
13...	1607	22.0	47	7.0	13.2	8.8	86
13...	1608	23.0	48	7.0	12.9	8.8	85
13...	1609	24.0	49	7.0	12.6	8.8	85
13...	1610	25.0	50	7.0	12.6	8.8	85
13...	1611	26.0	51	7.0	12.2	8.7	83
13...	1612	27.0	51	7.0	12.0	8.7	83
13...	1613	28.0	51	6.9	11.8	8.6	81

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

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE SITE NO. 2 ON NORTH FORK ARM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)		
JUN									
13...	1614	29.0	53	6.9	11.7	8.6	81		
13...	1615	30.0	53	7.0	11.7	8.6	81		
13...	1616	31.0	53	6.9	11.4	8.5	80		
13...	1617	32.0	53	6.9	11.3	8.5	79		
13...	1618	33.0	53	6.9	11.2	8.5	79		
13...	1619	34.0	55	6.9	11.1	8.4	78		
13...	1620	35.0	55	6.9	11.0	8.4	78		
13...	1621	36.0	55	6.9	10.9	8.4	78		
13...	1622	37.0	55	6.9	10.9	8.4	78		
13...	1623	38.0	55	6.9	10.8	8.4	78		
13...	1624	39.0	57	6.9	10.7	8.4	77		
13...	1625	40.0	57	6.9	10.6	8.3	76		
13...	1626	41.0	57	6.9	10.5	8.3	76		
13...	1627	42.0	58	6.9	10.3	8.2	75		
13...	1628	43.0	58	6.9	10.3	8.2	75		
13...	1629	44.0	59	6.9	10.2	8.1	74		
13...	1630	45.0	59	6.9	10.2	8.1	74		
13...	1631	46.0	59	6.9	10.1	8.1	74		
13...	1632	47.0	59	6.9	10.1	8.0	73		
13...	1633	48.0	59	6.9	10.0	8.0	73		
13...	1634	49.0	59	6.9	10.0	8.0	73		
13...	1635	50.0	59	6.9	9.9	7.9	71		
13...	1636	51.0	59	6.9	9.9	7.9	71		
13...	1637	52.0	59	6.8	9.8	7.9	71		
13...	1638	53.0	59	6.8	9.8	7.9	71		
JUL									
25...	1230	.50	58	8.0	27.2	7.9	102		
25...	1231	1.0	58	8.0	27.2	8.0	103		
25...	1232	2.0	58	8.0	27.1	8.2	105		
25...	1233	3.0	57	8.2	26.3	8.4	106		
25...	1234	4.0	57	8.2	25.7	8.6	108		
25...	1235	5.0	56	8.2	25.6	8.6	108		
25...	1236	6.0	56	8.2	25.4	8.8	110		
25...	1237	7.0	57	8.2	25.1	8.8	109		
25...	1238	8.0	56	8.2	24.9	8.8	109		
25...	1239	9.0	57	7.8	23.7	8.7	105		
25...	1240	10.0	57	7.7	22.7	8.6	102		
25...	1241	11.0	58	7.4	22.1	8.2	96		
25...	1242	12.0	57	7.4	20.5	8.3	94		
25...	1243	13.0	49	7.4	19.4	8.6	96		
DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
JUL									
25...	1244	14.0	47	7.3	18.8	8.7	95	--	--
25...	1245	15.0	49	7.2	17.7	8.3	89	--	--
25...	1246	16.0	46	7.3	17.6	8.4	90	--	--
25...	1247	17.0	47	7.2	17.0	8.1	86	--	--
25...	1248	18.0	48	7.1	16.6	7.9	83	--	--
25...	1249	19.0	48	6.9	15.6	7.1	73	--	--
25...	1250	20.0	47	6.8	15.0	6.9	70	--	--
25...	1251	22.0	48	6.8	14.6	6.8	68	--	--
25...	1252	24.0	48	6.8	14.1	6.6	66	--	--
25...	1253	25.0	49	6.8	13.6	6.7	66	--	--
25...	1254	30.0	49	6.8	12.7	6.8	66	--	--
25...	1255	35.0	52	6.8	12.0	6.6	63	--	--
25...	1256	40.0	54	6.7	11.4	6.3	59	--	--
25...	1257	45.0	55	6.7	11.1	6.1	57	--	--
25...	1258	50.0	57	6.7	10.6	5.9	54	--	--
SEP									
12...	1300	.50	61	8.0	25.9	8.0	101	21	1.50
12...	1301	1.0	61	8.0	25.3	8.0	100	21	1.50
12...	1302	2.0	62	8.0	24.6	8.1	100	23	1.50
12...	1303	3.0	61	8.0	24.6	8.1	100	24	1.40
12...	1304	4.0	61	8.0	24.4	8.1	99	24	1.40
12...	1305	5.0	60	8.0	24.2	8.1	99	25	1.40
12...	1306	6.0	60	8.0	24.2	8.0	98	27	1.30
12...	1307	7.0	60	7.8	23.6	7.9	95	27	1.30
12...	1308	8.0	58	7.7	23.4	7.8	94	28	1.30
12...	1309	9.0	58	7.7	23.1	7.7	92	30	1.20
12...	1310	10.0	57	7.6	22.8	7.6	90	32	1.20
12...	1311	11.0	57	7.5	22.7	7.5	89	32	1.20

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

SACRAMENTO RIVER BASIN

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE SITE NO. 2 ON NORTH FORK ARM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		SAMPLING DEPTH (M) $\frac{1}{2}$	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	LIGHT TRANSMISSION 1 METER PATH-LENGTH (%)	LIGHT ATTENUATION COEFFICIENT (ALPHA/METER)		
SEP											
12...	1312	12.0	55	7.5	22.0	7.6	89	32	1.20		
12...	1313	13.0	52	7.4	21.4	7.7	89	30	1.20		
12...	1314	14.0	51	7.4	20.9	7.8	89	25	1.40		
12...	1315	15.0	51	7.4	20.0	8.0	90	21	1.50		
12...	1316	16.0	50	7.4	19.3	8.1	90	18	1.70		
12...	1317	17.0	50	7.4	18.8	8.1	89	13	2.00		
12...	1318	18.0	50	7.4	18.4	8.1	88	7.0	2.70		
12...	1319	19.0	51	7.4	18.2	8.2	89	4.0	3.10		
12...	1320	20.0	49	7.4	18.0	7.8	84	4.0	3.30		
12...	1321	21.0	50	7.3	17.7	7.3	78	3.0	3.50		
12...	1322	22.0	51	7.2	17.6	7.2	77	3.0	3.50		
12...	1323	23.0	51	7.1	17.6	6.9	74	3.0	3.70		
12...	1324	24.0	51	7.1	17.3	6.7	71	2.0	3.90		
12...	1325	25.0	52	7.0	16.9	6.4	68	2.0	4.10		
12...	1326	30.0	56	6.9	15.0	5.3	54	1.0	5.00		
12...	1327	35.0	57	6.8	14.0	5.1	51	.10	6.90		
12...	1328	40.0	58	6.8	13.0	4.6	45	.01	9.60		
12...	1329	42.0	60	6.8	12.8	4.4	43	.00	11.00		
DATE	TIME	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS, NONCARBONATE (MG/L CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
MAR											
01...	1340	98	10	39	7.8	9.5	8	7.7	2.5	2.2	14
JUN											
13...	1530	13	13	--	--	--	6	6.0	2.2	2.6	18
13...	1535	39	34	--	--	--	4	6.6	.9	2.3	19
13...	1540	134	94	--	7.0	--	3	6.2	2.0	2.4	18
JUL											
25...	1305	19	9.8	58	--	--	2	5.6	2.0	2.2	17
25...	1310	39	29	--	--	--	0	5.7	1.6	2.1	17
25...	1315	131	66	48	--	--	0	5.8	1.9	2.0	16
DATE		SODIUM+ POTASSIUM, DIS-SOLVED (MG/L AS NA)	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)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS AC-FT)
MAR											
01...	.2	--	.5	22	7.1	1.9	.0	10	48	45	.07
JUN											
13...	.2	3.5	.9	18	3.3	2.6	.0	7.8	25	36	.03
13...	.2	2.9	.6	16	2.8	1.5	.0	9.0	41	33	.06
13...	.2	3.1	.7	21	3.3	1.7	.0	9.7	44	39	.06
JUL											
25...	.2	2.8	.6	20	5.4	1.8	.0	9.1	43	39	.06
25...	.2	2.8	.7	21	5.1	1.7	.0	10	33	40	.04
25...	.2	2.7	.7	21	5.7	1.6	.0	11	32	41	.04
DATE		NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + 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)
MAR											
01...	--	--	--	.05	.05	.01	.09	.10	.15	.02	.007
JUN											
13...	--	--	--	.02	.02	.05	.39	.44	.46	.01	.003
13...	--	--	--	.01	.01	.05	.45	.50	.51	.00	.005
13...	--	--	--	.06	.06	.08	.07	.15	.21	.00	.004
JUL											
25...	--	--	--	.02	.00	.01	.15	.16	.18	.01	.000
25...	.00	.02	.01	.01	.00	.01	.07	.08	.09	.02	.000
25...	.03	.02	.05	.05	.01	.01	.07	.08	.13	.02	.000

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

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE SITE NO. 2 ON NORTH FORK ARM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR										
01...	.00	80	--	160	--	10	20	--	0	2.3
JUN										
13...	.00	70	70	80	60	20	0	0	10	2.2
13...	.00	40	40	100	80	20	0	0	0	--
13...	.00	60	50	190	180	10	10	10	0	--
JUL										
25...	.00	30	30	20	20	<0	0	0	<1	1.2
25...	.00	80	80	60	60	<0	10	9	<1	--
25...	.00	60	50	120	110	10	20	20	<1	--

FOLSOM LAKE SITE NO. 1 ON SOUTH FORK ARM, NEAR FOLSOM, CA

LOCATION.--Lat 38°44'49", long 121°04'47", El Dorado County, 0.5 mi (0.8 km) north of Iron Mountain and 6.3 mi (10.1 km) northeast of Folsom.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) <u>1</u> /	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
MAR							
01...	1100	.50	59	7.6	9.4	11.4	102
01...	1101	1.0	59	7.6	9.4	11.4	102
01...	1102	2.0	59	7.6	9.4	11.4	102
01...	1103	3.0	59	7.6	9.3	11.4	101
01...	1104	4.0	59	7.6	9.2	11.4	101
01...	1105	5.0	59	7.6	9.2	11.4	101
01...	1106	6.0	61	7.6	9.2	11.4	101
01...	1107	7.0	61	7.6	9.2	11.3	100
01...	1108	8.0	61	7.6	9.1	11.4	101
01...	1109	9.0	61	7.5	9.1	11.3	100
01...	1110	10.0	62	7.5	8.9	11.3	100
01...	1111	11.0	63	7.5	8.7	11.1	97
01...	1112	12.0	62	7.4	8.6	11.1	97
01...	1113	13.0	63	7.5	8.5	11.2	98
01...	1114	14.0	68	7.4	8.2	11.2	97
01...	1115	15.0	68	7.5	8.2	11.2	97
01...	1116	16.0	68	7.4	8.1	11.2	97
01...	1117	17.0	68	7.4	8.0	11.3	97
01...	1118	18.0	68	7.4	7.9	11.3	97
01...	1119	19.0	68	7.4	7.9	11.3	97
01...	1120	20.0	68	7.4	7.9	11.4	98
01...	1121	21.0	67	7.5	7.9	11.3	97
01...	1122	22.0	68	7.5	7.9	11.3	97
01...	1123	23.0	67	7.5	7.9	11.3	97
01...	1124	24.0	67	7.5	7.9	11.3	97
01...	1125	25.0	68	7.5	7.9	11.3	97
01...	1126	26.0	68	7.5	7.5	11.5	98
01...	1127	27.0	67	7.5	7.3	11.5	97
01...	1128	28.0	68	7.5	7.2	11.6	98
01...	1129	29.0	69	7.5	7.1	11.6	98
01...	1130	30.0	68	7.5	7.1	11.6	98
01...	1131	31.0	68	7.5	7.1	11.5	97
01...	1132	32.0	69	7.4	7.1	11.6	98
JUN							
13...	1314	.50	60	7.6	23.7	8.1	98
13...	1315	1.0	60	7.6	23.6	8.2	99
13...	1316	2.0	60	7.7	23.4	8.2	99
13...	1317	3.0	60	7.7	23.4	8.2	99
13...	1318	4.0	60	7.6	23.3	8.2	98
13...	1319	5.0	60	7.6	23.2	8.2	98

< Actual value is known to be less than the value shown.
1. To convert meters to feet, multiply by 3.281.

SACRAMENTO RIVER BASIN

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE SITE NO. 1 ON SOUTH FORK ARM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION)	LIGHT, TRANSMISSION COEFFICIENT (ALPHA/ METER)
JUN								
13...	1320	6.0	59	7.6	23.0	8.2	98	
13...	1321	7.0	59	7.5	22.0	8.2	96	
13...	1322	8.0	49	7.2	20.1	8.6	97	
13...	1323	9.0	42	7.1	19.0	8.7	96	
13...	1324	10.0	34	6.9	17.3	8.8	94	
13...	1325	11.0	32	6.9	16.3	8.7	91	
13...	1326	12.0	31	6.8	15.4	8.7	89	
13...	1327	13.0	29	6.8	14.8	8.8	89	
13...	1328	14.0	29	6.8	14.5	8.7	87	
13...	1329	15.0	28	6.7	14.1	8.8	87	
13...	1330	16.0	28	6.7	14.0	8.7	86	
13...	1331	17.0	28	6.7	13.9	8.7	86	
13...	1332	18.0	28	6.7	13.7	8.6	85	
13...	1333	19.0	28	6.7	13.5	8.6	84	
13...	1334	20.0	28	6.7	13.4	8.7	85	
13...	1335	21.0	29	6.7	13.0	8.7	84	
13...	1336	22.0	30	6.7	12.9	8.6	83	
13...	1337	23.0	31	6.7	12.8	8.6	83	
13...	1338	24.0	32	6.7	12.6	8.7	84	
13...	1339	25.0	32	6.7	12.3	8.6	82	
13...	1340	26.0	32	6.7	12.2	8.6	82	
13...	1341	27.0	33	6.7	12.1	8.6	82	
13...	1342	28.0	33	6.7	12.1	8.6	82	
13...	1343	29.0	33	6.6	12.1	8.5	81	
13...	1344	30.0	33	6.6	12.1	8.5	81	
13...	1345	31.0	33	6.6	11.8	8.4	79	
13...	1346	32.0	36	6.6	11.5	8.3	78	
13...	1347	33.0	36	6.6	11.5	8.3	78	
13...	1348	34.0	38	6.6	11.2	8.3	77	
13...	1349	35.0	40	6.6	10.9	8.2	76	
13...	1350	36.0	41	6.6	10.8	8.0	74	
13...	1351	37.0	43	6.6	10.7	7.9	73	
13...	1352	38.0	44	6.6	10.7	7.9	73	
JUL								
25...	1600	.50	55	8.0	27.4	7.9	102	
25...	1601	1.0	56	8.0	27.1	8.0	103	
25...	1602	2.0	56	8.1	26.9	8.2	105	
25...	1603	3.0	56	8.1	26.6	8.4	107	
25...	1604	4.0	55	8.2	25.8	8.5	107	
25...	1605	5.0	55	8.2	25.4	8.6	107	
DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION)	LIGHT, TRANSMISSION COEFFICIENT (ALPHA/ METER)
JUL								
25...	1606	6.0	55	8.2	25.3	8.6	107	--
25...	1607	7.0	55	8.1	25.0	8.6	106	--
25...	1608	8.0	56	8.0	24.3	8.5	104	--
25...	1609	9.0	55	7.7	23.3	8.4	101	--
25...	1610	10.0	43	7.1	22.1	7.5	88	--
25...	1611	11.0	43	7.0	20.8	7.6	87	--
25...	1612	12.0	38	6.9	20.4	7.8	88	--
25...	1613	13.0	36	6.9	19.9	8.0	90	--
25...	1614	14.0	34	6.9	19.3	8.2	91	--
25...	1615	15.0	31	6.9	18.6	8.5	93	--
25...	1616	16.0	29	6.9	18.0	8.4	91	--
25...	1617	17.0	29	6.8	17.5	8.1	87	--
25...	1618	18.0	29	6.8	17.4	8.0	85	--
25...	1619	19.0	29	6.7	17.4	8.1	86	--
25...	1620	20.0	30	6.6	16.6	7.7	81	--
25...	1621	22.0	32	6.5	15.5	6.8	70	--
25...	1622	24.0	34	6.5	14.5	6.7	67	--
25...	1623	25.0	36	6.5	14.0	6.4	64	--
25...	1624	30.0	38	6.4	12.6	6.0	58	--
25...	1625	35.0	41	6.4	12.1	5.9	56	--
25...	1626	36.0	41	6.4	12.0	5.9	56	--
SEP								
12...	1500	.50	59	8.2	25.2	8.4	104	--
12...	1501	1.0	59	8.2	25.2	8.4	104	19
12...	1502	2.0	59	8.2	25.1	8.5	105	19
12...	1503	3.0	59	8.1	24.4	8.4	103	19
12...	1504	4.0	59	8.0	24.1	8.4	102	18
12...	1505	5.0	59	7.9	23.9	8.3	101	18
12...	1506	6.0	58	7.9	23.9	8.3	101	19
12...	1507	7.0	59	7.9	23.7	8.2	99	18
12...	1508	8.0	58	7.8	23.6	8.1	98	19

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

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE SITE NO. 1 ON SOUTH FORK ARM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (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)		
SEP											
12...	1509	9.0	58	7.7	23.4	7.9	95	23	1.50		
12...	1510	10.0	56	7.6	22.8	7.4	88	28	1.30		
12...	1511	11.0	54	7.4	22.2	7.1	83	28	1.30		
12...	1512	12.0	51	7.4	21.7	7.2	84	25	1.40		
12...	1513	13.0	48	7.3	21.4	7.4	86	21	1.50		
12...	1514	14.0	45	7.3	20.8	7.5	86	20	1.60		
12...	1515	15.0	44	7.3	19.5	7.5	84	14	2.00		
12...	1516	16.0	40	7.3	19.1	7.6	84	9.0	2.40		
12...	1517	17.0	38	7.2	18.8	7.9	87	7.0	2.70		
12...	1518	18.0	36	7.2	18.6	8.1	89	4.0	3.30		
12...	1519	19.0	35	7.2	18.3	8.2	89	3.0	3.70		
12...	1520	20.0	34	7.3	17.9	8.4	91	2.0	4.10		
12...	1521	21.0	34	7.3	17.6	8.5	91	1.0	4.60		
12...	1522	22.0	32	7.2	17.3	8.5	90	1.0	5.00		
12...	1523	23.0	32	7.2	17.0	8.6	91	1.0	5.10		
12...	1524	24.0	31	7.3	16.9	8.8	93	1.0	5.10		
12...	1525	25.0	30	7.3	16.7	9.0	95	.20	6.20		
12...	1526	29.0	29	7.3	15.9	9.3	96	.00	11.00		
DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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	
MAR											
01...	1000	72	10	64	8	7.2	3.4	2.7	15	.2	
JUN											
13...	1300	10	10	--	14	6.9	3.3	3.4	28	.3	
13...	1305	39	23	45	3	4.2	1.5	2.2	21	.2	
13...	1310	150	49	--	2	3.0	1.0	2.0	26	.3	
JUL											
25...	1630	20	10	--	2	5.8	2.1	2.4	18	.2	
25...	1635	30	30	--	0	5.7	2.0	2.3	18	.2	
25...	1640	118	66	--	0	3.7	1.0	2.1	31	.3	
DATE	TIME	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAR											
01...	--	.6	26	7.1	2.8	.0	11	53	49	.07	
JUN											
13...	4.6	1.2	17	4.5	2.8	.0	8.0	46	40	.06	
13...	3.0	.8	17	2.0	1.5	.0	5.9	34	27	.05	
13...	2.6	.6	14	2.2	1.7	.0	8.2	46	25	.06	
JUL											
25...	2.7	.3	21	2.7	1.7	.0	9.8	39	37	.05	
25...	2.9	.6	25	4.1	2.0	.0	9.8	41	42	.06	
25...	2.7	.6	15	3.1	1.3	.1	8.9	26	30	.04	
DATE	TIME	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
MAR											
01...	--	--	--	.17	.18	.03	.18	.21	.38	.03	.010
JUN											
13...	--	--	--	.02	.05	.04	.42	.46	.48	.02	.002
13...	--	--	--	.01	.01	.03	.79	.82	.83	.00	.005
13...	--	--	--	.03	.04	.03	.41	.44	.47	.01	.003
JUL											
25...	--	--	--	.11	.00	.00	.08	.08	.19	.36	.000
25...	5.0	.10	.10	5.1	--	.01	.15	.16	5.3	.10	.000
25...	.05	.00	.00	.05	.00	.06	.54	.60	.65	.04	.000

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

SACRAMENTO RIVER BASIN

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE SITE NO. 1 ON SOUTH FORK ARM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 01...	.00	130	--	390	--	50	30	--	0	2.3
JUN 13...	.00	100	80	90	70	20	0	0	0	2.1
13...	.00	50	50	130	100	30	10	0	10	--
13...	.00	90	90	190	150	40	30	30	0	--
JUL 25...	.00	40	10	70	60	10	0	0	<1	2.5
25...	.00	40	10	70	60	10	0	0	<1	--
25...	.00	40	30	310	300	10	40	0	40	--

FOLSOM LAKE AT DAM, NEAR FOLSOM, CA

LOCATION.--Lat 38°42'44", long 121°08'45", Placer County, 0.6 mi (1.0 km) northeast of Folsom Dam and 2.7 mi (4.3 km) northeast of Folsom Post Office.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
MAR							
01...	1700	.50	54	7.7	9.2	11.7	104
01...	1701	1.0	54	7.7	9.2	11.7	104
01...	1702	2.0	54	7.7	8.9	11.7	103
01...	1703	3.0	54	7.7	8.8	11.7	103
01...	1704	4.0	54	7.6	8.7	11.6	102
01...	1705	5.0	54	7.6	8.6	11.6	101
01...	1706	6.0	54	7.6	8.6	11.5	101
01...	1707	7.0	54	7.6	8.6	11.5	101
01...	1708	8.0	53	7.6	8.6	11.4	100
01...	1709	9.0	53	7.5	8.6	11.4	100
01...	1710	10.0	53	7.5	8.6	11.4	100
01...	1711	11.0	53	7.5	8.6	11.4	100
01...	1712	12.0	53	7.5	8.5	11.4	99
01...	1713	13.0	53	7.5	8.5	11.4	99
01...	1714	14.0	54	7.5	8.5	11.4	99
01...	1715	15.0	54	7.5	8.5	11.3	99
01...	1716	16.0	54	7.5	8.5	11.3	99
01...	1717	17.0	54	7.4	8.4	11.3	98
01...	1718	18.0	54	7.4	8.4	11.3	98
01...	1719	19.0	56	7.4	8.2	11.2	97
01...	1720	20.0	59	7.4	8.1	11.2	97
01...	1721	26.0	63	7.4	7.7	11.1	95
01...	1722	22.0	61	7.4	7.9	11.2	96
01...	1723	23.0	62	7.4	7.8	11.2	96
01...	1724	24.0	62	7.4	7.8	11.2	96
01...	1725	25.0	63	7.4	7.7	11.2	96
01...	1727	27.0	63	7.4	7.7	11.1	95
01...	1728	28.0	64	7.4	7.7	11.1	95
01...	1729	29.0	65	7.4	7.6	11.1	95
01...	1730	30.0	67	7.4	7.6	11.2	96
01...	1731	31.0	67	7.4	7.6	11.2	96
01...	1732	32.0	67	7.4	7.5	11.2	95
01...	1733	33.0	67	7.4	7.5	11.2	95
01...	1734	34.0	68	7.4	7.5	11.2	95
01...	1735	35.0	68	7.4	7.5	11.2	95
01...	1736	36.0	68	7.4	7.5	11.2	95
01...	1737	37.0	68	7.4	7.4	11.2	95
01...	1738	38.0	68	7.4	7.4	11.2	95
01...	1739	39.0	67	7.4	7.4	11.2	95
01...	1740	40.0	66	7.4	7.3	11.1	94
01...	1741	41.0	64	7.4	7.2	11.0	93
01...	1742	42.0	64	7.4	7.2	11.0	93
01...	1743	43.0	62	7.3	7.1	10.9	92
01...	1744	44.0	60	7.3	7.0	10.9	92
01...	1745	45.0	60	7.3	7.0	10.8	91
01...	1746	46.0	58	7.3	7.0	10.8	91
01...	1747	47.0	58	7.3	6.9	10.7	90
01...	1748	48.0	58	7.2	6.9	10.7	90
01...	1749	49.0	56	7.2	6.8	10.7	90
01...	1750	50.0	56	7.2	6.8	10.7	90
01...	1751	51.0	56	7.0	6.8	10.6	89
01...	1752	52.0	56	7.0	6.8	10.6	89
01...	1753	53.0	56	7.0	6.8	10.6	89

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

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE AT DAM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
APR									
20...	1300	.50	62	8.0	16.5	10.2	107		
20...	1301	1.0	62	7.9	16.5	10.2	107		
20...	1302	2.0	62	7.9	16.4	10.3	108		
20...	1303	3.0	63	7.9	15.9	10.4	107		
20...	1304	4.0	62	8.0	15.6	10.5	108		
20...	1305	5.0	64	7.9	14.5	10.6	106		
20...	1306	6.0	63	7.9	14.3	10.6	106		
20...	1307	7.0	62	7.9	14.2	10.6	106		
20...	1308	8.0	62	7.9	14.2	10.6	106		
20...	1309	9.0	62	7.9	14.1	10.5	104		
20...	1310	10.0	63	7.7	13.6	10.4	102		
20...	1311	11.0	62	7.7	12.9	10.3	100		
20...	1312	12.0	63	7.6	12.0	10.2	97		
20...	1313	13.0	63	7.5	11.8	10.2	96		
20...	1314	14.0	59	7.4	11.1	10.2	95		
20...	1315	15.0	58	7.4	10.5	10.2	93		
20...	1316	16.0	58	7.4	10.1	10.0	91		
20...	1317	17.0	56	7.4	10.0	10.0	91		
20...	1318	18.0	55	7.3	9.8	10.0	90		
20...	1319	19.0	59	7.3	9.6	10.0	90		
20...	1320	20.0	60	7.3	9.5	10.0	89		
20...	1321	21.0	61	7.3	9.5	10.0	89		
20...	1322	22.0	61	7.3	9.4	10.0	89		
20...	1323	23.0	62	7.3	9.3	10.0	89		
20...	1324	24.0	62	7.3	9.2	9.9	88		
20...	1325	25.0	64	7.3	9.2	9.9	88		
20...	1330	30.0	62	7.3	8.8	9.9	87		
20...	1335	35.0	63	7.3	8.7	9.8	86		
20...	1340	40.0	63	7.3	8.6	9.8	86		
20...	1345	45.0	63	7.3	8.4	9.7	85		
20...	1350	50.0	64	7.3	8.2	9.6	83		
JUN									
14...	1315	.50	59	7.8	23.0	8.5	101		
14...	1316	1.0	60	7.8	22.5	8.6	102		
14...	1317	2.0	59	7.8	22.1	8.6	101		
14...	1318	3.0	58	7.8	21.9	8.6	100		
14...	1319	4.0	59	7.8	21.7	8.7	101		
14...	1320	5.0	58	7.8	21.5	8.7	101		
14...	1321	6.0	58	7.8	21.4	8.7	101		
14...	1322	7.0	58	7.8	21.3	8.7	100		
14...	1323	8.0	57	7.7	21.1	8.7	100		
14...	1324	9.0	57	7.6	20.7	8.8	100		
14...	1325	10.0	56	7.6	20.1	8.9	100		
14...	1326	11.0	48	7.2	17.1	9.2	98		
14...	1327	12.0	44	7.2	16.6	9.2	97		
14...	1328	13.0	45	7.1	15.5	9.2	94		
14...	1329	14.0	46	7.1	15.0	9.2	93		
14...	1330	15.0	46	7.1	14.9	9.2	93		
14...	1331	16.0	47	7.1	14.6	9.2	92		
14...	1332	17.0	47	7.1	14.4	9.0	90		
14...	1333	18.0	47	7.0	14.0	9.0	89		
14...	1334	19.0	46	7.0	13.7	9.0	89		
14...	1335	20.0	42	7.0	13.5	9.0	88		
14...	1336	21.0	42	7.0	13.3	9.0	88		
14...	1337	22.0	40	6.9	13.2	9.0	88		
14...	1338	23.0	39	6.9	13.0	9.0	87		
14...	1339	24.0	39	6.9	12.8	9.0	87		
14...	1340	25.0	41	6.9	12.6	9.1	87		
14...	1341	26.0	42	6.9	12.5	9.0	86		
14...	1342	27.0	44	6.9	12.4	9.0	86		
14...	1343	28.0	44	6.9	12.2	8.9	85		
14...	1344	29.0	40	6.9	12.0	8.9	84		
14...	1345	30.0	45	6.9	12.0	8.9	84		
14...	1346	31.0	48	6.8	11.9	8.8	83		
14...	1347	32.0	47	6.8	11.8	8.8	83		
JUL									
25...	1030	.50	57	8.2	26.1	7.7	97	--	--
25...	1031	1.0	57	8.2	26.1	7.8	99	--	--
25...	1032	2.0	57	8.2	26.1	7.8	99	--	--
25...	1033	3.0	57	8.1	26.0	7.8	98	--	--
25...	1034	4.0	57	8.2	25.7	8.0	100	--	--
25...	1035	5.0	56	8.2	25.5	8.0	100	--	--
25...	1036	6.0	56	8.2	25.2	8.0	99	--	--
25...	1037	7.0	55	8.1	24.0	8.2	100	--	--

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

SACRAMENTO RIVER BASIN

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE AT DAM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
JUL									
25...	1038	8.0	53	8.1	23.6	8.4	101	--	--
25...	1039	9.0	55	7.6	22.2	8.2	96	--	--
25...	1040	10.0	48	7.3	21.7	8.0	93	--	--
25...	1041	11.0	45	7.2	20.6	7.8	89	--	--
25...	1042	12.0	43	7.0	20.4	7.6	86	--	--
25...	1043	13.0	41	6.9	19.7	7.5	84	--	--
25...	1044	14.0	40	6.8	19.0	7.4	82	--	--
25...	1045	15.0	37	6.8	18.4	7.3	80	--	--
25...	1046	16.0	38	6.8	17.7	7.2	77	--	--
25...	1047	17.0	36	6.7	16.9	7.3	77	--	--
25...	1048	18.0	34	6.7	16.2	7.3	76	--	--
25...	1049	19.0	35	6.7	15.8	7.3	75	--	--
25...	1050	20.0	34	6.7	15.2	7.2	73	--	--
25...	1051	22.0	34	6.7	14.4	7.2	72	--	--
25...	1052	24.0	33	6.7	13.9	7.4	73	--	--
25...	1053	26.0	32	6.6	13.3	7.3	71	--	--
25...	1054	28.0	32	6.6	13.0	7.4	72	--	--
25...	1055	30.0	32	6.7	12.5	7.5	72	--	--
25...	1056	32.0	33	6.7	12.2	7.7	73	--	--
25...	1057	34.0	33	6.7	12.0	7.7	73	--	--
25...	1058	36.0	33	6.7	11.8	7.7	73	--	--
25...	1059	38.0	33	6.6	11.6	7.6	71	--	--
25...	1100	40.0	35	6.7	11.6	7.2	68	--	--
SEP									
12...	1030	5.0	60	8.2	24.9	8.5	105	43	.84
12...	1031	1.0	59	8.2	24.6	8.5	104	43	.84
12...	1032	2.0	59	8.2	24.6	8.5	104	41	.89
12...	1033	3.0	59	8.2	24.5	8.6	105	39	.94
12...	1034	4.0	59	8.2	24.5	8.6	105	39	.94
12...	1035	5.0	59	8.2	24.5	8.6	105	41	.89
12...	1036	6.0	59	8.2	24.4	8.6	105	41	.89
12...	1037	7.0	59	8.2	24.4	8.7	106	41	.89
12...	1038	8.0	59	8.2	24.4	8.7	106	41	.89
12...	1039	9.0	59	8.2	24.4	8.7	106	43	.84
12...	1040	10.0	59	8.1	24.3	8.6	105	43	.84
12...	1041	11.0	59	7.9	23.8	8.4	102	39	.94
12...	1042	12.0	58	7.2	21.7	7.0	81	39	.94
12...	1043	13.0	50	7.0	20.7	7.0	80	41	.89
12...	1044	14.0	48	7.0	20.4	6.9	78	41	.89
12...	1045	15.0	49	7.0	20.0	6.9	78	43	.84
12...	1046	16.0	48	6.9	19.6	6.9	77	45	.79
12...	1047	17.0	47	6.9	19.1	6.9	76	45	.79
12...	1048	18.0	46	6.8	18.8	6.6	73	45	.79
12...	1049	19.0	46	6.8	18.5	6.4	70	47	.74
12...	1050	20.0	45	6.8	18.2	6.4	70	47	.74
12...	1051	21.0	44	6.8	17.7	6.4	69	43	.84
12...	1052	22.0	43	6.7	17.6	6.2	67	41	.89
12...	1053	23.0	43	6.7	17.4	6.0	64	37	.99
12...	1054	24.0	44	6.7	17.2	5.9	63	33	1.10
12...	1055	25.0	42	6.7	16.9	5.8	61	37	.99
12...	1056	26.0	42	6.7	16.6	5.8	61	41	.89
12...	1057	27.0	41	6.6	16.2	5.7	59	43	.84
12...	1058	28.0	41	6.6	16.0	5.7	59	37	.99
12...	1059	29.0	44	6.6	15.5	5.7	59	39	.94
12...	1100	30.0	47	6.6	14.8	5.8	59	39	.94
12...	1101	34.0	45	6.6	13.7	6.2	61	24	1.43

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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
MAR											
01...	1650	131	10	--	--	9.2	0	6.5	.4	2.5	23
JUN											
14...	1500	26	13	--	--	21.4	9	6.6	2.4	2.8	18
14...	1505	42	36	--	--	--	5	5.6	1.7	2.2	25
14...	1510	89	66	--	--	--	3	4.9	1.6	2.3	20
JUL											
25...	1105	10	10	56	8.1	--	2	5.7	2.1	2.4	18
25...	1110	49	49	42	6.8	--	2	5.5	2.0	2.1	17
25...	1115	115	82	--	--	--	2	4.4	1.4	1.9	19

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

11446200 FOLSOM LAKE NEAR FOLSOM, CA--Continued

FOLSOM LAKE AT DAM, NEAR FOLSOM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM- DIS- SOLVED (MG/L AS NA)	POTAS- SIUM- DIS- SOLVED (MG/L AS K)	ALKA- LINITY AS (MG/L 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 SI02)	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)
MAR 01...	.3	--	.5	24	4.3	1.7	.0	9.3	43	37	.06
JUN 14...	.2	3.5	.7	24	2.8	1.8	.0	8.2	43	36	.06
14...	.2	2.8	.6	16	2.5	1.4	.0	9.0	38	33	.05
14...	.2	2.8	.5	19	2.3	3.3	.0	13	49	38	.07
JUL 25...	.2	3.0	.6	21	5.1	3.2	.0	9.3	22	41	.03
25...	.2	2.3	.2	20	5.1	1.9	.0	8.8	30	38	.04
25...	.2	2.4	.5	15	3.8	1.5	.0	10	13	33	.02

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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
MAR 01...	--	--	.06	.06	.02	.11	.13	.19	.02	.015	.00
JUN 14...	--	--	.01	.31	.08	.07	.15	.16	.00	.009	.00
14...	--	--	.01	.01	.03	.42	.45	.46	.00	.004	.00
14...	--	--	.02	.05	.02	.34	.36	.38	.00	.006	.00
JUL 25...	.01	.02	.03	.00	.01	.08	.09	.12	.02	.010	.00
25...	.03	.00	.03	.00	.01	.15	.16	.19	.02	.000	.00
25...	.16	.02	.18	.00	.01	.12	.13	.31	.02	.000	.00

DATE	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
MAR 01...	80	--	170	--	40	2	--	2	2.2	1.0
JUN 14...	30	30	80	70	10	0	0	0	2.2	.6
14...	0	0	80	70	10	10	10	0	--	--
14...	0	0	70	60	10	0	0	0	--	--
JUL 25...	40	20	30	30	<0	10	9	<1	--	.7
25...	40	10	20	20	<0	10	9	<1	--	--
25...	30	10	50	50	<0	0	0	<1	--	--

CHEMICAL ANALYSES OF LAKEBED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL IN BOT- TOM MA- TERIAL (MG/KG AS P)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)
APR , 1979 20...	1200	1300	900	57	0	17	20	60	39000
DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SILVER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS AG)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR , 1979 20...	30	1200	.13	0	0	88	0	0	.0

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

11446400 AMERICAN RIVER AT NIMBUS DAM, AT FAIR OAKS, CA

LOCATION.--Lat 38°38'06", long 121°13'10", in Rio de Los Americanos Grant, Sacramento County, Hydrologic Unit 18020111, on left bank 200 ft (61 m) downstream from Nimbus Dam and 1.0 mi (1.6 km) south of Fair Oaks.

DRAINAGE AREA.--1,887 mi² (4,887 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

BIOLOGICAL DATA: Water year 1979.

REMARKS.--Site is located just upstream from Nimbus Fish Hatchery. Records of discharge given for American River at Fair Oaks (station 11446500).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT											
03...	1100	2980	50	6.5	13.5	--	8.6	18	--	--	21
24...	1000	1230	47	6.5	15.0	--	7.7	52	--	--	21
NOV											
06...	1130	1260	51	6.5	16.0	--	8.0	--	--	--	22
22...	1115	1220	51	6.6	13.5	--	8.8	--	--	--	19
DEC											
04...	1130	1220	56	6.7	11.0	--	9.3	5	--	--	21
18...	0930	1220	51	7.4	10.5	--	10.5	--	--	--	21
JAN											
08...	1130	1220	54	7.7	9.5	--	11.1	8	--	--	21
22...	1100	2500	56	7.9	8.5	--	11.7	25	--	--	22
FEB											
05...	1130	1210	54	7.7	9.0	--	11.8	12	--	--	22
22...	1245	7560	57	7.9	8.0	3.4	12.9	11	88	K56	21
MAR											
05...	1130	4860	59	7.6	9.0	--	11.8	15	--	--	28
19...	1400	4940	62	7.4	9.0	--	11.4	14	--	--	28
APR											
09...	1300	2710	60	7.7	12.0	--	12.0	7	--	--	24
23...	1130	4550	62	7.4	11.0	--	11.2	9	--	--	30
MAY											
07...	1315	5270	60	7.0	10.5	--	10.5	7	--	--	30
23...	0930	8550	60	7.4	11.5	--	--	5	--	--	24
JUN											
04...	1450	5050	53	7.2	12.5	--	10.0	11	--	--	21
25...	1130	2540	45	7.0	15.5	--	9.5	7	--	--	--
JUL											
09...	1315	2520	50	6.9	16.0	--	9.2	4	--	--	19
23...	1030	2960	56	7.3	15.0	--	9.2	5	K66	28	18
AUG											
16...	1200	2490	42	6.7	17.0	--	8.7	8	--	--	18
27...	1200	2000	46	7.3	18.0	--	8.6	43	--	--	17
SEP											
10...	1230	3470	46	6.6	17.5	--	8.6	8	--	--	19
24...	1100	3470	47	6.7	18.5	--	7.6	11	--	--	20

See footnotes at end of table.

11446400 AMERICAN RIVER AT NIMBUS DAM, AT FAIR OAKS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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- LITY (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)
OCT											
03...	5	5.5	1.7	2.0	17	.2	.6	16	6.5	1.8	.0
24...	2	5.6	1.8	2.3	18	.2	.6	19	3.4	1.5	.0
NOV											
06...	3	6.0	1.8	1.8	14	.2	.6	19	5.0	1.7	.1
22...	0	4.9	1.7	2.0	18	.2	.7	20	2.3	1.8	.0
DEC											
04...	0	5.6	1.8	2.3	18	.2	.6	22	--	2.0	.0
18...	0	5.4	1.8	2.2	18	.2	.9	22	2.1	1.6	.0
JAN											
08...	1	5.4	1.8	2.2	18	.2	.5	20	3.1	1.8	.0
22...	1	5.5	1.9	2.2	18	.2	.6	21	4.4	2.0	.0
FEB											
05...	1	5.5	2.1	2.1	17	.2	.5	21	2.7	2.3	.0
22...	3	5.0	2.1	2.2	18	.2	.6	18	6.2	1.9	.0
MAR											
05...	7	7.1	2.5	2.3	15	.2	.5	21	5.5	2.1	.1
19...	4	6.8	2.6	2.5	16	.2	.6	24	3.1	2.2	.0
APR											
09...	0	5.7	2.3	2.1	16	.2	.6	25	3.8	2.1	.0
23...	--	7.7	2.7	2.5	15	.2	.7	--	--	2.1	.0
MAY											
07...	--	7.9	2.5	2.5	15	.2	.7	--	5.5	2.3	.1
23...	5	5.8	2.4	2.4	17	.2	.8	19	5.2	2.0	.1
JUN											
04...	3	5.4	1.9	2.7	21	.3	.9	18	3.8	2.2	.1
25...	--	--	1.9	2.5	--	--	.6	15	4.1	1.7	.0
JUL											
09...	1	4.9	1.7	2.1	18	.2	.8	18	5.1	1.7	.0
23...	0	4.5	1.7	2.1	19	.2	.7	21	7.6	2.1	.1
AUG											
16...	4	4.8	1.5	2.6	23	.3	.6	14	4.3	1.5	.0
27...	3	4.4	1.4	1.9	19	.2	.6	14	3.2	1.4	.0
SEP											
10...	3	4.8	1.6	2.3	21	.2	.6	16	4.5	1.2	.1
24...	1	5.5	1.6	2.3	19	.2	.6	19	2.9	1.6	.0

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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEED (MG/L)	SOLIDS, NON- VOLA- TILE, SUS- PENDEED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDEED (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)
OCT										
03...	11	--	39	.06	--	--	--	.09	.01	.10
24...	11	37	38	.05	--	--	--	.05	.01	.06
NOV										
06...	11	37	39	.05	1	--	--	.06	.01	.07
22...	9.9	36	35	.05	0	--	--	.23	.01	.24
DEC										
04...	11	43	--	.06	9	--	--	.09	.01	.10
18...	9.8	39	34	.05	1	--	--	.04	.00	.04
JAN										
08...	9.2	34	36	.05	9	--	--	.04	.01	.05
22...	9.1	39	38	.05	10	--	--	.10	.00	.10
FEB										
05...	8.8	42	37	.06	14	--	--	.06	.02	.08
22...	9.4	34	--	.05	14	--	15	.04	.02	.06
MAR										
05...	9.8	46	43	.06	--	--	--	.09	.00	.09
19...	9.8	--	42	.05	3	--	--	.06	.02	.08
APR										
09...	9.8	39	41	.05	23	--	--	.08	.00	.08
23...	9.4	45	--	.06	0	--	--	.05	.00	.05
MAY										
07...	9.4	43	43	.06	6	--	--	.08	.00	.08
23...	9.8	42	40	.06	0	0	0	--	--	.06
JUN										
04...	9.4	33	37	.04	4	--	--	.04	.00	.04
25...	9.0	36	--	--	10	--	--	.01	.02	.03
JUL										
09...	11	38	38	.05	0	--	--	.05	.00	.05
23...	11	33	13	.02	--	--	--	--	--	.02
AUG										
16...	11	37	35	.05	0	--	--	.02	.00	.02
27...	9.9	--	31	.05	13	--	--	.00	.02	.00
SEP										
10...	10	32	35	.04	10	--	--	.02	.00	.02
24...	11	40	37	.05	17	--	--	.01	.02	.03

SACRAMENTO RIVER BASIN

11446400 AMERICAN RIVER AT NIMBUS DAM, AT FAIR OAKS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, KJEL- DAHL, 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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT										
03...	--	.03	.20	.23	.33	.01	--	--	1.9	--
24...	--	.04	.35	.39	.45	.02	--	--	1.3	--
NOV										
06...	--	.01	.00	.00	.07	.01	--	--	1.3	--
22...	--	.02	.07	.09	.33	.02	--	--	2.4	--
DEC										
04...	--	.05	.13	.18	.28	.00	--	--	1.7	--
18...	--	.02	.05	.07	.11	.01	--	--	2.0	--
JAN										
08...	--	.01	.14	.15	.20	.03	--	--	1.6	--
22...	--	.02	.05	.07	.17	.03	--	--	1.9	--
FEB										
05...	--	.00	.10	.10	.18	.03	--	--	--	--
22...	.07	.01	.06	.07	.13	.01	.00	.00	2.1	1.0
MAR										
05...	--	.01	.12	.13	.22	.02	--	--	2.8	--
19...	--	.01	.19	.20	.28	.01	--	--	2.1	--
APR										
09...	--	.01	.10	.11	.19	.02	--	--	2.4	--
23...	--	.01	.28	.29	.34	.01	--	--	2.4	--
MAY										
07...	--	.02	.09	.11	.19	.01	--	--	1.8	--
23...	.12	.03	.06	.09	.15	.01	.00	.00	1.8	1.6
JUN										
04...	--	.02	.13	.15	.19	.01	--	--	1.2	--
25...	--	.03	.17	.20	.23	.01	--	--	2.2	--
JUL										
09...	--	.01	.00	.00	.05	.01	--	--	1.2	--
23...	.00	.00	.08	.08	.10	.01	.00	.00	1.3	1.3
AUG										
16...	--	.00	.24	.24	.26	--	--	--	1.6	--
27...	--	.00	.76	.76	.76	.02	--	--	2.1	--
SEP										
10...	--	.00	.39	.39	.41	.01	--	--	1.3	--
24...	--	.02	.27	.29	.32	.01	--	--	1.4	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)
OCT										
03...	1100	1	--	--	--	--	--	--	--	--
NOV										
06...	1130	0	--	--	--	--	--	--	--	--
DEC										
04...	1130	1	--	--	--	--	--	--	--	--
JAN										
08...	1130	1	--	--	--	--	--	--	--	--
FEB										
05...	1130	0	--	--	--	--	--	--	--	--
22...	1245	0	0	0	0	0	0	30	--	20
MAR										
05...	1130	1	--	--	--	--	--	--	--	--
APR										
09...	1300	1	--	--	--	--	--	--	--	--
MAY										
07...	1315	0	--	--	--	--	--	--	--	--
23...	0930	1	0	0	0	0	0	--	--	40
JUL										
09...	1315	1	--	--	--	--	--	--	--	--
23...	1030	0	0	0	0	--	<1	20	10	10
AUG										
16...	1200	0	--	--	--	--	--	--	--	--
SEP										
10...	1230	0	--	--	--	--	--	--	--	--

See footnotes at end of table.

11446400 AMERICAN RIVER AT NIMBUS DAM, AT FAIR OAKS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 03...	4	--	--	10	--	--	5	--	--	340
NOV 06...	6	--	--	0	--	--	5	--	--	120
DEC 04...	0	--	--	10	--	--	3	--	--	180
JAN 08...	0	--	--	10	--	--	4	--	--	140
FEB 05...	1	--	--	20	--	--	2	--	--	150
22...	0	0	0	0	0	10	2	2	0	160
MAR 05...	1	--	--	10	--	--	7	--	--	200
APR 09...	2	--	--	10	--	--	5	--	--	420
MAY 07...	1	--	--	0	--	--	14	--	--	140
23...	0	0	0	0	0	0	6	6	0	70
JUL 09...	0	--	--	0	--	--	5	--	--	90
23...	1	--	12	0	--	0	3	--	1	70
AUG 16...	0	--	--	0	--	--	2	--	--	80
SEP 10...	0	--	--	10	--	--	1	--	--	60

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PR)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
OCT 03...	--	--	--	--	--	20	--	--	.0	--
NOV 06...	--	--	3	--	--	20	--	--	.0	--
DEC 04...	--	--	3	--	--	70	--	--	.0	--
JAN 08...	--	--	2	--	--	30	--	--	.0	--
FEB 05...	--	--	1	--	--	20	--	--	1.7	--
22...	140	20	2	2	0	20	20	0	.9	.1
MAR 05...	--	--	9	--	--	20	--	--	.2	--
APR 09...	--	--	9	--	--	40	--	--	.1	--
MAY 07...	--	--	47	--	--	10	--	--	.0	--
23...	60	10	25	25	0	10	10	0	.7	.6
JUL 09...	--	--	11	--	--	20	--	--	.1	--
23...	--	10	8	--	0	10	--	5	.0	--
AUG 16...	--	--	9	--	--	10	--	--	.1	--
SEP 10...	--	--	3	--	--	20	--	--	.1	--

SACRAMENTO RIVER BASIN

11446400 AMERICAN RIVER AT NIMBUS DAM, AT FAIR OAKS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE D RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, SUS- PENDE D TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE D TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	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)
OCT										
03...	--	--	--	--	0	--	--	10	--	--
NOV										
06...	--	--	--	--	0	--	--	0	--	--
DEC										
04...	--	--	--	--	0	--	--	10	--	--
JAN										
08...	--	--	--	--	0	--	--	0	--	--
FEB										
05...	--	--	--	--	0	--	--	10	--	--
22...	.8	1	1	0	0	0	0	0	0	0
MAR										
05...	--	--	--	--	0	--	--	10	--	--
APR										
09...	--	--	--	--	0	--	--	10	--	--
MAY										
07...	--	--	--	--	0	--	--	--	--	--
23...	.1	0	0	0	0	0	1	10	0	10
JUL										
09...	--	--	--	--	0	--	--	20	--	--
23...	.0	5	--	3	0	--	0	10	--	<3
AUG										
16...	--	--	--	--	0	--	--	0	--	--
SEP										
10...	--	--	--	--	0	--	--	0	--	--

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.

11446500 AMERICAN RIVER AT FAIR OAKS, CA

LOCATION.--Lat 38°38'08", long 121°13'36", in SE¼NE¼ sec.17, T.9 N., R.7 E., Sacramento County, Hydrologic Unit 18020111, on right bank 2,100 ft (640 m) downstream from Nimbus Dam, 2.4 mi (3.9 km) east of Fair Oaks, 8.1 mi (13.0 km) downstream from South Fork, and at mile 22.2 (35.7 km).

DRAINAGE AREA.--1,888 mi² (4,890 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1181: 1928(M). WSP 1515: 1907(M), 1910, 1931(M), 1943(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.53 ft (21.802 m) National Geodetic Vertical Datum of 1929. See WSP 2131 for history of changes prior to July 15, 1970.

REMARKS.--Records good. Flow regulated by Folsom Lake beginning Feb. 25, 1955 (station 11446200). Some minor regulation of high flows by temporary pondage during period of construction January 1953 to February 1955. Diurnal fluctuations from Folsom powerplant re-regulated by Nimbus Reservoir, capacity, 2,800 acre-ft (3.45 hm³) between normal operating elevations, 118.5 ft (36.12 m) and 125.0 ft (38.10 m) and powerplant. Many diversions above station for irrigation, municipal, and domestic water supply. Diversions of San Juan Suburban Water District, Cordova Water Service, city of Folsom, city of Roseville, and State of California are made at Folsom Dam. Diversion to Folsom South Canal from Nimbus Reservoir started in June 1973. Some inflow from Bear and Yuba River basins.

AVERAGE DISCHARGE (adjusted for change in contents, diversions, and evaporation from Folsom Lake since 1955).--75 years, 3,739 ft³/s (105.9 m³/s), 2,709,000 acre-ft/yr (3.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s (5,100 m³/s) Nov. 21, 1950, gage height, 31.85 ft (9.708 m) site and datum then in use; minimum 3.6 ft³/s (0.10 m³/s) Aug. 16, 1924. Maximum discharge since construction of Folsom Dam in 1953, 115,000 ft³/s (3,260 m³/s) Dec. 23-25, 1964, gage height, 27.65 ft (8.428 m), present datum; minimum, 86 ft³/s (2.44 m³/s) Apr. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,500 ft³/s (467 m³/s) Feb. 23, gage height, 12.14 ft (3.700 m); minimum daily, 1,180 ft³/s (33.4 m³/s) Dec. 30.

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	2980	1250	1230	1210	1200	2490	2450	2530	6150	2550	2440	1530
2	3010	1250	1230	1210	1210	4660	2450	3980	5200	2550	2510	1530
3	2990	1260	1220	1220	1210	4870	2450	4130	5140	2550	2520	1530
4	2980	1260	1220	1230	1220	4860	2450	4070	5140	2550	2510	1530
5	3030	1260	1220	1230	1210	4870	2440	4100	4580	2550	2500	1560
6	3030	1260	1230	1220	1210	4890	2410	5210	4050	2550	2500	1560
7	3040	1230	1240	1220	1200	4810	2420	5310	4080	2540	2510	1980
8	3010	1240	1270	1220	1200	2760	2420	7560	4030	2530	2510	2500
9	3140	1240	1230	1230	1210	2450	2530	7830	3610	2530	2490	2970
10	1590	1240	1220	1230	1200	2400	2420	7790	3550	2530	2470	3460
11	1450	1230	1220	2150	1200	2410	2420	7610	3140	2530	2480	3450
12	1450	1220	1220	7610	1200	2410	2390	6150	3150	2540	2470	3470
13	1440	1220	1210	7540	1190	2420	2370	5970	3130	2540	2460	3470
14	1220	1230	1220	7460	1200	2420	2360	6090	3130	2480	2490	3460
15	1220	1230	1260	7410	1200	2450	2340	6180	3130	2470	2490	3470
16	1220	1230	1230	7350	1210	2510	2370	6100	3120	2490	2530	3460
17	1230	1220	1230	7230	2380	4640	2410	6060	3140	2520	3420	3520
18	1230	1220	1230	7140	5010	4900	2400	6090	3190	2530	3460	3560
19	1230	1220	1230	5220	4960	4940	2410	7220	3150	2500	3500	3550
20	1230	1220	1250	4820	7410	4950	2410	7830	3120	2600	3510	3550
21	1230	1220	1290	3120	7710	2650	2400	7930	2840	3070	3430	3550
22	1240	1220	1240	2350	7900	2420	2530	8430	2710	3040	3000	3550
23	1240	1210	1250	1620	15200	2430	4250	8550	2570	2960	3010	3540
24	1240	1210	1240	1470	16000	2440	4620	8490	2550	2890	2970	3530
25	1260	1220	1240	1460	15700	2450	4670	8410	2550	2490	2470	3540
26	1220	1230	1240	1460	10100	2440	3630	8300	2550	2470	2470	3530
27	1240	1230	1230	1450	4910	2480	2700	8280	2530	2470	1940	3520
28	1230	1240	1220	1450	2680	2450	2610	8250	2550	2460	1530	3550
29	1240	1230	1190	1430	---	2450	2600	8240	2540	2460	1540	3590
30	1250	1230	1180	1190	---	2450	2550	7370	2560	2430	1530	3450
31	1250	---	1220	1250	---	2450	---	7280	---	2410	1530	---
TOTAL	55360	36970	38150	94400	119230	100220	80880	207340	102880	79780	79190	90460
MEAN	1786	1232	1231	3045	4258	3233	2696	6688	3429	2574	2555	3015
MAX	3140	1260	1290	7610	16000	4950	4670	8550	6150	3070	3510	3590
MIN	1220	1210	1180	1190	1190	2400	2340	2530	2530	2410	1530	1530
AC-FT	109800	73330	75670	187200	236500	198800	160400	411300	204100	158200	157100	179400
MEAN ‡	754	1505	1344	3744	4836	5414	5010	7148	2652	1953	1865	1919
AC-FT ‡	46380	89560	82610	230200	268600	332900	298100	439500	157800	120100	114700	114200
†	5694	4274	3708	3948	4512	6894	8180	7603	10062	11585	10458	11600

CAL YR 1978 TOTAL 1288999 MEAN 3532 MAX 15200 MIN 232 AC-FT 2557000 MEAN ‡ 4214 AC-FT ‡ 3051000
WTR YR 1979 TOTAL 1084860 MEAN 2972 MAX 16000 MIN 1180 AC-FT 2152000 MEAN ‡ 3170 AC-FT ‡ 2295000

‡ Adjusted for change in contents, diversions, and evaporation from Folsom Lake.

† Diversions, in acre-feet, from Folsom-Nimbus Dam complex furnished by Water and Power Resources Service.

SACRAMENTO RIVER BASIN

11446500 AMERICAN RIVER AT FAIR OAKS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906-07, 1951-58, 1960-79.

CHEMICAL ANALYSES: Water years 1906-07, 1951-62.

WATER TEMPERATURES: Water years 1951-58, 1960-79 (discontinued).

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: January to December 1906, March 1951 to September 1958, November 1959 to September 1962.

SPECIFIC CONDUCTANCE: March 1951 to September 1958, November 1959 to September 1962.

WATER TEMPERATURES: March 1951 to September 1958, November 1959 to January 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder March 1951 to September 1958, and from November 1959 to January 1979.

REMARKS.--Water temperatures affected by construction of Folsom Dam beginning in February 1955. Extremes are given for two separate periods -- 1951-55, and 1956 to January 1979.

EXTREMES FOR PERIOD OF DAILY RECORD (see REMARKS above):

WATER TEMPERATURES (1951-55): Maximum recorded, 27.0°C July 27, Aug. 3, 1954; minimum recorded, 3.5°C Oct. 30, 31, 1954.

(1956 to January 1979): Maximum recorded, 26.0°C Sept. 28, 1961; minimum recorded, 0.0°C on several days in 1957 and 1958.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 17.0°C Oct. 1; minimum recorded, 9.0°C Jan. 1-4.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO JANUARY 1979

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

11447000 AMERICAN RIVER AT SACRAMENTO, CA

LOCATION.--Lat 38°33'35", long 121°24'57", in Rio de Americanos Grant, Sacramento County, Hydrologic Unit 18020111, at filtration plant intake 2,000 ft (610 m) downstream from Howe Avenue bridge, and 4.3 mi (6.9 km) southeast of State Capitol.

DRAINAGE AREA.--1,936 mi² (5,014 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

BIOLOGICAL DATA: Water year 1979.

REMARKS.--Streamflow data obtained from gaging station American River at Fair Oaks (station 11446500).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM+ ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT											
03...	0900	2990	53	6.6	15.0	--	8.6	13	--	--	22
24...	0830	1240	61	6.7	15.0	--	8.0	51	--	--	22
NOV											
06...	1030	1260	58	6.8	15.0	--	8.2	--	--	--	21
22...	0915	1220	61	6.3	12.5	--	9.2	--	--	--	19
DEC											
04...	1015	1220	70	6.4	11.0	--	9.6	4	--	--	22
18...	1040	1230	62	7.2	11.0	--	9.9	--	--	--	22
JAN											
08...	1000	1220	68	7.3	10.5	--	10.4	9	--	--	22
22...	1000	2350	58	7.9	9.0	--	11.3	31	--	--	21
FEB											
05...	1030	1210	76	7.2	9.0	--	11.2	22	--	--	24
22...	1300	7900	57	7.5	8.5	17	11.8	11	880	370	30
MAR											
05...	1000	4870	61	7.2	12.0	--	11.6	17	--	--	27
19...	1130	4940	60	7.3	12.0	--	11.8	13	--	--	30
APR											
09...	1100	2530	68	7.7	13.5	--	11.6	8	--	--	24
23...	1030	4250	77	7.5	12.5	--	11.2	12	--	--	29
MAY											
07...	1430	5310	74	7.4	13.5	--	11.3	7	--	--	--
22...	1400	8430	68	7.8	13.0	--	11.6	8	--	--	24
JUN											
04...	1620	5140	60	8.1	16.5	--	11.1	7	--	--	23
25...	1000	2550	50	7.4	16.0	--	9.5	7	--	--	23
JUL											
09...	1130	2530	56	7.1	16.5	--	9.9	6	--	--	20
23...	1230	2960	51	7.3	17.0	--	10.1	5	200	500	18
AUG											
16...	0930	2530	57	6.8	16.5	--	8.6	7	--	--	20
27...	1030	1940	57	7.3	18.0	--	9.0	13	--	--	17
SEP											
10...	1100	3460	49	6.6	18.0	--	8.8	11	--	--	19
24...	0930	3530	56	6.7	19.0	--	8.2	12	--	--	21

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	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)
OCT										
03...	1	5.9	1.7	2.5	19	.2	--	.7	21	3.3
24...	1	5.7	1.9	3.9	27	.4	--	.9	21	3.8
NOV										
06...	6	5.5	1.8	3.2	24	.3	--	.9	--	5.1
22...	0	5.0	1.6	2.9	24	.3	--	1.0	25	2.9
DEC										
04...	4	5.8	1.9	3.7	26	.3	--	.9	21	5.8
18...	4	5.6	1.9	3.6	25	.3	--	1.2	20	3.8
JAN										
08...	0	5.7	1.8	3.8	27	.4	--	.9	23	4.3
22...	0	5.3	1.9	2.6	21	.2	--	.6	21	4.0
FEB										
05...	0	5.9	2.3	3.6	24	.3	--	.7	24	4.2
22...	30	8.7	2.1	2.1	13	.2	--	.6	21	8.3
MAR										
05...	6	7.0	2.4	2.6	17	.2	--	.6	21	5.1
19...	5	7.6	2.6	2.7	16	.2	--	.6	25	5.8
APR										
09...	0	5.7	2.4	2.4	17	.2	--	.6	25	5.2
23...	5	7.0	2.8	2.7	16	.2	3.4	.7	24	5.0
MAY										
07...	--	--	2.6	2.9	--	--	3.6	.7	22	5.0
22...	4	7.1	1.4	2.6	19	.2	3.4	.8	20	7.1
JUN										
04...	0	6.0	1.9	2.9	21	.3	3.9	1.0	23	4.2
25...	8	5.6	2.1	3.1	22	.3	3.9	.8	--	5.1
JUL										
09...	2	4.9	1.8	2.7	22	.3	3.6	.9	18	5.4
23...	3	4.4	1.7	2.6	32	.3	3.4	.8	15	.9
AUG										
16...	3	5.2	1.7	2.6	21	.3	3.4	.8	17	5.9
27...	4	4.5	1.5	2.7	24	.3	3.5	.8	15	3.6
SEP										
10...	0	4.8	1.6	2.6	23	.3	3.3	.7	20	4.9
24...	2	5.5	1.7	2.6	21	.2	3.3	.7	19	4.0

SACRAMENTO RIVER BASIN

11447000 AMERICAN RIVER AT SACRAMENTO, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, NON-VOLATILE, SUS-PENDED (MG/L)	SOLIDS, VOLATILE, SUS-PENDED (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)
OCT										
03...	2.7	44	41	.06	--	--	--	.11	.01	.12
24...	3.7	51	45	.07	--	--	--	.11	.02	.13
NOV										
06...	3.3	45	40	.06	1	--	--	.15	.02	.17
22...	3.4	38	44	.05	18	--	--	.81	.02	.83
DEC										
04...	3.5	49	42	.07	6	--	--	.17	.02	.19
18...	2.6	49	39	.07	0	--	--	.14	.01	.15
JAN										
08...	3.5	--	43	.07	5	--	--	.12	.02	.14
22...	2.7	41	39	.06	7	--	--	.09	.02	.11
FEB										
05...	4.4	49	44	.07	2	--	--	.11	.04	.15
22...	2.1	37	--	.05	9	--	22	.06	.02	.08
MAR										
05...	2.4	45	42	.06	3	--	--	.07	.02	.09
19...	2.5	37	46	.05	3	--	--	.08	.02	.10
APR										
09...	2.8	42	44	.06	7	--	--	.08	.02	.10
23...	2.5	46	44	.06	0	--	--	.08	.00	.08
MAY										
07...	2.6	44	--	.06	30	--	--	.09	.02	.11
22...	1.8	41	43	.06	0	0	0	--	--	.05
JUN										
04...	2.5	37	42	.05	5	--	--	.04	.00	.04
25...	2.4	40	37	.05	8	--	--	.05	.02	.07
JUL										
09...	2.5	39	39	.05	3	--	--	.04	.02	.06
23...	2.0	39	38	.05	--	--	--	--	--	.05
AUG										
16...	2.4	40	39	.05	5	--	--	.03	.02	.05
27...	2.3	39	33	.05	1	--	--	.03	.04	.07
SEP										
10...	1.6	35	38	.05	26	--	--	.09	.00	.09
24...	2.1	34	39	.05	12	--	--	.03	.02	.05

DATE	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS-SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT										
03...	--	.12	.22	.34	.46	.08	--	--	3.4	--
24...	--	.54	.08	.62	.75	.27	--	--	2.0	--
NOV										
06...	--	.40	.12	.52	.69	.25	--	--	2.1	--
22...	--	.38	.28	.66	1.5	.25	--	--	3.9	--
DEC										
04...	--	.42	.17	.59	.78	.27	--	--	2.0	--
18...	--	.41	.09	.50	.65	.20	--	--	2.3	--
JAN										
08...	--	.22	.53	.75	.89	.27	--	--	2.5	--
22...	--	.23	.39	.62	.73	.11	--	--	2.4	--
FEB										
05...	--	.48	.07	.55	.70	.25	--	--	--	--
22...	.14	.07	.11	.18	.26	.04	.030	.02	2.1	13
MAR										
05...	--	.05	.14	.19	.28	.06	--	--	2.3	--
19...	--	.04	.25	.29	.39	.04	--	--	2.3	--
APR										
09...	--	.10	.17	.27	.37	.07	--	--	2.2	--
23...	--	.05	.17	.22	.30	.04	--	--	1.9	--
MAY										
07...	--	.12	.06	.18	.29	.07	--	--	1.1	--
22...	.05	.07	.08	.15	.20	.03	.032	.03	2.1	13
JUN										
04...	--	.10	.22	.32	.36	.03	--	--	1.0	--
25...	--	.19	.12	.31	.38	.08	--	--	2.1	--
JUL										
09...	--	.11	.12	.23	.29	.07	--	--	2.4	--
23...	.00	.04	.27	.31	.36	.06	.030	.06	1.9	4.5
AUG										
16...	--	.13	.45	.58	.63	--	--	--	1.9	--
27...	--	.18	--	--	--	.13	--	--	2.4	--
SEP										
10...	--	.07	--	--	--	.05	--	--	1.3	--
24...	--	.10	.39	.49	.54	.05	--	--	1.6	--

11447000 AMERICAN RIVER AT SACRAMENTO, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC		ARSENIC		BERYL-		BERYL-		BERYL-		BORON,		BORON,	
		TOTAL	SUS- PENDE	TOTAL	DIS- SOLVED	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE
		(UG/L AS AS)	(UG/L AS AS)	(UG/L AS AS)	(UG/L AS AS)	(UG/L AS BE)	(UG/L AS BE)	(UG/L AS BE)	(UG/L AS BE)	(UG/L AS B)	(UG/L AS B)	(UG/L AS B)	(UG/L AS B)	(UG/L AS B)	(UG/L AS B)
OCT															
03...	0900	0	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV															
06...	1030	0	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC															
04...	1015	0	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN															
08...	1000	1	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB															
05...	1030	2	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	1300	1	0	0	0	0	0	0	0	70	30	40			
MAR															
05...	1000	1	--	--	--	--	--	--	--	--	--	--	--	--	--
APR															
09...	1100	1	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY															
07...	1430	2	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	1400	1	0	1	0	0	0	0	0	--	--	20			20
JUL															
09...	1130	1	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	1230	0	0	0	0	0	--	--	--	<1	20	--	--	--	40
AUG															
16...	0930	0	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP															
10...	1100	1	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	CADMIUM		CADMIUM		CHRO-		CHRO-		CHRO-		COPPER,		COPPER,		IRON,	
	TOTAL	SUS- PENDE	TOTAL	DIS- SOLVED	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE	TOTAL	SUS- PENDE
	(UG/L AS CD)	(UG/L AS CD)	(UG/L AS CD)	(UG/L AS CD)	(UG/L AS CR)	(UG/L AS CR)	(UG/L AS CR)	(UG/L AS CR)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS FE)	(UG/L AS FE)
OCT																
03...	0	--	--	0	--	--	--	--	5	--	--	--	--	--	200	--
NOV																
06...	3	--	--	0	--	--	--	--	6	--	--	--	--	--	60	--
DEC																
04...	0	--	--	10	--	--	--	--	13	--	--	--	--	--	200	--
JAN																
08...	1	--	--	20	--	--	--	--	11	--	--	--	--	--	170	--
FEB																
05...	1	--	--	10	--	--	--	--	2	--	--	--	--	--	150	--
22...	1	1	0	10	0	10	8	6	2	6	2	520				
MAR																
05...	1	--	--	10	--	--	--	--	8	--	--	--	--	--	250	--
APR																
09...	3	--	--	0	--	--	--	--	4	--	--	--	--	--	120	--
MAY																
07...	0	--	--	0	--	--	--	--	0	--	--	--	--	--	120	--
22...	0	0	0	0	0	0	9	8	1	140						
JUL																
09...	0	--	--	0	--	--	--	--	20	--	--	--	--	--	80	--
23...	1	--	--	0	--	--	0	4	--	2	110					
AUG																
16...	0	--	--	0	--	--	--	--	2	--	--	--	--	--	140	--
SEP																
10...	0	--	--	0	--	--	--	--	2	--	--	--	--	--	100	--

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

SACRAMENTO RIVER BASIN

11447000 AMERICAN RIVER AT SACRAMENTO, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE 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 RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
OCT 03...	--	--	18	--	--	10	--	--	.0	--
NOV 06...	--	--	57	--	--	0	--	--	.0	--
DEC 04...	--	--	9	--	--	10	--	--	.1	--
JAN 08...	--	--	15	--	--	10	--	--	.0	--
FEB 05...	--	--	2	--	--	10	--	--	.3	--
22...	490	30	7	7	0	30	30	0	1.3	.2
MAR 05...	--	--	11	--	--	20	--	--	.2	--
APR 09...	--	--	10	--	--	10	--	--	.1	--
MAY 07...	--	--	86	--	--	0	--	--	.1	--
22...	130	10	76	76	0	10	0	10	.9	.5
JUL 09...	--	--	22	--	--	10	--	--	.1	--
23...	--	20	5	--	0	20	--	7	.1	--
AUG 16...	--	--	4	--	--	0	--	--	.1	--
SEP 10...	--	--	4	--	--	20	--	--	.2	--

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 03...	--	--	--	--	0	--	--	20	--	--
NOV 06...	--	--	--	--	1	--	--	20	--	--
DEC 04...	--	--	--	--	0	--	--	20	--	--
JAN 08...	--	--	--	--	0	--	--	20	--	--
FEB 05...	--	--	--	--	0	--	--	0	--	--
22...	1.1	1	1	0	0	0	0	20	10	10
MAR 05...	--	--	--	--	0	--	--	10	--	--
APR 09...	--	--	--	--	0	--	--	10	--	--
MAY 07...	--	--	--	--	0	--	--	10	--	--
22...	.4	4	4	0	1	0	1	20	20	0
JUL 09...	--	--	--	--	0	--	--	30	--	--
23...	.1	5	--	2	0	--	0	10	--	4
AUG 16...	--	--	--	--	0	--	--	0	--	--
SEP 10...	--	--	--	--	0	--	--	0	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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
JUL 23...	1230	2960	17.0	5	40	71

11447230 AMERICAN RIVER AT 16TH STREET BRIDGE, AT SACRAMENTO, CA

LOCATION.--Lat 38°35'46", long 121°28'30", in Rio Los Americanos Land Grant, T.9 N., R.5 E., Sacramento County, Hydrologic Unit 18020111, at center of 16th Street Bridge, 1.6 mi (2.6 km) northeast of the State Capitol at Sacramento.

DRAINAGE AREA.--1,972 mi² (5,107 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

REMARKS.--Streamflow data obtained from gaging station American River at Fair Oaks (station 11446500).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (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)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
NOV 13...	1200	1220	73	7.1	12.5	8.9	23	--	K940	K1100	26	4
FEB 21...	1300	7710	47	7.2	8.5	11.4	20	--	4000	1800	24	6
MAY 22...	1100	8430	55	7.5	13.0	10.4	--	6	K192	85	23	4
JUL 23...	1000	2960	58	7.5	17.0	8.2	--	8	K8000	K140	28	20

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	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV 13...	7.2	2.0	4.1	24	.3	--	1.1	22	5.4	4.6	.0
FEB 21...	6.3	2.1	1.8	13	.2	--	.8	18	6.8	2.1	.0
MAY 22...	7.2	1.2	2.5	22	.2	3.4	.9	19	2.5	2.5	.1
JUL 23...	4.8	1.9	3.2	25	.3	4.0	.8	29	1.3	2.7	.0

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, NON- VOLATILE, RESIDUE AT 105 DEG. C, SUS- PENDED TOTAL (MG/L)	SOLIDS, NON- VOLATILE, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 13...	12	53	--	.07	--	12	--	2	--	--	.36
FEB 21...	8.9	37	40	.05	30	--	--	10	--	--	.11
MAY 22...	9.5	46	41	.06	5	--	5	0	--	--	.38
JUL 23...	--	--	--	--	--	--	--	--	.03	.00	--

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (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. 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)	PHOS- PHORUS, ORTHOPHOS- PHATE DIS- SOLVED (MG/L AS P)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
NOV 13...	.33	.57	2.4	3.0	2.2	.77	3.4	.23	.220	--	--
FEB 21...	.12	.09	.17	.26	--	--	.37	.06	.060	.03	15
MAY 22...	2.7	.06	.17	.23	--	--	.61	.03	.030	.02	4.5
JUL 23...	.03	--	--	--	--	--	--	--	.105	.00	12

K Results based on colony count outside the acceptable range (non-ideal colony count).

SACRAMENTO RIVER BASIN

11447230 AMERICAN RIVER AT 16TH STREET BRIDGE, AT SACRAMENTO, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
NOV 13...	1200	1	--	1	0	--	0	--	--	--	0
FEB 21...	1300	1	--	1	0	--	0	40	0	40	1
MAY 22...	1100	0	0	0	0	0	0	--	--	40	2
JUL 23...	1000	0	0	0	0	--	<1	20	--	30	1

DATE	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 13...	--	0	0	0	0	16	9	7	--	--	40
FEB 21...	--	1	10	10	0	11	9	2	1100	1100	50
MAY 22...	2	0	0	0	0	10	9	1	250	220	30
JUL 23...	--	1	0	--	0	4	--	2	130	--	20

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE 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 RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)
NOV 13...	7	5	2	--	--	10	.2	.2	.0	3	2
FEB 21...	13	12	1	40	40	0	1.5	.2	1.3	2	2
MAY 22...	23	23	0	10	10	0	.8	.6	.2	2	0
JUL 23...	6	--	0	10	--	10	.0	--	.1	4	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, DIS- SOLVED (MG/L AS C)	OIL AND GREASE (MG/L)
NOV 13...	1	0	0	1	20	0	20	--	4.0	0
FEB 21...	0	0	0	0	30	0	30	--	3.3	--
MAY 22...	3	1	0	1	10	0	10	2.3	--	--
JUL 23...	3	0	--	0	20	--	20	1.9	--	--

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

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA

LOCATION.--Lat 38°35'12", long 121°30'16", Sacramento County, Hydrologic Unit 18020109, on left bank 1,000 ft (300 m) upstream from I Street Bridge, in city of Sacramento, and 0.5 mi (0.8 km) downstream from American River.

DRAINAGE AREA.--23,502 mi² (60,870 km²).

REVISED RECORDS.--WDR CA-76-4: Drainage area.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1904 to July 1905 (gage heights only), June to November 1921, October 1948 to current year. Gage heights collected in this vicinity November 1879 to May 1888, December 1890 to September 1963 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1912, nonrecording gage in vicinity of I Street Bridge. Oct. 15, 1912, to Nov. 16, 1956, water-stage recorder at various sites in vicinity of I Street Bridge. Prior to Nov. 16, 1956, datum of gages at low-water mark of Oct. 23, 1856, 0.12 ft (0.037 m) NGVD. Auxiliary water-stage recorder on right bank 10.8 mi (17.4 km) downstream near Freeport.

REMARKS.--Records good above 8,000 ft³/s (227 m³/s) and fair below. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas. Flood flows bypass station through Yolo Bypass (stations 11426000, 11453000).

AVERAGE DISCHARGE.--31 years (water years 1949-79), 23,590 ft³/s (668 m³/s), 17,091,000 acre-ft/yr (21.1 km³/yr).

EXTREMES FOR PERIOD OF RECORD (since 1949).--Maximum discharge, 104,000 ft³/s (2,950 m³/s) Nov. 21, 1950, elevation, 30.14 ft (9.187 m) site and datum then in use; minimum daily, 3,970 ft³/s (112 m³/s) Oct. 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known prior to Nov. 21, 1950, 103,000 ft³/s (2,920 m³/s) Jan. 17, 1909, elevation, 29.6 ft (9.02 m) present datum, from reports of California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 71,300 ft³/s (2,020 m³/s) Feb. 24; minimum daily, 10,100 ft³/s (286 m³/s) Apr. 22.

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	15700	11100	13400	13300	15000	42200	28200	14300	15500	14900	17200	13800
2	15500	10900	13400	13200	14700	50600	26100	14400	13800	15500	17100	14300
3	15300	10900	13600	13100	14000	52400	24800	14800	13200	16200	17100	14500
4	14500	10600	13500	13300	13200	47500	23800	14100	13100	16600	17000	14400
5	14200	10600	13000	13300	12900	42200	22400	12900	12200	16500	16900	14700
6	14200	10900	12800	13300	12700	38000	20400	12900	11500	16400	17100	14800
7	14200	11300	12900	13300	12500	34500	18800	13900	11300	16300	17300	15100
8	14000	11300	13000	13600	12200	31500	18500	17200	11800	16300	17500	15300
9	14300	11200	12900	14600	11900	29500	18000	19600	11400	16600	17600	15700
10	13600	11100	12800	16100	11600	28000	17000	20100	11000	16800	17400	15900
11	12600	11100	12700	19100	11400	26500	16100	19000	11000	16900	17000	15500
12	12500	11300	12700	30500	11400	25000	15900	16800	11100	16400	17000	15500
13	12400	11500	12800	35500	12400	23500	14700	15800	11600	16000	17000	15400
14	12100	11700	12800	34800	16700	21500	13400	16200	11600	15600	16600	15100
15	12100	11900	12900	38200	31800	20400	12600	17200	11800	15600	16400	14900
16	11900	11900	12900	43600	37600	20500	12500	18000	11600	15300	15900	15100
17	11600	12000	13200	46100	39100	22800	12800	18100	11300	15200	15900	15100
18	11300	12000	13500	43700	41100	26800	13100	18500	11300	15000	15800	14900
19	11300	12200	13800	38300	41800	28600	13100	19300	11600	15100	15600	14600
20	11300	13100	13900	33400	46500	28900	12700	20300	11800	15800	15500	14500
21	11300	14100	13500	29600	51400	27200	11200	20400	11900	17000	15300	14400
22	11100	15600	13500	25800	57000	23900	10100	20600	12100	17600	14700	14500
23	11100	16100	13500	23300	66600	21600	11000	21800	11900	17800	14400	14300
24	11200	15700	13500	21400	71300	20300	13200	22100	12200	17800	14300	14300
25	11200	14800	13300	19800	70700	19100	14900	22600	12700	17500	13800	14000
26	11400	14200	13300	18300	66400	18400	16300	22300	12700	17500	13700	13200
27	11300	13800	13200	17400	57100	18700	16300	20700	12500	17200	13300	13100
28	11000	13500	13200	16400	47400	21600	16200	19700	13100	16800	12900	13200
29	11000	13400	13200	15800	---	29800	16600	18800	13500	16700	12800	13200
30	10900	13500	13200	15500	---	32200	15700	18000	14100	16900	12800	13700
31	11000	---	13400	15300	---	30400	---	17100	---	17000	13100	---
TOTAL	387100	373300	409300	718900	908400	904100	496400	557500	366200	508800	486000	437000
MEAN	12490	12440	13200	23190	32440	29160	16550	17980	12210	16410	15680	14570
MAX	15700	16100	13900	46100	71300	52400	28200	22600	15500	17800	17600	15900
MIN	10900	10600	12700	13100	11400	18400	10100	12900	11000	14900	12800	13100
AC-FT	767800	740400	811800	1426000	1802000	1793000	984600	1106000	726400	1009000	964000	866800
CAL YR 1978	TOTAL	9357900	MEAN	25640	MAX	79300	MIN	10600	AC-FT	18560000		
WTR YR 1979	TOTAL	6553000	MEAN	17950	MAX	71300	MIN	10100	AC-FT	13000000		

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906-8, 1951-79.

CHEMICAL ANALYSES: Water years 1906-8, 1951-60. Published as "above Sacramento" in 1906-8.

WATER TEMPERATURES: Water years 1955 to September 1979 (discontinued).

SEDIMENT RECORDS: Water years 1957 to September 1979 (discontinued).

TURBIDITY: Water years 1972 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: May 1955 to May 1960.

WATER TEMPERATURES: May 1955 to September 1979 (discontinued).

SEDIMENT RECORDS: October 1956 to September 1979 (discontinued).

REMARKS.--Unpublished records of daily specific conductance for period May 1955 to May 1960, and water temperature for period May 1955 to September 1960 are available in files of district office. Values reported as bedload discharge are unsampled sediment discharges computed by the modified Einstein procedure.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.0°C on several days in 1969 and 1970; minimum recorded, 3.0°C Dec. 14, 1973.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,960 mg/L Dec. 24, 1964; minimum daily mean, 8 mg/L Dec. 29, 30, 1976.

SEDIMENT DISCHARGE: Maximum daily, 525,000 tons (476,000 metric tons) Dec. 24, 1964; minimum daily, 151 tons (137 metric tons), Oct. 21, 22, 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 390 mg/L Feb. 16; minimum daily mean, 12 mg/L Dec. 23.

SEDIMENT DISCHARGE: Maximum daily, 47,300 tons (42,900 metric tons) Jan. 17; minimum daily, 437 tons (396 metric tons) Dec. 23.

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
(NOT PREVIOUSLY PUBLISHED)

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	139320.00	8084.00	9	8090
NOVEMBER ...	200620.00	14448.00	14	14500
DECEMBER ...	364110.00	272063.00	1630	274000
JANUARY 1978	1410200.00	1503930.00	173000	1680000
FEBRUARY ...	1251700.00	728370.00	139000	867000
MARCH	1722700.00	586850.00	255000	842000
APRIL	1166500.00	382920.00	71900	455000
MAY	781000.00	126970.00	20800	148000
JUNE	379800.00	33020.00	388	34000
JULY	443300.00	49070.00	833	49900
AUGUST	495000.00	56210.00	1630	57800
SEPTEMBER ..	538000.00	64060.00	3070	67100
TOTAL	8892250.00	3827195.00	667274	4497390

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

TEMPERATURE (DEG. C) OF WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	6.5	---	---	---	---	---	---	23.0	---
2	---	13.5	---	6.0	---	---	13.5	---	---	---	24.5	---
3	21.5	14.5	---	7.0	7.0	---	---	15.0	---	---	---	23.5
4	---	---	10.0	---	---	11.5	15.0	---	22.5	---	---	25.0
5	---	14.5	---	---	---	---	---	---	---	---	---	24.0
6	---	---	8.0	---	---	---	---	14.5	---	21.0	23.0	---
7	18.5	---	---	---	7.5	12.5	---	---	---	---	---	24.5
8	---	14.0	11.5	---	10.0	---	---	---	---	---	---	---
9	---	---	---	9.5	10.5	---	15.0	15.0	20.0	---	---	---
10	18.5	---	7.5	---	---	13.0	---	16.0	---	---	22.0	---
11	---	---	7.0	---	12.0	---	---	---	22.5	---	---	---
12	18.5	---	---	10.0	---	14.5	16.0	---	---	22.5	---	24.5
13	---	8.5	6.0	10.5	---	---	---	---	21.0	22.5	---	22.5
14	---	---	4.5	9.5	---	---	---	---	---	22.5	---	---
15	---	6.5	---	9.0	11.5	12.5	---	---	---	23.0	22.5	---
16	17.0	---	---	10.0	10.0	---	---	---	20.0	---	---	25.0
17	---	11.0	---	10.5	---	---	15.5	19.0	20.0	25.0	21.0	---
18	---	10.5	4.5	10.0	9.5	12.5	---	---	---	---	---	22.5
19	17.5	---	6.0	9.0	---	12.5	14.5	---	23.0	---	23.5	---
20	---	---	7.5	---	---	---	---	---	---	23.5	23.5	23.0
21	---	---	---	9.5	9.5	13.0	---	---	20.5	---	---	---
22	---	---	---	10.5	10.5	14.0	---	---	22.5	24.0	---	---
23	---	---	7.0	---	9.0	---	14.5	21.5	---	---	---	---
24	18.5	11.0	---	9.0	9.0	---	---	---	22.5	25.0	---	---
25	---	10.5	---	9.0	10.5	---	15.5	---	---	22.5	---	---
26	18.5	10.5	---	---	---	12.5	15.0	20.0	21.0	---	---	---
27	---	---	---	---	9.5	---	---	19.5	---	---	24.0	---
28	16.5	---	7.5	8.5	9.5	---	---	---	---	22.5	---	21.5
29	---	---	---	---	---	---	---	19.0	23.5	22.0	22.5	22.0
30	15.0	10.0	6.0	---	---	12.5	15.5	18.5	---	---	---	---
31	13.0	---	6.5	7.5	---	---	---	---	---	---	22.0	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	15700	28	1190	11100	27	809	13400	23	832
2	15500	32	1340	10900	26	765	13400	23	832
3	15300	28	1160	10900	22	647	13600	22	808
4	14500	27	1060	10600	23	658	13500	22	802
5	14200	28	1070	10600	25	715	13000	25	877
6	14200	30	1150	10900	24	706	12800	30	1040
7	14200	32	1230	11300	25	763	12900	26	906
8	14000	30	1130	11300	24	732	13000	18	632
9	14300	28	1080	11200	24	726	12900	17	592
10	13600	24	881	11100	23	689	12800	16	553
11	12600	27	919	11100	23	689	12700	15	514
12	12500	38	1280	11300	22	671	12700	20	686
13	12400	42	1410	11500	17	528	12800	17	588
14	12100	39	1270	11700	16	505	12800	21	726
15	12100	42	1370	11900	16	514	12900	18	627
16	11900	40	1290	11900	21	675	12900	18	627
17	11600	41	1280	12000	23	745	13200	17	606
18	11300	42	1280	12000	22	713	13500	19	693
19	11300	42	1280	12200	25	823	13800	16	596
20	11300	39	1190	13100	29	1030	13900	29	1090
21	11300	39	1190	14100	34	1290	13500	26	948
22	11100	36	1080	15600	42	1770	13500	18	656
23	11100	28	839	16100	48	2090	13500	12	437
24	11200	25	756	15700	53	2250	13500	13	474
25	11200	24	726	14800	41	1640	13300	13	467
26	11400	26	800	14200	33	1270	13300	13	467
27	11300	27	824	13800	33	1230	13200	13	463
28	11000	25	742	13500	32	1170	13200	13	463
29	11000	26	772	13400	33	1190	13200	13	463
30	10900	25	736	13500	27	984	13200	13	463
31	11000	24	713	---	---	---	13400	15	543
TOTAL	387100	---	33038	373300	---	28987	409300	---	20471

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	13300	18	646	15000	30	1220	42200	75	8550
2	13200	13	463	14700	31	1230	50600	75	10200
3	13100	15	531	14000	29	1100	52400	70	9900
4	13300	14	503	13200	23	820	47500	65	8340
5	13300	15	539	12900	23	801	42200	65	7410
6	13300	14	503	12700	22	754	38000	75	7690
7	13300	14	503	12500	23	776	34500	90	8380
8	13600	15	551	12200	21	692	31500	98	8330
9	14600	28	1100	11900	19	610	29500	102	8120
10	16100	35	1520	11600	20	626	28000	101	7640
11	19100	48	2480	11400	23	708	26500	95	6800
12	30500	130	10700	11400	20	616	25000	84	5670
13	35500	130	12500	12400	23	770	23500	71	4500
14	34800	140	13200	16700	35	1580	21500	60	3480
15	38200	160	16500	31800	270	83200	20400	50	2750
16	43600	220	25900	37600	390	39600	20500	50	2770
17	46100	380	47300	39100	360	38000	22800	60	3690
18	43700	280	33000	41100	260	28900	26800	65	4700
19	38300	160	16500	41800	165	18600	28600	60	4630
20	33400	105	9470	46500	180	22600	28900	55	4290
21	29600	95	7590	51400	220	30500	27200	50	3670
22	25800	70	4880	57000	180	27700	23900	56	3610
23	23300	50	3150	66600	190	34200	21600	60	3500
24	21400	55	3180	71300	160	30800	20300	60	3290
25	19800	65	3470	70700	115	22000	19100	60	3090
26	18300	48	2370	66400	110	19700	18400	60	2980
27	17400	40	1880	57100	115	17700	18700	56	2830
28	16400	38	1680	47400	95	12200	21600	80	4670
29	15800	34	1450	---	---	---	29800	210	16900
30	15500	32	1340	---	---	---	32200	360	31300
31	15300	31	1280	---	---	---	30400	365	30000
TOTAL	718900	---	226679	908400	---	378003	904100	---	233680

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	28200	220	16800	14300	34	1310	15500	26	1090
2	26100	120	8460	14400	34	1320	13800	23	857
3	24800	85	5690	14800	36	1440	13200	22	784
4	23800	82	5270	14100	32	1220	13100	19	672
5	22400	78	4720	12900	27	940	12200	22	725
6	20400	68	3750	12900	27	940	11500	20	621
7	18800	60	3050	13900	28	1050	11300	24	732
8	18500	58	2900	17200	36	1670	11800	27	860
9	18000	56	2720	19600	40	2120	11400	27	831
10	17000	56	2570	20100	46	2500	11000	24	713
11	16100	56	2430	19000	43	2210	11000	22	653
12	15900	54	2320	16800	38	1720	11100	22	659
13	14700	52	2060	15800	36	1540	11600	21	658
14	13400	46	1660	16200	38	1660	11600	22	689
15	12600	40	1360	17200	44	2040	11800	22	701
16	12500	39	1320	18000	56	2720	11600	22	689
17	12800	40	1380	18100	62	3030	11300	24	732
18	13100	30	1060	18500	61	3050	11300	24	732
19	13100	25	884	19300	59	3070	11600	27	846
20	12700	26	892	20300	55	3010	11800	27	860
21	11200	25	756	20400	54	2970	11900	26	835
22	10100	25	682	20600	48	2670	12100	32	1050
23	11000	29	861	21800	43	2530	11900	27	868
24	13200	36	1280	22100	40	2390	12200	27	889
25	14900	43	1730	22600	41	2500	12700	27	926
26	16300	49	2160	22300	38	2290	12700	26	892
27	16300	45	1980	20700	36	2010	12500	24	810
28	16200	40	1750	19700	32	1700	13100	30	1060
29	16600	38	1700	18800	32	1620	13500	33	1200
30	15700	37	1570	18000	30	1460	14100	34	1290
31	---	---	---	17100	29	1340	---	---	---
TOTAL	496400	---	85765	557500	---	62040	366200	---	24924

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

JULY				AUGUST			SEPTEMBER		
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	14900	34	1370	17200	30	1390	13800	48	1790
2	15500	35	1460	17100	28	1290	14300	46	1780
3	16200	35	1530	17100	29	1340	14500	46	1800
4	16600	35	1570	17000	30	1380	14400	46	1790
5	16500	34	1510	16900	30	1370	14700	45	1790
6	16400	33	1460	17100	30	1390	14800	44	1760
7	16300	32	1410	17300	31	1450	15100	43	1750
8	16300	32	1410	17500	32	1510	15300	42	1740
9	16600	33	1480	17600	27	1280	15700	42	1780
10	16800	32	1450	17400	25	1170	15900	41	1760
11	16900	33	1510	17000	24	1100	15500	41	1720
12	16400	32	1420	17000	27	1240	15500	40	1670
13	16000	32	1380	17000	28	1290	15400	40	1660
14	15600	33	1390	16600	28	1250	15100	39	1590
15	15600	32	1350	16400	26	1150	14900	39	1570
16	15300	29	1200	15900	26	1120	15100	38	1550
17	15200	27	1110	15900	26	1120	15100	37	1510
18	15000	26	1050	15800	29	1240	14900	36	1450
19	15100	28	1140	15600	30	1260	14600	34	1340
20	15800	29	1240	15500	27	1130	14500	32	1250
21	17000	33	1510	15300	27	1120	14400	34	1320
22	17600	34	1620	14700	28	1110	14500	34	1330
23	17800	34	1630	14400	28	1090	14300	33	1270
24	17800	30	1440	14300	32	1240	14300	32	1240
25	17500	28	1320	13800	33	1230	14000	31	1170
26	17500	28	1320	13700	34	1260	13200	28	998
27	17200	28	1300	13300	37	1330	13100	26	920
28	16800	27	1220	12900	39	1360	13200	25	891
29	16700	28	1260	12800	37	1280	13200	24	855
30	16900	28	1280	12800	34	1180	13700	23	851
31	17000	31	1420	13100	46	1630	---	---	---
TOTAL	508800	---	42760	486000	---	39300	437000	---	43895
YEAR	6553000		1219542						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1978	387100.00	33038.00	417	33500
NOVEMBER ...	373300.00	28987.00	406	29400
DECEMBER ...	409300.00	20471.00	473	20900
JANUARY 1979	718900.00	226679.00	23600	250000
FEBRUARY ...	908400.00	378003.00	87700	466000
MARCH	904100.00	233680.00	37400	271000
APRIL	496400.00	85765.00	3550	89300
MAY	557500.00	62040.00	3730	65800
JUNE	366200.00	24924.00	302	25200
JULY	508800.00	42760.00	1890	44600
AUGUST	486000.00	39300.00	1580	40900
SEPTEMBER ..	437000.00	43895.00	900	44800
TOTAL	6553000.00	1219542.00	161948	1381400

SACRAMENTO RIVER BASIN

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
JAN 18...	1400	43600	10.0	257	30300	30	37
FEB 21...	0835	50800	9.5	195	26700	32	39
APR 17...	0915	11000	15.5	30	891	--	--
MAY 30...	1300	18400	18.5	32	1590	--	--
JUN 26...	1025	13400	20.5	27	977	--	--
AUG 17...	0925	17300	21.0	29	1360	--	--
SEP 13...	1335	12700	22.5	39	1340	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	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
JAN 18...	46	56	65	73	86	96	100
FEB 21...	48	57	66	71	84	97	100
APR 17...	--	--	--	92	100	--	--
MAY 30...	--	--	--	89	100	--	--
JUN 26...	--	--	--	90	93	96	100
AUG 17...	--	--	--	85	96	99	100
SEP 13...	--	--	--	95	99	100	--

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	NUMBER OF SAM- PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
OCT												
12...	1230	12000	18.5	5	0	2	6	68	96	100	--	--
12...	1231	--	--	--	0	1	4	68	98	100	--	--
12...	1232	--	--	--	0	1	11	87	98	100	--	--
12...	1233	--	--	--	--	0	14	77	94	98	100	--
12...	1234	--	--	--	0	3	54	97	99	100	--	--
DEC												
11...	1305	11800	7.0	5	0	3	64	98	99	99	100	--
11...	1306	--	--	--	1	2	23	96	100	--	--	--
11...	1307	--	--	--	--	0	12	84	99	100	--	--
11...	1308	--	--	--	0	1	3	61	97	100	--	--
11...	1309	--	--	--	6	17	24	66	93	99	100	--
JAN												
18...	1400	43600	10.0	5	5	15	24	67	94	100	--	--
18...	1401	--	--	--	0	1	7	66	97	100	--	--
18...	1402	--	--	--	0	1	27	89	99	100	--	--
18...	1403	--	--	--	--	0	22	87	96	99	100	--
18...	1404	--	--	--	0	2	60	100	--	--	--	--
FEB												
21...	0835	50800	9.5	5	0	1	14	63	97	100	--	--
21...	0836	--	--	--	--	0	11	66	97	100	--	--
21...	0837	--	--	--	--	0	10	77	98	100	--	--
21...	0838	--	--	--	--	0	27	94	98	99	100	--
21...	0839	--	--	--	0	3	67	100	--	--	--	--
MAR												
21...	1300	26400	14.0	5	--	2	19	71	98	100	--	--
21...	1301	--	--	--	--	0	3	80	98	100	--	--
21...	1302	--	--	--	--	0	6	82	97	99	100	--
21...	1303	--	--	--	0	1	23	94	99	100	--	--
21...	1304	--	--	--	0	1	58	99	100	--	--	--
APR												
17...	0915	11000	15.5	7	--	76	86	93	97	99	100	--
17...	0916	--	--	--	2	2	10	50	94	100	--	--
17...	0917	--	--	--	8	12	20	88	98	99	100	--
17...	0918	--	--	--	0	1	11	90	98	100	--	--
17...	0919	--	--	--	0	1	22	97	99	100	--	--
17...	0920	--	--	--	10	18	68	97	99	99	100	--
17...	0921	--	--	--	27	69	94	99	100	--	--	--
MAY												
30...	1530	18900	18.5	5	--	0	37	96	100	--	--	--
30...	1531	--	--	--	0	1	17	92	98	100	--	--
30...	1532	--	--	--	0	2	15	94	100	--	--	--
30...	1533	--	--	--	--	0	6	87	99	100	--	--
30...	1534	--	--	--	1	2	12	64	94	99	100	--
JUN												
26...	1014	13300	20.5	5	9	14	26	63	92	100	--	--
26...	1015	--	--	--	1	3	9	90	99	100	--	--
26...	1016	--	--	--	2	3	7	78	96	98	100	--
26...	1017	--	--	--	1	2	12	81	97	100	--	--
26...	1018	--	--	--	0	1	36	96	99	100	--	--
JUL												
25...	1235	18200	24.0	5	6	13	31	74	95	100	--	--
25...	1236	--	--	--	0	1	4	77	97	100	--	--
25...	1237	--	--	--	1	2	7	90	100	--	--	--
25...	1238	--	--	--	0	2	32	93	97	98	99	100
25...	1239	--	--	--	1	3	51	98	100	--	--	--
AUG												
17...	0930	17300	21.0	5	0	3	16	61	93	100	--	--
17...	0931	--	--	--	--	0	3	72	96	100	--	--
17...	0932	--	--	--	0	1	8	82	96	100	--	--
17...	0933	--	--	--	0	1	13	94	99	100	--	--
17...	0934	--	--	--	1	4	45	97	99	100	--	--
SEP												
13...	1330	12700	22.5	5	1	4	21	69	96	100	--	--
13...	1331	--	--	--	0	2	9	92	99	100	--	--
13...	1332	--	--	--	0	1	11	91	98	100	--	--
13...	1333	--	--	--	0	2	19	90	95	96	98	100
13...	1334	--	--	--	0	2	42	99	100	--	--	--

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 to SEPTEMBER 1979

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)
OCT						
03...	2030	13900	21.5	22	826	7.0
07...	2045	12200	18.5	30	988	10
10...	2015	13800	18.5	26	969	6.0
12...	1205	13600	18.5	34	1250	8.0
12...	1240	13200	18.5	40	1430	10
12...	1325	12200	18.5	42	1380	10
16...	2015	10900	17.0	41	1210	7.0
19...	1910	8900	17.5	39	937	8.0
24...	1630	10900	18.5	20	589	6.0
26...	1830	11700	18.0	28	885	8.0
28...	1930	11400	16.5	24	739	8.0
30...	1710	8220	15.0	19	422	7.0
31...	1630	8980	13.0	19	461	6.0
NOV						
02...	1610	8590	13.5	22	510	7.0
03...	1740	8100	14.5	16	350	6.0
05...	1620	11400	14.5	42	1290	6.0
08...	1445	10300	14.0	22	612	7.0
13...	1930	12000	8.5	16	518	6.0
15...	1730	9300	8.5	13	326	5.0
17...	1645	10600	11.0	20	572	7.0
18...	1645	11600	10.5	20	626	6.0
24...	1230	14100	11.0	53	2020	7.0
25...	1615	14200	10.5	35	1340	12
26...	1645	13900	10.5	30	1130	10
30...	0920	14000	10.0	28	1060	8.0
30...	2130	14500	10.0	24	940	7.0
DEC						
04...	1745	13100	10.0	19	672	5.0
06...	1615	13000	8.0	33	1160	6.0
08...	2030	14000	11.5	20	756	6.0
10...	2015	13900	7.5	17	638	4.0
11...	1300	11800	7.0	13	414	5.0
11...	1330	11200	7.0	11	333	4.0
13...	1545	11300	5.8	13	397	4.0
14...	1415	12100	9.5	19	621	5.0
18...	1620	13600	8.5	19	698	6.0
19...	1315	13700	8.0	16	592	5.0
20...	1415	13600	7.5	33	1210	5.0
23...	1530	13200	7.0	12	428	4.0
28...	1530	9810	7.5	11	291	5.0
30...	1815	10100	6.0	9	245	4.0
31...	1530	12800	6.5	14	484	4.0
JAN						
01...	1405	13900	6.5	24	901	6.0
02...	2030	10900	6.0	11	324	5.0
03...	1450	13800	7.0	16	596	5.0
08...	1545	13200	14.0	13	463	6.0
09...	2115	16500	9.5	36	1600	17
12...	1040	31600	10.0	141	12000	45
13...	1620	35600	10.5	125	12000	40
14...	1255	34800	9.5	145	13600	65
15...	2200	39900	9.0	189	20400	90
16...	0945	43200	10.0	231	26900	55
16...	1615	44900	10.0	196	23800	60
17...	1645	46200	10.5	447	55800	160
18...	1340	43400	10.0	228	26700	90
18...	1400	43600	10.0	257	30300	95
18...	1430	43300	10.0	220	25700	85
19...	1540	37400	9.0	130	13100	50
21...	1720	29100	9.5	88	6910	40
22...	1715	25500	10.5	70	4820	32
24...	1845	21900	9.0	66	3900	28
25...	1720	19300	9.0	58	3020	25
28...	1745	13500	8.5	37	1350	18
31...	2145	14600	7.5	31	1220	18
FEB						
03...	0730	14200	7.0	33	1270	14
07...	1445	9940	9.5	19	510	10
07...	1745	13000	9.5	26	913	13
08...	1940	13300	10.0	22	790	10
09...	1845	12200	10.5	19	626	10
11...	1245	12400	12.0	25	837	9.0
15...	1715	35200	10.5	365	34700	70
16...	1645	38000	10.0	400	41000	160
18...	1740	42100	9.5	244	27700	90
21...	0820	50800	9.5	237	32500	70
21...	0835	50800	9.5	195	26700	75
21...	0940	51300	10.0	183	25300	70
22...	1845	58600	10.5	164	25900	70

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 to SEPTEMBER 1979

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)
FEB						
23...	0930	66600	9.0	204	36700	120
25...	1345	70800	10.5	112	21400	40
27...	2140	53700	9.5	114	16500	50
28...	1840	43500	9.5	83	9750	45
MAR						
04...	1530	46600	11.5	63	7930	21
07...	1910	34500	12.5	93	8660	24
10...	1840	28000	13.0	100	7560	25
12...	1615	25000	14.5	82	5540	24
15...	1610	20500	12.5	49	2710	16
18...	1715	28200	12.5	64	4870	17
19...	1615	29100	12.5	58	4560	13
21...	1340	26700	13.0	49	3530	15
22...	1745	23900	14.0	62	4000	17
26...	1845	18200	12.5	60	2950	23
30...	2120	31200	12.5	411	34600	160
APR						
02...	1830	26300	13.5	99	7030	25
04...	1745	23900	15.0	81	5230	20
09...	1615	16900	15.0	51	2330	16
12...	1720	14500	16.0	60	2350	17
17...	0740	9840	15.5	33	877	17
17...	0915	11000	15.5	30	891	13
17...	1035	12700	15.5	37	1270	13
19...	1645	14000	14.5	25	945	12
23...	2115	13400	14.5	35	1270	13
25...	1645	14200	15.5	43	1650	14
26...	1845	15400	15.0	49	2040	14
30...	1530	16800	15.5	40	1810	15
MAY						
03...	1830	15700	15.0	38	1610	13
06...	1615	12900	14.5	25	871	11
09...	1230	20500	15.0	41	2270	13
10...	1430	21100	16.0	50	2850	17
17...	1430	18700	19.0	65	3280	14
23...	1730	21400	21.5	39	2250	12
26...	2045	20700	20.0	36	2010	10
27...	2020	20100	19.5	32	1740	10
29...	1545	19600	19.0	29	1540	10
30...	1300	18400	18.5	32	1590	10
30...	1330	18300	18.5	32	1580	11
JUN						
04...	1545	12900	22.5	19	662	7.0
09...	2020	10300	20.0	26	723	9.0
11...	1630	12400	22.5	24	804	10
13...	1610	13300	21.0	22	790	8.0
16...	1845	12900	20.0	23	801	9.0
17...	1945	12300	20.0	24	797	9.0
19...	1415	11200	23.0	26	786	10
21...	1945	11900	20.5	24	771	9.0
22...	1430	13300	22.5	36	1290	12
24...	2015	11200	22.5	24	726	9.0
26...	1000	12800	20.5	27	933	12
26...	1025	13400	20.5	27	977	12
26...	1045	13200	20.5	26	927	11
26...	1710	13500	22.5	38	1390	13
29...	1710	14600	23.5	35	1380	11
JUL						
06...	2020	16500	21.0	33	1470	9.0
12...	1710	17200	22.5	34	1580	8.0
13...	2015	16100	22.5	32	1390	10
14...	2010	15900	22.5	33	1420	10
15...	2045	15900	23.0	30	1290	8.0
17...	1515	14700	25.0	25	992	9.0
20...	1545	15700	23.5	27	1150	11
22...	2015	17200	24.0	34	1580	9.0
24...	1430	18800	25.0	32	1620	9.0
25...	1310	18200	22.5	29	1430	8.0
28...	1215	17000	22.5	26	1190	9.0
29...	1830	17600	22.0	28	1330	9.0
AUG						
01...	2015	17100	23.0	38	1750	8.0
02...	1530	16700	24.5	28	1260	8.0
06...	1715	16800	23.0	28	1270	9.0
10...	1530	18400	22.0	23	1140	6.0
15...	1530	16000	22.5	25	1080	9.0
17...	0810	17200	22.0	26	1210	10
17...	0910	17300	21.0	27	1260	11
17...	0925	17300	21.0	29	1360	10
17...	1010	17400	21.0	30	1410	9.0

SACRAMENTO RIVER BASIN

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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						
19...	1710	14600	23.5	28	1100	8.0
20...	2015	14900	23.5	25	1010	7.0
27...	1830	13600	24.0	38	1400	14
29...	1610	13800	22.5	39	1450	14
31...	1910	13900	22.0	69	2590	18
SEP						
04...	1005	15900	25.0	52	2230	18
13...	1325	12700	22.5	40	1370	16
13...	1335	12700	22.5	39	1340	16

11447650 SACRAMENTO RIVER AT FREEPORT, CA
(National stream-quality accounting network and radiochemical station)

LOCATION.--Lat 38°27'20", long 121°30'07", in SE¼SE¼ sec.14, T.7 N., R.4 E., Sacramento County, Hydrologic Unit 18020109, at drawbridge at Freeport, 8.4 mi (13.5 km) south of State Capitol Building in Sacramento.

PERIOD OF RECORD.--Water years 1959 to current year.

CHEMICAL ANALYSES: Water years 1959 to current year.

BIOLOGICAL DATA: Water years 1974 to current year.

WATER TEMPERATURES: Water years 1960 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: June 1960 to June 1963.

SPECIFIC CONDUCTANCE: June 1960 to June 1963, February 1974 to July 1975.

WATER TEMPERATURES: June 1960 to current year.

INSTRUMENTATION.--Temperature recorder since June 1960.

REMARKS.--Unpublished records of daily specific conductance readings for period June 1960 to June 1963 available in files of district office. Temperature recorder located on right bank 1.9 mi (3.1 km) northwest of Freeport, and 7.4 mi (11.9 km) southwest of State Capitol Building in Sacramento.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 27.0°C Sept. 8, 1977; minimum recorded, 4.5°C Dec. 12-15, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.5°C on several days during July and August; minimum recorded, 6.5°C Jan. 2-4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
18...	1045	12800	115	7.3	18.0	5.0	9.2	160	K15	45	0	9.8
NOV												
14...	1300	13400	130	7.5	9.0	2.6	10.8	140	110	50	7	11
DEC												
13...	1045	14900	126	--	8.0	3.2	11.6	<2	K4	47	2	10
JAN												
24...	1130	19100	191	7.7	9.0	26	10.4	K19	200	63	2	13
FEB												
12...	1200	14400	185	7.7	11.0	7.0	10.7	19	K15	66	4	14
MAR												
21...	1030	26900	133	7.5	13.0	14	10.2	120	22	57	5	13
APR												
09...	1200	20300	198	7.7	15.0	17	9.6	50	K15	68	0	15
MAY												
15...	1045	18400	130	7.8	19.0	9.4	8.8	36	15	53	10	11
JUN												
12...	1100	17300	148	7.7	21.5	7.3	8.0	43	12	51	0	11
JUL												
26...	1100	21400	130	7.4	22.5	5.5	7.8	>240	37	49	1	10
AUG												
23...	1100	17400	157	7.8	21.0	7.0	8.0	--	K2	61	0	12
SEP												
13...	1000	12500	189	7.5	21.5	8.4	7.8	36	K10	62	0	12

DATE	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT												
18...	5.1	6.8	24	.4	1.0	48	7.9	4.9	.1	17	81	81
NOV												
14...	5.4	7.7	25	.5	1.1	43	11	5.6	.1	17	90	85
DEC												
13...	5.4	6.6	23	.4	1.1	45	9.9	5.0	.0	17	77	82
JAN												
24...	7.5	13	30	.7	2.0	61	22	9.5	.1	18	132	122
FEB												
12...	7.6	12	28	.6	1.2	62	17	9.1	.1	21	113	119
MAR												
21...	5.9	7.4	22	.4	1.1	52	8.6	5.1	.1	16	--	88
APR												
09...	7.5	13	29	.7	1.1	68	16	10	.1	19	119	123
MAY												
15...	6.1	10	29	.6	1.2	43	14	7.4	.1	14	100	90
JUN												
12...	5.6	8.7	39	.5	1.7	51	7.2	6.4	.1	15	91	83
JUL												
26...	5.8	9.0	28	.6	.4	48	11	5.3	.1	17	--	87
AUG												
23...	7.6	13	31	.7	1.0	69	14	7.2	.1	16	104	108
SEP												
13...	7.8	13	31	.7	1.3	72	14	7.6	.2	16	114	117

See footnotes at end of table.

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, KJEL- DAHL, TOTAL (MG/L AS N)	NITRO- GEN+NH ₄ + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	.11	.13	.16	.21	.37	.10	.27	.50	.08	.08	--
NOV 14...	.12	.15	.17	.13	.30	.14	.16	.45	.12	.08	--
DEC 13...	.10	.12	.10	.23	.33	.00	.34	.45	.51	.09	2.5
JAN 24...	.18	.36	.13	.26	.39	.12	.27	.75	.14	.09	2.9
FEB 12...	.15	.25	.08	.23	.31	.08	.23	.56	.11	.08	--
MAR 21...	.10	.15	.05	.13	.18	.02	.16	.33	.05	.04	3.2
APR 09...	.16	.40	.08	.11	.19	.00	.21	.59	.10	.05	2.3
MAY 15...	.14	.15	.08	.21	.29	.00	.31	.44	.06	.06	--
JUN 12...	.12	.15	.15	.35	.50	.00	.55	.65	.14	.11	1.7
JUL 26...	.10	.06	.04	--	--	--	.18	--	.09	.08	1.5
AUG 23...	.14	.05	.08	.02	.10	.00	.13	.15	.54	.04	--
SEP 13...	.16	.09	.06	.60	.66	.00	.66	.75	.08	.05	2.5

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV 14...	1300	1	0	1	0	0	0	1	1	0
FEB 12...	1200	2	1	1	100	100	0	2	0	--
MAY 15...	1045	4	2	2	100	100	0	1	1	0
AUG 23...	1100	2	1	1	100	70	30	1	0	<1

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
NOV 14...	0	0	0	0	0	0	9	4	5	650
FEB 12...	0	0	0	0	0	1	9	6	3	600
MAY 15...	10	10	0	2	2	0	4	3	1	610
AUG 23...	20	20	0	1	0	<3	5	4	1	890

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE 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 RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
NOV 14...	600	50	14	14	0	10	0	10	.0	.0
FEB 12...	570	30	9	8	1	30	20	10	.1	.0
MAY 15...	590	20	53	53	0	20	20	0	.1	.1
AUG 23...	880	10	5	5	0	40	40	<1	.1	.1

See footnotes at end of table.

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 14...	.0	0	0	1	0	0	0	10	0	10
FEB 12...	.1	0	0	0	1	1	0	10	10	0
MAY 15...	.0	0	0	0	0	0	0	20	10	10
AUG 23...	.0	0	0	0	0	0	0	10	7	<3

DATE	TIME	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SP/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
AUG 23...	1100	1.0	<.3	1.5	<.4	.9	.6	.9	.6	.02	.21

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DOD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
NOV 14...	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 12...	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	1045	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 23...	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)
NOV 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 12...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

K Results based on colony count outside the acceptable range (non-ideal colony count).

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

> Actual value is known to be greater than the value shown.

ND Material specifically analyzed for but not detected.

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES
OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	OCT 18,78 1045	NOV 14,78 1300	MAR 21,79 1030	MAY 15,79 1045
TOTAL CELLS/ML	190	230	2500	4100
DIVERSITY: DIVISION	1.5	1.3	0.8	1.1
..CLASS	1.5	1.3	0.8	1.1
..ORDER	2.3	1.3	1.7	1.8
...FAMILY	2.5	1.3	2.2	2.5
....GENUS	3.0	1.3	3.0	3.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	24	1	--	-
....MICRACTINIACEAE								
....MICRACTINIUM	--	-	--	-	--	-	430	10
....OOCYSTACEAE								
....ANKISTRODESUS	7	4	--	-	48	2	400	10
....DICTYOSPHAERIUM	--	-	--	-	--	-	95	2
....KIRCHNERIELLA	--	-	--	-	--	-	170	4
....OOCYSTIS	--	-	--	-	48	2	24	1
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
....SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	190	5
....CRUCIGENIA	7	4	--	-	48	2	--	-
....SCENEDESMUS	--	-	100#	44	72	3	310	7
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	18	9	--	-	--	-	--	-
...VOLVOCAEAE								
....GONIUM	--	-	--	-	190	8	--	-
....PANDORINA	--	-	--	-	--	-	380	9
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
....CYCLOTELLA	39#	20	--	-	630#	26	1200#	30
....MELOSIRA	18	9	--	-	770#	32	450	11
....STEPHANODISCUS	12	6	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....COCCONEIS	--	-	--	-	#	0	--	-
....RHOICOSPHENIA	--	-	--	-	#	0	--	-
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	24	1	--	-
...DIATOMACEAE								
....DIATOMA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	95	4	--	-
....FRAGILARIA	--	-	--	-	180	7	71	2
....SYNEDRA	--	-	--	-	36	1	24	1
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	2	1	15	6	72	3	--	-
...NITZSCHIACEAE								
....NITZSCHIA	39#	20	--	-	150	6	260	6
...SURIRELLACEAE								
....SURIRELLA	2	1	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....ANACYSTIS	2	1	--	-	--	-	95	2
....COCCOCHLORIS	2	1	--	-	--	-	--	-
...HORMOGONALES								
....OSCILLATORIACEAE								
....OSCILLATORIA	44#	23	--	-	--	-	--	-
....PHORMIDIUM	--	-	120#	50	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....EUGLENA	2	1	--	-	24	1	--	-
....TRACHELOMONAS	2	1	--	-	#	0	--	-

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

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

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES
OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	JUN 12,79 1100	JUL 26,79 1100	AUG 23,79 1100	SEP 13,79 1000
TOTAL CELLS/ML	450	1400	970	1800
DIVERSITY: DIVISION	1.1	1.1	1.6	1.5
..CLASS	1.1	1.1	1.6	1.5
..ORDER	1.5	1.8	1.9	2.1
...FAMILY	1.5	2.2	1.9	2.7
....GENUS	2.1	2.5	2.1	2.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	--	-	13	1	--	-	--	-
....MICRACTINIACEAE								
....MICRACTINIUM	--	-	--	-	--	-	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	55	3
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	13	1	--	-	--	-
....TETRAEDRON	--	-	26	2	--	-	--	-
....SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-
....SCENEDESMUS	52	11	490#	34	340#	35	300#	17
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	13	1	13	1	41	2
...VOLVOCACEAE								
....GONIUM	--	-	--	-	--	-	--	-
....PANDORINA	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
....CYCLOTELLA	190#	43	310#	22	78	8	250	14
....MELOSIRA	90#	20	180	13	100	11	120	7
....STEPHANODISCUS	--	-	--	-	--	-	--	-
...PENNALES								
....ACHNANTHACEAE								
....COCCONEIS	--	-	13	1	--	-	27	2
....RHOICOSPHENIA	--	-	--	-	--	-	--	-
....CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
....DIATOMACEAE								
....DIATOMA	--	-	--	-	--	-	14	1
....FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	280#	20	--	-	360#	20
....SYNEDRA	--	-	--	-	13	1	14	1
....GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	14	1
....NAVICULACEAE								
....NAVICULA	--	-	--	-	--	-	27	2
....NITZSCHIACEAE								
....NITZSCHIA	52	11	52	4	26	3	55	3
....SURIPELLACEAE								
....SURIPELLA	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	13	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....ANACYSTIS	64	14	39	3	--	-	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-
...HORMOGONALES								
....OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	390#	40	470#	27
....PHORMIDIUM	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	14	1

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

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

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES
OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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
MAY 15...	37	--	--	37.1	3.14	--	Polyethylene
JUL 26...	44	134	121	28.5	5.91	456	strip
AUG 23...	28	234	121	1.77	1.20	11300	do

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
18...	1045	12800	18.0	15	518	91
NOV						
14...	1300	13400	9.0	17	615	84
DEC						
13...	1045	14900	8.0	13	523	91
JAN						
24...	1130	19100	9.0	52	2680	90
FEB						
12...	1200	14400	11.0	29	1130	78
MAR						
21...	1030	26900	13.0	50	3630	81
APR						
09...	1200	20300	15.0	55	3020	94
MAY						
15...	1045	18400	19.0	20	994	96
JUN						
12...	1100	17300	21.5	18	841	76
JUL						
26...	1100	21400	22.5	12	693	84
AUG						
23...	1100	17400	21.0	28	1320	93
SEP						
13...	1000	12500	21.5	45	1520	95

SACRAMENTO RIVER BASIN

11447810 SACRAMENTO RIVER AT GREEN'S LANDING, NEAR COURTLAND, CA

LOCATION.--Lat 38°20'45", long 121°32'42", in SW¼NE¼ sec.28, T.6 N., R.4 E., Sacramento County, Hydrologic Unit 18020109, on left bank 2.2 mi (3.5 km) upstream from Sutter Slough, and 1.6 mi (2.6 km) northeast of Courtland.

PERIOD OF RECORD.--Water years 1953-58, 1971 to current year.

CHEMICAL ANALYSES: Water years 1953-58, 1971 to current year. Published as "at Snodgrass Slough, near Courtland" 1953-58.

SPECIFIC CONDUCTANCE: Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1973 to current year.

COOPERATION.--Chemical-quality records furnished by California Department of Water Resources. Specific conductance data furnished by Water and Power Resources Service.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 400 micromhos Aug. 31, 1977; minimum recorded, 71 micromhos Apr. 2, 3, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 360 micromhos Sept. 17; minimum recorded, 100 micromhos Feb. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (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)	SODIUM AD- SORP- TION RATIO
OCT											
18...	0930	140	7.3	18.5	6.0	8.5	48	9.6	5.8	7.6	.5
NOV											
15...	1325	130	7.3	9.5	16	10.7	50	11	5.5	8.2	.5
DEC											
20...	1130	144	7.2	8.5	5.0	10.1	51	10	6.3	9.5	.6
JAN											
17...	1330	135	7.3	9.5	80	10.1	42	8.8	4.9	7.2	.5
FEB											
21...	1130	114	7.3	10.0	90	10.1	43	9.0	5.0	7.0	.5
MAR											
21...	1410	138	7.3	14.0	15	9.9	52	11	6.0	8.0	.5
APR											
18...	0745	182	7.4	16.0	13	8.6	64	14	7.0	11	.6
MAY											
16...	1225	146	7.3	19.5	5.0	8.3	52	11	6.0	10	.6
JUN											
20...	0745	140	7.5	20.5	7.0	8.8	48	10	6.0	9.0	.6
JUL											
18...	0715	131	7.7	23.0	12	8.0	46	10	5.0	8.0	.5
AUG											
16...	0900	171	7.3	21.5	15	7.2	59	12	7.0	12	.7
SEP											
19...	1215	186	7.3	23.0	12	7.1	59	12	7.0	13	.7

DATE	ALKA- LITY (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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (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										
18...	48	7.2	5.9	.0	85	.07	--	.18	--	.20
NOV										
15...	51	6.2	6.4	.1	81	.16	--	.23	--	.10
DEC										
20...	52	4.9	6.8	.1	104	.16	--	.17	--	.20
JAN										
17...	41	3.4	5.9	.0	84	.36	--	.08	--	.60
FEB										
21...	39	3.0	5.0	.0	91	--	.37	--	.06	--
MAR										
21...	52	9.0	6.0	.0	94	--	.21	--	.05	--
APR										
18...	63	11	7.0	.0	102	--	.19	.60	.12	.00
MAY										
16...	49	10	6.0	.0	92	--	.08	--	.10	--
JUN										
20...	48	8.0	6.0	.0	93	--	.11	--	.12	--
JUL										
18...	48	6.0	4.0	.0	86	--	.10	--	.05	--
AUG										
16...	65	10	6.0	.2	107	--	.10	--	.07	--
SEP										
19...	70	8.0	8.0	.1	124	--	.10	--	.13	--

11447810 SACRAMENTO RIVER AT GREEN'S LANDING, NEAR COURTLAND, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, KJEL- DAHL, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	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)
OCT 18...	--	.13	.11	0	0	--	0	20	0	0
NOV 15...	--	.14	.11	0	100	--	0	20	0	0
DEC 20...	--	.11	.08	0	0	--	10	20	0	20
JAN 17...	--	.24	.04	0	100	--	10	10	0	0
FEB 21...	.90	.35	.10	0	0	--	10	40	0	0
MAR 21...	.30	.09	.06	0	0	--	10	20	0	10
APR 18...	.60	.12	.08	0	0	--	0	0	0	10
MAY 16...	.40	.11	.07	0	0	--	0	10	0	10
JUN 20...	.30	.11	.08	0	0	--	0	10	0	10
JUL 18...	.30	.11	.06	0	0	--	0	10	0	10
AUG 16...	.30	.12	.10	0	0	--	0	10	0	10
SEP 19...	.50	.14	.08	10	0	0	10	10	0	10

		NITRO- GEN, TOT IN HOT- TOM MA- TERIAL	PHOS- PHORUS, TOTAL IN HOT- TOM MA- TERIAL	ARSENIC TOTAL IN HOT- TOM MA- TERIAL	CADMIUM RECOV. FM BOT- TOM MA- TERIAL	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL	COPPER, RECOV. FM BOT- TOM MA- TERIAL	IRON, RECOV. FM BOT- TOM MA- TERIAL
DATE	TIME	(MG/KG AS V)	(MG/KG AS P)	(UG/G AS AS)	(UG/G AS CD)	(UG/G)	(UG/G AS CU)	(UG/G AS FE)
APR 20...	1200	1300	900	57	0	17	20	60
								39000

DATE	LEAD, RFOCV, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RFOCV, FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS AG)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR 20...	30	1200	.13	0	0	88	0	0	.0

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	145	150	130	220	145	155	180	145	155	170	240
2	120	150	150	145	200	140	160	180	150	145	170	240
3	120	150	140	135	200	125	150	185	145	150	170	235
4	115	150	140	140	210	125	160	180	145	160	175	245
5	110	150	160	140	205	130	160	180	150	155	170	245
6	120	150	140	140	200	145	170	170	150	155	160	245
7	110	145	140	140	215	150	170	165	155	160	165	250
8	115	140	140	175	185	160	170	160	160	160	165	250
9	120	140	140	180	195	175	190	155	160	160	165	245
10	125	140	140	165	195	190	200	150	155	165	165	230
11	145	140	140	210	195	185	175	145	145	160	170	230
12	150	145	140	180	200	190	180	150	150	165	170	230
13	150	135	140	145	195	200	175	155	150	160	170	230
14	115	135	135	130	215	185	190	160	145	165	170	235
15	115	130	135	165	200	190	185	180	145	165	180	230
16	120	140	130	160	130	190	185	170	140	165	190	240
17	115	140	135	115	120	185	190	180	140	160	180	360
18	115	140	130	110	120	180	190	185	140	150	190	345
19	115	145	140	115	120	180	185	185	140	140	190	250
20	115	135	145	140	120	145	175	185	160	140	185	210
21	115	130	150	175	120	150	170	185	190	140	195	210
22	110	130	155	190	115	160	170	185	190	140	190	210
23	115	135	140	210	105	170	180	175	190	145	190	195
24	120	145	140	215	100	175	165	165	185	155	200	190
25	110	160	140	235	105	175	155	170	170	150	210	190
26	115	160	145	225	105	180	155	170	185	150	210	180
27	120	160	140	215	115	190	175	170	170	160	230	185
28	130	170	140	215	130	180	165	170	160	160	250	180
29	130	160	140	220	---	190	165	180	155	165	235	175
30	130	150	140	205	---	160	170	175	155	165	220	180
31	130	---	135	200	---	155	---	150	---	170	240	---
MONTH	121	145	141	170	162	168	173	171	157	156	188	229

SACRAMENTO RIVER BASIN

11449100 SCOTTS CREEK NEAR LAKEPORT, CA

LOCATION.--Lat 39°05'44", long 122°57'38", in NE¼NW¼ sec.3, T.14 N., R.10 W., Lake County, Hydrologic Unit 18020116, on left bank at upstream side of Eickhoff Road bridge, 0.9 mi (1.4 km) downstream from small right-bank tributary, and 4.2 mi (6.8 km) northwest of Lakeport.

DRAINAGE AREA.--55.2 mi² (143.0 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (427 m), from topographic map. Prior to Oct. 1, 1968, at site 3.0 mi (4.8 km) upstream at different datum.

REMARKS.--Small diversions above station for irrigation.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--19 years, 77.1 ft³/s (2.183 m³/s), 55,860 acre-ft/yr (68.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) Jan. 16, 1974, gage height, 13.38 ft (4.078 m); maximum gage height, 17.88 ft (5.450 m) Dec. 22, 1964, site and datum then in use; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,820 ft³/s (51.5 m³/s) Jan. 11, gage height, 17.37 ft (5.294 m); no flow for several months.

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				0	4.0	505	81	39	2.8			
2				0	3.4	272	68	34	1.7			
3				0	2.7	228	59	30	1.0			
4				0	3.1	180	52	27	.30			
5				0	3.3	146	47	50	0			
6				0	3.3	123	45	48	0			
7				0	3.3	102	40	96	0			
8				0	3.0	88	36	74	0			
9				0	2.9	76	34	57	0			
10				15	3.4	65	32	47	0			
11				738	3.6	58	31	41	0			
12				121	4.3	53	29	35	0			
13				55	365	47	27	31	0			
14				316	317	43	25	29	0			
15				328	256	48	24	26	0			
16				104	549	48	25	24	0			
17				56	226	47	27	22	0			
18				41	516	39	22	20	0			
19				25	298	37	18	18	0			
20				18	495	34	17	17	0			
21				14	889	30	16	16	0			
22				10	522	27	19	17	0			
23				7.8	454	26	39	16	0			
24				7.0	282	24	71	14	0			
25				5.7	198	23	33	12	0			
26				3.8	227	26	101	9.0	0			
27				3.7	160	600	104	7.8	0			
28				3.9	468	322	65	7.1	0			
29				3.1	---	187	52	6.7	0			
30				3.7	---	130	44	6.2	0			
31		---		4.1	---	99	---	5.1	---			---
TOTAL	0	0	0	1883.8	6262.3	3733	1283	881.9	5.80	0	0	0
MEAN	0	0	0	60.8	224	120	42.8	28.4	.19	0	0	0
MAX	0	0	0	738	889	600	104	96	2.8	0	0	0
MIN	0	0	0	0	2.7	23	16	5.1	0	0	0	0
AC-FT	0	0	0	3740	12420	7400	2540	1750	12	0	0	0
CAL YR 1978	TOTAL	47529.30	MEAN	130	MAX	3750	MIN	0	AC-FT	94270		
WTR YR 1979	TOTAL	14049.80	MEAN	38.5	MAX	889	MIN	0	AC-FT	27870		

11449500 KELSEY CREEK NEAR KELSEYVILLE, CA

LOCATION.--Lat 38°55'39", long 122°50'33", in SE¼SE¼ sec.34, T.13 N., R.9 W., Lake County, Hydrologic Unit 18020116, on left bank 1.6 mi (2.6 km) downstream from Widow Creek, and 3.5 mi (5.6 km) south of Kelseyville.

DRAINAGE AREA.--36.6 mi² (94.8 km²).

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1285: 1947-48(M), 1950-52(P). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,475.44 ft (449.714 m) National Geodetic Vertical Datum of 1929. Prior to July 16, 1955, at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, October 1, 2, and March 13 to April 3, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--33 years, 71.5 ft³/s (2.025 m³/s), 51,800 acre-ft/yr (63.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft³/s (249 m³/s) Dec. 21, 1955, gage height, 12.80 ft (3.901 m); maximum gage height, 13.48 ft (4.109 m) Jan. 5, 1965; minimum daily, 0.18 ft³/s (0.005 m³/s) Aug. 15-23, 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft³/s (56.6 m³/s) Mar. 27, gage height, 8.79 ft (2.679 m), no peak above base of 2,400 ft³/s (68 m³/s); minimum daily, 2.4 ft³/s (0.068 m³/s) Aug. 12, Sept. 16, 17, 22, 23.

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	3.7	4.4	6.7	6.1	8.2	327	78	39	12	4.7	2.6	2.9
2	3.6	4.6	6.7	6.1	7.7	196	70	36	11	5.0	2.7	2.9
3	3.6	4.6	6.4	6.1	7.4	158	63	33	11	4.4	2.6	3.0
4	3.6	4.7	6.3	7.0	7.7	122	59	31	10	4.9	2.5	2.9
5	3.5	4.7	6.4	9.2	9.4	98	54	67	10	5.0	2.5	2.9
6	3.6	4.6	6.2	8.5	9.7	82	53	59	9.8	4.8	2.6	2.7
7	3.7	4.5	6.2	8.4	9.3	70	47	76	9.2	4.5	2.6	2.7
8	3.7	4.5	6.1	9.4	8.6	60	42	57	8.4	4.6	2.6	2.6
9	3.7	4.5	6.2	4.5	8.2	53	38	48	8.2	4.7	2.5	2.6
10	3.7	4.8	6.2	5.6	8.3	46	36	42	7.8	5.1	2.5	2.6
11	3.7	5.2	6.3	54.3	8.4	40	35	38	7.6	4.9	2.5	2.7
12	3.7	5.5	6.2	105	8.8	33	32	35	7.1	4.2	2.4	2.6
13	3.5	6.1	6.0	48	7.31	31	30	31	7.1	3.9	2.5	2.6
14	3.3	5.9	6.0	660	5.56	29	28	28	7.1	3.5	2.6	2.5
15	3.4	5.8	6.1	508	2.37	30	26	26	6.8	3.2	2.6	2.5
16	3.7	5.8	6.0	145	5.57	30	29	25	7.0	3.2	2.6	2.4
17	3.9	5.8	7.6	70	2.21	29	30	24	7.7	3.1	2.7	2.4
18	3.9	5.7	9.7	46	4.07	28	26	22	8.0	3.1	2.7	2.5
19	3.9	6.3	7.7	28	2.23	26	24	21	7.2	3.1	2.6	2.5
20	4.0	11	6.9	21	3.97	24	23	20	6.9	3.0	2.7	2.6
21	4.1	8.9	6.6	18	4.65	23	22	19	6.6	3.0	2.9	2.5
22	4.0	8.5	6.5	15	4.24	22	24	19	6.2	3.1	2.9	2.4
23	3.9	8.5	6.4	13	2.82	22	105	19	5.8	3.1	2.8	2.4
24	3.7	7.2	6.4	12	1.92	21	119	18	5.5	3.2	2.8	2.5
25	3.8	6.7	6.4	11	1.42	20	57	17	5.6	3.1	2.7	2.6
26	4.0	6.5	6.3	9.6	1.42	85	69	15	5.3	2.8	2.7	3.0
27	4.0	6.5	6.3	8.9	1.02	600	74	15	5.1	2.7	2.7	3.1
28	4.0	6.3	6.2	8.5	3.70	250	55	14	4.4	2.7	2.7	3.0
29	4.2	6.3	6.2	7.9	---	140	48	14	4.7	2.7	2.7	2.8
30	4.4	6.3	6.0	8.5	---	110	43	13	4.6	2.8	2.9	2.7
31	4.4	---	5.8	9.0	---	90	---	13	---	2.7	2.9	---
TOTAL	117.9	180.7	201.0	2541.8	5549.7	2895	1439	934	223.7	114.8	82.3	80.1
MEAN	3.80	6.02	6.48	82.0	198	93.4	48.0	30.1	7.46	3.70	2.65	2.67
MAX	4.4	11	9.7	660	731	600	119	76	12	5.1	2.9	3.1
MIN	3.3	4.4	5.8	6.1	7.4	20	22	13	4.4	2.7	2.4	2.4
AC-FT	234	358	399	5040	11010	5740	2850	1850	444	228	163	159
CAL YR 1978 TOTAL	32698.0			MEAN 89.6	MAX 2670	MIN 2.3	AC-FT 64860					
WTR YR 1979 TOTAL	14360.0			MEAN 39.3	MAX 731	MIN 2.4	AC-FT 28480					

11450000 CLEAR LAKE AT LAKEPORT, CA

LOCATION.--Lat 39°02'21", long 122°54'44", in NE¼NE¼ sec.25, T.14 N., R.10 W., Lake County, Hydrologic Unit 18020116, on private pier at 410 Esplanada Street in Lakeport.

DRAINAGE AREA.--528 mi² (1,368 km²).

PERIOD OF RECORD.--1874-1900 (incomplete), January 1913 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,318.65 ft (401.925 m) National Geodetic Vertical Datum of 1929. Prior to July 8, 1947, nonrecording gage and July 8, 1947, to Mar. 17, 1949, at municipal wharf at foot of Third Street in Lakeport at datum 0.06 ft (0.018 m) lower. Mar. 18, 1949, to Sept. 30, 1967, at private pier at foot of Fourth Street at datum 0.06 ft (0.018 m) lower.

REMARKS.--This natural lake is regulated by gates on a dam at outlet, completed in 1915. Capacity between gage heights 0.00 and 7.56 ft (2.304 m), limits stipulated by court decree of 1920, about 319,000 acre-ft (393 hm³). Water is released down natural channel of Cache Creek from which it is diverted for irrigation (station 11451000).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.12 ft (3.389 m) Jan. 28, 1914; minimum observed, -3.50 ft (-1.067 m) Sept. 24-27, 1920.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean gage height, 6.80 ft (2.073 m) May 10, 11; minimum daily mean gage height, 1.57 ft (0.479 m) Dec. 14-16, and Dec. 29 to Jan. 3.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.17	1.75	1.61	1.57	2.76	5.29	6.53	6.77	6.36	5.11	3.70	2.39
2	2.16	1.74	1.63	1.57	2.77	5.42	6.53	6.79	6.34	5.06	3.65	2.37
3	2.15	1.73	1.63	1.57	2.77	5.51	6.56	6.78	6.31	5.01	3.60	2.34
4	2.14	1.72	1.62	1.58	2.77	5.57	6.57	6.77	6.28	4.96	3.53	2.32
5	2.13	1.72	1.62	1.58	2.76	5.62	6.58	6.77	6.21	4.91	3.48	2.30
6	2.11	1.71	1.61	1.58	2.76	5.66	6.60	6.78	6.15	4.87	3.43	2.28
7	2.09	1.71	1.60	1.62	2.77	5.69	6.61	6.77	6.10	4.82	3.38	2.25
8	2.08	1.71	1.59	1.73	2.77	5.72	6.60	6.76	6.07	4.79	3.32	2.21
9	2.07	1.70	1.58	1.77	2.78	5.75	6.54	6.79	6.05	4.73	3.28	2.19
10	2.06	1.69	1.58	1.81	2.79	5.77	6.56	6.80	6.03	4.69	3.23	2.18
11	2.05	1.66	1.58	2.05	2.79	5.78	6.55	6.80	6.00	4.64	3.17	2.16
12	2.04	1.66	1.58	2.15	2.81	5.80	6.58	6.79	5.96	4.60	3.11	2.14
13	2.02	1.67	1.58	2.20	2.92	5.80	6.59	6.78	5.90	4.56	3.06	2.11
14	2.01	1.65	1.57	2.33	3.08	5.81	6.59	6.77	5.84	4.52	3.01	2.09
15	1.97	1.65	1.57	2.60	3.20	5.82	6.59	6.75	5.80	4.48	2.96	2.06
16	1.97	1.64	1.57	2.67	3.35	5.86	6.59	6.74	5.70	4.43	2.91	2.04
17	1.97	1.64	1.58	2.70	3.46	5.87	6.56	6.73	5.67	4.38	2.88	2.03
18	1.96	1.63	1.60	2.73	3.62	5.89	6.58	6.72	5.65	4.33	2.83	1.98
19	1.95	1.64	1.59	2.75	3.77	5.91	6.58	6.70	5.62	4.28	2.76	1.96
20	1.92	1.66	1.59	2.76	3.94	5.92	6.58	6.67	5.58	4.23	2.72	1.94
21	1.92	1.66	1.58	2.77	4.22	5.92	6.57	6.64	5.54	4.18	2.68	1.93
22	1.91	1.67	1.58	2.78	4.46	5.94	6.59	6.62	5.51	4.13	2.64	1.91
23	1.90	1.65	1.58	2.78	4.66	5.94	6.64	6.59	5.48	4.09	2.60	1.90
24	1.89	1.65	1.58	2.76	4.79	5.94	6.69	6.57	5.44	4.05	2.58	1.87
25	1.88	1.65	1.58	2.77	4.87	5.95	6.70	6.56	5.41	4.00	2.55	1.86
26	1.87	1.65	1.58	2.75	4.93	5.99	6.74	6.52	5.37	3.94	2.52	1.83
27	1.86	1.64	1.58	2.72	4.99	6.17	6.75	6.47	5.33	3.90	2.50	1.82
28	1.84	1.64	1.58	2.75	5.10	6.36	6.76	6.44	5.26	3.86	2.48	1.80
29	1.79	1.63	1.57	2.75	---	6.42	6.77	6.43	5.18	3.82	2.45	1.78
30	1.79	1.63	1.57	2.81	---	6.47	6.77	6.41	5.15	3.78	2.43	1.76
31	1.78	---	1.57	2.77	---	6.50	---	6.38	---	3.74	2.42	---
MEAN	1.98	1.67	1.59	2.31	3.52	5.87	6.62	6.67	5.78	4.42	2.96	2.06
MAX	2.17	1.75	1.63	2.81	5.10	6.50	6.77	6.80	6.36	5.11	3.70	2.39
MIN	1.78	1.63	1.57	1.57	2.76	5.29	6.53	6.38	5.15	3.74	2.42	1.76
WTR YR 1979	MEAN 3.79		MAX 6.80	MIN 1.57								

11451000 CACHE CREEK NEAR LOWER LAKE, CA

LOCATION.--Lat 38°55'27", long 122°33'53", in sec.6, T.12 N., R.6 W., Lake County, Hydrologic Unit 18020116, on left bank 500 ft (152 m) downstream from Clear Lake Dam, 1.9 mi (3.1 km) downstream from Copsey Creek, and 2.5 mi (4.0 km) northeast of Lower Lake.

DRAINAGE AREA.--528 mi² (1,368 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder and rain gage. Datum of gage is 1,280.34 ft (390.248 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow completely regulated by Clear Lake (station 11450000) 500 ft (152 m) upstream.

AVERAGE DISCHARGE (unadjusted).--35 years, 343 ft³/s (9.714 m³/s), 248,500 acre-ft/yr (306 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Feb. 24, 1958, gage height, 9.40 ft (2.865 m); no flow Nov. 8-20, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 750 ft³/s (21.2 m³/s) July 15, gage height, 4.20 ft (1.280 m); minimum daily, 2.3 ft³/s (0.065 m³/s) Dec. 9, 11.

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	105	25	2.7	3.2	2.9	3.8	7.6	64	322	519	594	187
2	103	18	2.6	3.1	2.8	3.8	7.7	65	322	525	617	177
3	102	27	2.6	3.1	2.8	4.1	8.1	76	333	532	624	139
4	102	17	2.6	3.3	2.8	4.1	8.0	107	332	538	608	111
5	96	3.2	2.6	3.3	2.6	4.3	8.1	136	367	546	582	140
6	77	3.0	2.4	3.4	2.6	4.4	8.3	156	454	545	579	177
7	65	2.9	2.4	3.4	2.6	4.6	8.2	141	476	521	579	208
8	65	3.7	2.4	3.9	2.6	4.6	8.1	96	500	487	577	225
9	65	3.5	2.3	3.4	2.6	4.6	8.0	85	531	500	581	224
10	66	3.3	2.4	3.7	2.6	4.7	8.0	136	488	500	567	223
11	66	3.2	2.3	4.0	2.5	4.8	8.1	191	435	557	527	223
12	66	3.1	2.4	3.7	2.6	5.1	27	226	423	598	497	223
13	65	3.1	2.4	3.5	3.4	5.4	7.0	235	455	610	466	223
14	64	3.1	2.4	4.3	3.0	5.4	6.2	264	482	650	434	223
15	60	3.1	2.4	4.0	2.7	5.7	6.4	289	450	712	416	223
16	58	3.1	2.5	3.5	3.0	5.8	6.7	272	397	741	433	222
17	57	3.0	2.7	3.4	2.6	6.0	6.9	247	407	739	454	202
18	57	2.9	2.6	3.4	2.8	6.1	32	241	458	728	461	128
19	57	3.0	2.7	3.4	2.8	6.0	71	272	434	658	482	91
20	58	3.1	2.8	3.2	3.2	6.2	111	296	404	699	500	88
21	57	3.0	2.8	3.2	3.1	6.1	159	275	393	666	406	85
22	56	3.0	2.9	3.2	3.1	6.0	190	271	406	635	316	79
23	50	2.8	3.0	3.2	3.1	6.2	182	287	355	590	144	76
24	44	2.8	3.1	3.0	3.1	6.4	108	269	350	548	26	75
25	44	2.8	3.1	2.9	3.2	6.4	57	277	461	524	14	75
26	33	2.8	3.1	2.8	3.4	6.7	83	305	538	443	5.9	98
27	21	2.7	3.1	2.9	3.3	8.3	73	312	521	376	5.7	115
28	30	2.6	3.1	2.9	3.6	7.7	37	277	523	395	6.1	115
29	34	2.8	3.1	2.9	---	7.6	32	253	540	394	144	112
30	34	2.8	3.0	2.9	---	7.8	51	265	530	386	199	107
31	33	---	3.1	3.0	---	7.9	---	311	---	509	187	---
TOTAL	1890	165.4	83.6	103.1	81.4	176.6	1334.4	6697	13087	17371	12031.7	4594
MEAN	61.0	5.51	2.70	3.33	2.91	5.70	44.5	216	436	560	388	153
MAX	105	27	3.1	4.3	3.6	8.3	190	312	540	741	624	225
MIN	21	2.6	2.3	2.8	2.5	3.8	6.2	64	322	376	5.7	75
AC-FT	3750	328	166	204	161	350	2650	13280	25960	34460	23860	9110
(†)	0	.77	.58	9.00	7.47	3.72	1.64	.43	0	0	.18	0
CAL YR 1978 TOTAL	172526.7			MEAN 473	MAX 3380	MIN 1.4	AC-FT 342200					
WTR YR 1979 TOTAL	57615.2			MEAN 158	MAX 741	MIN 2.3	AC-FT 114300					

† Precipitation, in inches.

WATER-QUALITY RECORDS

PERIOD OF RECORD. - -

CHEMICAL ANALYSES: Water years 1951-67, 1974 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
OCT , 1978												
OCT 05...	0900	102	289	7.8	21.0	5.0	7.8	91	...	...	...	...
NOV												
NOV 09...	0830	3.5	314	7.6	11.0	3.0	6.2	59	...	...	...	...
DEC												
DEC 07...	0950	3.1	325	7.8	5.0	2.0	9.6	78	...	...	...	...
MAR , 1979												
MAR 15...	1010	5.5	216	7.1	10.5	16	6.5	61	81	5	16	10
APR												
APR 05...	1115	8.1	219	7.3	15.0	30	7.2	74	88	12	17	11
MAY												
MAY 10...	1000	128	295	7.7	16.0	8.0	9.6	101	...	...	...	...
JUN												
JUN 08...	0925	478	299	8.0	22.5	17	8.2	98	...	...	...	...
JUL												
JUL 12...	0915	600	297	8.7	23.5	15	8.1	99	...	...	...	...
AUG												
AUG 10...	0905	588	306	8.6	26.5	8.0	7.5	97	...	...	...	...
SEP												
SEP 07...	0800	188	320	8.3	22.5	5.0	7.9	95	...	...	...	...

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	ALKA- LITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL AMMONIA (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT , 1978												
05...	--	--	--	--	--	.00	--	.06	--	.90	.96	.05
NOV												
09...	--	--	--	--	--	.04	--	.13	--	.70	.83	.06
DEC												
07...	--	--	--	--	--	.03	--	.13	--	.60	.73	.04
MAR , 1979												
15...	11	23	.5	76	4.0	--	.06	--	.12	--	1.0	.07
APR												
05...	11	22	.5	76	4.0	--	.05	--	.14	--	1.0	.10
MAY												
10...	--	--	--	--	--	--	.00	--	.06	--	1.4	.11
JUN												
08...	--	--	--	--	--	--	.02	--	.15	--	1.2	.10
JUL												
12...	--	--	--	--	--	--	.01	--	.00	--	1.4	.12
AUG												
10...	--	--	--	--	--	--	.00	--	.02	--	.90	.06
SEP												
07...	--	--	--	--	--	--	.00	--	.01	--	.80	.06

[illegible]

11451100 NORTH FORK CACHE CREEK AT HOUGH SPRINGS, NEAR CLEARLAKE OAKS, CA

LOCATION.--Lat 39°09'56", long 122°37'08", in SE¼NW¼ sec.10, T.15 N., R.7 W., Lake County, Hydrologic Unit 18020116, on right bank 0.5 mi (0.8 km) upstream from Spanish Creek, 0.9 mi (1.4 km) upstream from Hough Springs, and 10 mi (16 km) northeast of Clearlake Oaks.

DRAINAGE AREA.--60.2 mi² (155.9 km²).

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,840 ft (561 m), from topographic map. Recording rain gage (relocation) 4.7 mi (7.6 km) northwest of gage. Altitude of gage is 2,050 ft (625 m), from topographic map.

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

AVERAGE DISCHARGE.--8 years, 80.8 ft³/s (2.288 m³/s), 58,540 acre-ft/yr (72.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,980 ft³/s (226 m³/s) Jan. 16, 1974, gage height, 9.23 ft (2.813 m) from floodmarks, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of slope-area measurement of maximum flow; no flow for many days in 1972, 1976-77.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) Jan. 11, gage height, 3.40 ft (1.036 m), no peak above base of 1,500 ft³/s (42 m³/s); minimum daily, 0.31 ft³/s (0.009 m³/s) Sept. 18.

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	1.7	1.2	2.9	3.9	16	480	124	67	19	4.5	.92	1.7
2	1.7	1.2	2.9	3.6	15	324	115	63	18	3.2	.90	1.4
3	1.5	1.2	2.9	3.6	14	278	105	56	17	3.1	.85	1.1
4	1.4	1.4	3.1	5.1	14	248	95	51	17	3.1	.78	.95
5	1.2	1.5	3.3	5.6	14	227	85	78	15	2.6	.75	.86
6	1.0	1.7	3.3	5.2	14	225	81	91	14	2.6	.69	.75
7	1.0	1.7	3.2	7.0	14	219	74	145	14	2.6	.63	.69
8	1.0	1.9	2.9	54	14	189	68	110	12	2.6	.63	.81
9	1.0	2.0	3.3	40	14	162	63	94	11	2.6	.63	.68
10	1.0	2.0	3.3	74	17	141	59	82	11	3.1	.63	.65
11	1.0	2.0	3.3	555	24	124	57	73	10	3.1	.63	.63
12	1.0	2.1	3.3	106	26	111	53	67	9.7	2.6	.63	.63
13	1.0	2.3	3.3	48	461	99	51	62	8.6	2.1	.63	.67
14	1.0	2.4	3.3	215	446	88	49	57	7.6	2.1	.65	.68
15	1.0	2.6	3.3	281	231	86	47	53	7.3	2.1	.74	.59
16	1.0	2.6	3.4	134	468	83	48	47	7.1	1.4	.75	.33
17	1.0	2.6	3.7	84	257	73	49	46	7.2	1.5	.75	.33
18	1.0	2.6	4.0	63	482	66	46	44	7.5	1.7	.75	.31
19	1.0	2.9	3.9	48	362	65	43	42	6.4	1.9	.70	.33
20	1.0	5.0	3.3	40	424	58	41	39	6.3	2.0	.63	.35
21	1.0	4.2	3.4	37	582	58	40	37	5.9	1.6	.63	.37
22	1.0	4.0	3.4	36	455	53	42	35	5.5	1.9	.63	.36
23	1.0	3.8	3.5	33	389	51	66	33	5.0	2.1	.74	.35
24	.90	3.6	3.6	29	293	48	123	32	4.9	2.1	.75	.37
25	.80	3.6	3.6	25	248	47	74	30	5.2	1.7	.75	.40
26	.80	3.5	3.6	22	334	51	105	29	4.5	1.6	.75	.43
27	.86	3.3	3.6	21	262	359	128	28	4.1	1.5	.71	.49
28	1.0	3.1	3.6	19	438	338	98	26	3.9	1.5	.63	.47
29	1.1	2.9	3.7	17	---	222	84	25	3.4	1.6	.63	.46
30	1.2	2.9	4.2	17	---	172	75	23	3.8	1.3	1.1	.46
31	1.2	---	3.7	17	---	146	---	21	---	1.3	1.5	---
TOTAL	33.36	77.8	105.8	2049.0	6328	4891	2188	1686	271.9	68.7	23.09	18.60
MEAN	1.08	2.59	3.41	66.1	226	158	72.9	54.4	9.06	2.22	.74	.62
MAX	1.7	5.0	4.2	555	582	480	128	145	19	4.5	1.5	1.7
MIN	.80	1.2	2.9	3.6	14	47	40	21	3.4	1.3	.63	.31
AC-FT	66	154	210	4060	12550	9700	4340	3340	539	136	46	37
(†)	.06	1.25	.49	11.24	9.64	4.58	2.72	.73	0	.02	.40	.10

CAL YR 1978 TOTAL 43826.26 MEAN 120 MAX 2450 MIN .80 AC-FT 86930
WTR YR 1979 TOTAL 17741.25 MEAN 48.6 MAX 582 MIN .31 AC-FT 35190

† Precipitation, in inches.

SACRAMENTO RIVER BASIN

11451500 NORTH FORK CACHE CREEK NEAR LOWER LAKE, CA

LOCATION.--Lat 39°01'09", long 122°34'04", in NE¼ sec.31, T.14 N., R.6 W. (unsurveyed), Lake County, Hydrologic Unit 18020116, on right bank 500 ft (152 m) upstream from Sweet Hollow Creek, 5 mi (8 km) upstream from mouth, and 7 mi (11 km) northeast of Lower Lake.

DRAINAGE AREA.--197 mi² (510 km²).

PERIOD OF RECORD.--July 1930 to current year.

REVISED RECORDS.--WSP 831: 1932(M). WSP 1315-A: 1935(M), 1937-38(M).

GAGE.--Water-stage recorder. Datum of gage is 1,034.60 ft (315.346 m) National Geodetic Vertical Datum of 1929. Prior to June 15, 1939, at datum 2.00 ft (0.610 m) higher. June 15, 1939, to Mar. 17, 1976, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Beginning in June 1974, flow regulated by Indian Valley Reservoir, 8 mi (13 km) upstream, capacity, 296,000 acre-ft. (365 hm³). Several small diversions for irrigation of about 150 acres (607,000 m²) above station.

AVERAGE DISCHARGE (unadjusted).--5 years (1975-79), 93.3 ft³/s (2.642 m³/s), 67,600 acre-ft/yr (83.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s (575 m³/s) Dec. 11, 1937, gage height, 14.98 ft (4.566 m) present datum, from floodmarks, from rating curve extended above 7,600 ft³/s (215 m³/s) on basis of slope-area measurement at gage height 14.9 ft (4.54 m), present datum for peak of Feb. 28, 1940; no flow at times in 1930-36, 1949-50, 1956-57, 1977. Maximum discharge since construction of Indian Valley Dam in 1974, 3,520 ft³/s (99.7 m³/s) Jan. 16, 1978, gage height, 7.85 ft (2.393 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) Jan. 14, gage height, 6.52 ft (1.987 m); minimum daily, 11 ft³/s (0.312 m³/s) Sept. 30.

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	12	13	14	13	24	399	51	364	295	138	19	99
2	12	13	14	13	23	233	75	363	295	138	17	99
3	12	13	14	14	22	186	70	360	294	138	16	98
4	12	13	14	14	22	153	66	359	295	138	16	98
5	12	13	14	14	21	131	62	368	260	138	15	72
6	12	13	13	14	23	117	60	370	233	138	15	20
7	12	13	25	16	22	105	58	377	231	138	15	18
8	12	13	15	54	22	95	55	370	222	138	15	17
9	12	13	13	29	23	86	52	356	214	138	15	16
10	12	13	13	98	22	76	50	342	214	138	15	16
11	12	13	13	396	24	69	49	339	213	92	15	16
12	12	14	13	65	25	64	90	338	210	29	15	16
13	12	14	13	37	67	59	248	336	211	19	15	15
14	12	13	13	487	145	55	424	335	212	17	15	15
15	12	13	13	513	72	57	380	333	212	17	15	15
16	12	13	13	126	231	55	356	333	212	16	15	15
17	12	13	14	76	124	53	307	331	212	16	14	34
18	12	13	14	56	263	49	305	328	213	16	14	87
19	12	14	14	45	206	51	306	328	211	16	14	88
20	13	15	14	39	468	46	305	328	211	16	15	89
21	13	14	14	35	604	44	304	327	204	16	63	89
22	13	15	13	32	462	43	310	328	189	16	134	89
23	12	15	13	30	374	43	325	316	187	16	276	89
24	13	14	13	28	241	40	269	302	185	56	383	89
25	13	14	13	26	184	39	203	300	173	114	386	90
26	13	14	13	25	191	40	380	299	138	141	372	67
27	13	14	13	24	150	293	392	299	137	176	328	14
28	13	14	13	24	360	189	375	298	136	178	329	12
29	13	14	13	23	---	122	369	297	137	179	232	12
30	13	14	13	24	---	99	366	297	138	180	103	11
31	13	---	13	25	---	89	---	295	---	97	101	---
TOTAL	383	407	427	2415	4415	3180	6692	10316	6294	2803	3012	1505
MEAN	12.4	13.6	13.8	77.9	158	103	223	333	210	90.4	97.2	50.2
MAX	13	15	25	513	604	399	424	377	295	180	386	99
MIN	12	13	13	13	21	39	49	295	136	16	14	11
AC-FT	760	807	847	4790	8760	6310	13270	20460	12480	5560	5970	2990
CAL YR 1978	TOTAL	43456	MEAN 119	MAX 2400	MIN 12	AC-FT 86190						
WTR YR 1979	TOTAL	41849	MEAN 115	MAX 604	MIN 11	AC-FT 83010						

11451720 BEAR CREEK NEAR RUMSEY, CA

LOCATION.--Lat 38°56'47", long 122°20'48", in NE¼SW¼ sec.30, T.13 N., R.4 W., Colusa County, Hydrologic Unit 1802011, on left bank 0.3 mi (0.5 km) downstream from Brophy Canyon, 1.4 mi (2.3 km) upstream from mouth, and 7.3 mi (11.7 km) northwest of Rumsey.

DRAINAGE AREA.--100 mi² (259 km²).

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

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 750 ft (229 m), from topographic map.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--21 years, 47.1 ft³/s (1.334 m³/s), 34,120 acre-ft/yr (42.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,720 ft³/s (275 m³/s) Jan. 5, 1965, gage height, 11.93 ft (3.636 m); no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1955, 12.33 ft (3.758 m) Feb. 24, 1958, discharge, 9,350 ft³/s (265 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) Jan. 15, gage height, 7.66 ft (2.335 m); minimum daily, 0.50 ft³/s (0.014 m³/s) Aug. 3-5, 9-11.

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	1.6	2.1	2.7	2.7	7.0	202	38	16	4.3	2.2	.60	1.2
2	1.6	2.2	2.7	2.6	6.5	99	34	15	4.6	2.2	.60	1.1
3	1.6	2.4	2.7	2.7	6.0	81	33	14	4.6	2.2	.50	1.0
4	1.6	2.4	2.7	3.2	5.8	70	30	13	4.0	2.3	.50	.90
5	1.7	2.4	2.6	3.7	5.4	60	28	12	3.8	2.2	.50	.80
6	1.7	2.5	2.5	4.4	5.0	54	28	13	3.6	2.1	.60	.80
7	1.8	2.6	2.5	5.4	4.8	49	28	14	3.3	2.0	.60	.90
8	1.8	2.6	2.6	14	4.4	47	26	13	3.1	2.0	.60	.90
9	1.9	2.5	2.5	18	4.8	43	25	12	3.2	2.0	.50	.90
10	1.9	2.4	2.6	9.4	5.0	41	24	11	3.3	2.1	.50	1.0
11	2.0	2.3	2.7	283	5.4	39	24	11	3.1	2.1	.50	1.0
12	1.9	2.7	2.8	86	5.8	37	23	10	3.0	2.0	.60	1.0
13	1.8	3.2	2.7	16	123	35	21	9.9	2.9	1.9	.60	.90
14	1.8	3.5	2.7	150	351	32	20	8.5	2.8	1.8	.80	.90
15	1.9	3.1	2.7	1240	82	30	19	7.3	2.9	1.8	1.0	.90
16	1.9	2.8	2.7	156	509	30	19	7.1	2.9	1.7	.80	.80
17	2.0	2.7	3.1	52	115	30	20	6.8	2.9	1.7	.80	.80
18	2.2	2.7	4.6	31	226	28	19	6.1	3.0	1.6	.80	.80
19	2.2	2.8	4.1	21	138	36	18	5.7	3.0	1.5	.80	.70
20	2.2	3.5	3.4	16	583	28	17	6.0	2.9	1.5	.80	.70
21	2.2	3.7	3.0	14	576	24	16	5.9	2.9	1.4	.80	.70
22	2.2	4.7	2.9	13	425	21	16	5.9	2.7	1.5	.90	.70
23	2.1	5.1	2.9	11	214	22	21	6.6	2.7	1.7	.90	.70
24	2.0	4.0	2.9	11	127	19	29	6.2	2.7	1.3	.90	.70
25	2.0	3.3	2.9	10	101	19	21	5.6	2.5	1.0	.80	.70
26	2.2	3.1	2.9	9.0	109	19	21	5.1	2.5	.90	.80	.70
27	2.2	2.9	2.9	8.2	77	536	31	4.9	2.4	.80	.80	.70
28	2.2	2.8	2.9	7.9	159	249	23	4.8	2.3	.80	.70	.70
29	2.2	2.7	2.9	8.0	---	85	18	4.6	2.1	.90	.80	.80
30	2.1	2.7	2.8	7.8	---	51	17	4.5	2.1	.80	1.2	.80
31	2.0	---	2.7	7.3	---	41	---	4.6	---	.70	1.3	---
TOTAL	60.5	88.4	89.3	2224.3	3980.9	2157	707	270.1	92.1	50.70	22.90	25.20
MEAN	1.95	2.95	2.88	71.8	142	69.6	23.6	8.71	3.07	1.64	.74	.84
MAX	2.2	5.1	4.6	1240	583	536	38	16	4.6	2.3	1.3	1.2
MIN	1.6	2.1	2.5	2.6	4.4	19	16	4.5	2.1	.70	.50	.70
AC-FT	120	175	177	4410	7900	4280	1400	536	183	101	45	50

CAL YR 1978 TOTAL 44266.80 MEAN 121 MAX 4030 MIN .30 AC-FT 87800
WTR YR 1979 TOTAL 9768.40 MEAN 26.8 MAX 1240 MIN .50 AC-FT 19380

SACRAMENTO RIVER BASIN

11451760 CACHE CREEK AT RUMSEY, CA

LOCATION.--Lat 38°53'25", long 122°14'13", T.12 N., R.3 W., Yolo County, Hydrologic Unit 18020116, in Canada De Capay Grant, on downstream side of bridge on Arbuckle Road, 800 ft (244 m) north of Rumsey.

DRAINAGE AREA.--964 mi² (2,497 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to September 1962, June 1965 to September 1973, December 1975 to current year. Prior to September 1973, published as "above Rumsey."

GAGE.--Water-stage recorder. Altitude of gage is 420 ft (128 m), from topographic map. Prior to September 1973, at site 3.0 mi (4.8 km) upstream at different datum.

REMARKS.--Flow partly regulated by Clear Lake (station 11450000) beginning in 1915. Flow also regulated by Indian Valley Reservoir beginning in June 1974, capacity, 296,000 acre-ft (365 hm³).

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--13 years (water years 1961-62, 1966-79), 668 ft³/s (18.92 m³/s), 484,000 acre-ft/yr (597 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft³/s (1,230 m³/s), Jan. 24, 1970, gage height, 19.59 ft (5.971 m), from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of slope-area measurement at gage height 21.42 ft (6.529 m); no flow for many days in 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 5, 1965, reached a stage of 21.42 ft (6.529 m) from flood-marks, discharge, 59,000 ft³/s (1,670 m³/s) by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,660 ft³/s (160 m³/s) Jan. 15, gage height, 16.04 ft (4.889 m); minimum daily, 12 ft³/s (0.34 m³/s) Nov. 10.

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	117	41	26	21	59	1150	178	514	699	704	672	324
2	118	38	26	21	55	591	164	526	696	705	707	320
3	117	23	26	22	52	464	152	515	701	715	707	297
4	119	32	25	23	49	387	144	550	720	722	714	244
5	119	34	25	26	48	326	137	586	684	735	680	236
6	109	18	25	25	47	281	134	630	745	733	678	222
7	92	13	24	26	46	248	132	637	773	725	679	217
8	86	13	31	58	48	228	125	596	774	681	681	249
9	85	13	31	131	51	209	119	545	821	677	683	247
10	84	12	25	66	55	192	115	561	794	709	693	244
11	83	15	24	735	58	177	113	622	723	698	648	241
12	82	19	23	330	65	168	112	669	700	681	610	237
13	82	18	23	113	1160	161	222	690	709	673	588	234
14	80	18	22	331	538	153	418	696	760	706	553	230
15	80	23	22	2620	877	150	445	751	742	767	524	228
16	70	25	21	464	597	154	444	730	692	812	526	225
17	65	29	21	213	468	151	387	704	647	808	549	223
18	65	27	40	152	630	141	381	662	723	802	557	220
19	65	25	37	122	1350	145	418	682	711	788	562	169
20	66	24	32	101	1980	135	454	730	668	722	597	159
21	67	23	28	91	1510	127	507	721	652	747	580	157
22	64	24	25	85	954	122	554	683	643	730	528	152
23	61	25	24	79	804	125	603	713	626	680	523	149
24	56	26	23	74	660	119	591	679	563	639	474	148
25	50	26	23	71	558	114	327	653	648	694	464	150
26	51	26	22	67	500	113	489	695	729	681	451	153
27	44	26	22	62	458	1430	584	706	718	603	395	145
28	29	26	22	60	607	689	519	682	696	636	381	127
29	33	26	22	58	---	324	486	645	724	636	404	125
30	40	26	22	57	---	236	499	620	720	636	378	121
31	40	---	21	61	---	199	---	684	---	665	331	---
TOTAL	2319	714	783	6365	14284	9209	9953	20077	21201	21910	17517	6193
MEAN	74.8	23.8	25.3	205	510	297	332	648	707	707	565	206
MAX	119	41	40	2620	1980	1430	603	751	821	812	714	324
MIN	29	12	21	21	46	113	112	514	563	603	331	121
AC-FT	4600	1420	1550	12620	28330	18270	19740	39820	42050	43460	34740	12280
CAL YR 1978	TOTAL	318872	MEAN	874	MAX	9740	MIN	12	AC-FT	632500		
WTR YR 1979	TOTAL	130525	MEAN	358	MAX	2620	MIN	12	AC-FT	258900		

11451760 CACHE CREEK AT RUMSEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-70, 1976 to current year.

CHEMICAL ANALYSES: December 1976 to current year.

WATER TEMPERATURES: Water years 1960-70, 1976,

SEDIMENT RECORDS: Water years 1960-63, 1965-70, 1976.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1960 to September 1970, December 1975 to September 1976.

SEDIMENT RECORDS: January 1960 to September 1963, June 1965 to September 1970, December 1975 to September 1976.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT											
12...	1300	82	477	8.2	20.0	--	9.8	--	--	--	--
NOV											
08...	1000	13	698	8.1	11.5	--	10.6	--	--	--	--
DEC											
11...	1030	24	955	8.4	5.5	--	12.8	--	--	--	--
JAN											
19...	1200	122	852	8.2	8.5	--	11.2	--	--	--	--
FEB											
09...	1245	51	1050	8.2	10.5	--	12.0	--	--	--	--
MAR											
07...	0945	248	657	8.4	14.5	18	10.0	--	--	240	32
APR											
17...	1340	387	448	8.4	15.0	--	10.0	4	.9	170	24
MAY											
10...	0845	561	369	8.5	14.5	--	10.2	--	--	140	22
JUN											
19...	0815	711	306	8.3	19.0	--	8.9	--	--	130	23
JUL											
11...	0845	698	311	8.3	21.0	--	7.8	--	--	130	24
AUG											
07...	1130	679	317	8.4	25.0	--	9.1	13	1.4	140	26
SEP											
26...	0915	153	351	8.2	17.0	--	9.6	--	--	140	25

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	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, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT										
12...	--	--	--	--	--	--	--	--	--	--
NOV										
08...	--	--	--	--	--	--	--	--	--	--
DEC										
11...	--	--	--	--	--	--	--	--	--	--
JAN										
19...	--	--	--	--	--	--	--	--	--	--
FEB										
09...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	39	53	--	1.5	220	--	52	387	.53	--
APR										
17...	26	30	28	1.0	160	23	31	249	.34	30
MAY										
10...	21	23	26	.8	140	17	21	212	.29	--
JUN										
19...	18	15	20	.6	140	10	12	178	.24	--
JUL										
11...	18	16	20	.6	140	10	12	181	.25	--
AUG										
07...	18	16	20	.6	140	9.0	9.0	190	.26	50
SEP										
26...	19	20	23	.7	150	10	18	195	.27	--

SACRAMENTO RIVER BASIN

11451760 CACHE CREEK AT RUMSEY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, KJEL- DAHL, TOTAL (MG/L AS N)	PHOS- PHORUS, PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
OCT 12...	.02	.01	--	.02	--	.50	--	.02	.00	--
NOV 08...	.09	.00	--	.03	--	.20	--	.01	.01	--
DEC 11...	.50	.01	--	.00	--	.20	--	.00	.00	--
JAN 19...	.66	.03	--	.18	--	.30	--	.04	.02	--
FEB 09...	--	--	.88	--	.05	--	.20	.01	.00	--
MAR 07...	--	--	.42	--	.01	--	.30	.03	.01	--
APR 17...	.09	--	.10	--	.00	--	.50	.04	.00	1400
MAY 10...	.02	--	.02	.03	.03	.37	.40	.04	.00	1300
JUN 19...	.07	--	.06	--	.00	--	.80	.09	.01	1200
JUL 11...	.00	--	.00	--	.02	--	.90	.10	.00	1200
AUG 07...	.00	--	.01	--	.01	--	.70	.07	.02	1200
SEP 26...	.00	--	.01	--	.00	--	.40	.03	.00	1600

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)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR 17...	1340	0	100	0	0	0	0	10	10	.0	3.6
AUG 07...	1130	0	100	10	0	10	10	0	0	.0	7.5

11452500 CACHE CREEK AT YOLO, CA

LOCATION.--Lat 38°43'38", long 121°48'22", in Rio Jesus Maria Grant, Yolo County, Hydrologic Unit 18020129, on left bank 35 ft (11 m) upstream from highway bridge, 0.5 mi (0.8 km) south of Yolo, and 7.3 mi (11.7 km) downstream from Moore Dam.

DRAINAGE AREA.--1,139 mi² (2,950 km²).

PERIOD OF RECORD.--January 1903 to current year. Records for water year 1903 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1914(M). WSP 1345: 1906. WSP 1445: 1955. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 2131 for history of changes prior to Apr. 25, 1969. Apr. 25, 1969, to July 1976, at site 765 ft (233 m) upstream at same datum.

REMARKS.--Records good. Flow regulated by Clear Lake beginning in 1915 (station 11450000). Diversions for irrigation of about 30,000 acres (121 km²) between Capay and Yolo, from data furnished by Clear Lake Water Co.

AVERAGE DISCHARGE.--77 years, 513 ft³/s (14.52 m³/s), 371,700 acre-ft/yr (458 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,400 ft³/s (1,170 m³/s) Feb. 25, 1958, gage height, 85.35 ft (26.015 m) present datum; maximum stage observed, 88.44 ft (26.957 m) present datum, Mar. 10, 1904; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,490 ft³/s (184 m³/s) Jan. 15, gage height, 60.41 ft (18.413 m); no flow many days.

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				0	27	1020	186	1.6	15	28	3.3	0
2				0	26	713	161	.94	18	25	7.1	2.6
3				0	18	504	133	4.3	16	21	14	1.0
4				0	15	419	88	3.6	22	17	15	1.4
5				0	12	351	80	.54	23	21	17	.92
6				0	9.1	301	59	.96	12	17	22	.15
7				0	7.7	270	58	2.7	4.1	15	20	.20
8				0	7.3	243	51	4.2	9.4	16	18	.15
9				0	7.1	219	46	6.8	11	11	15	0
10				0	6.0	195	34	4.5	12	14	15	0
11				0	5.5	175	24	3.1	15	19	9.9	0
12				538	4.9	160	15	7.6	16	13	7.3	0
13				184	15	150	11	4.3	18	6.8	5.4	0
14				105	1630	137	3.3	6.7	12	6.5	5.8	0
15				3000	588	134	46	7.0	12	6.3	13	0
16				1270	553	129	90	10	20	3.5	6.4	0
17				370	830	130	80	8.9	21	7.4	2.0	0
18				201	494	123	53	14	20	11	3.5	0
19				137	1180	117	17	4.3	19	11	12	0
20				99	648	115	5.7	2.5	28	12	7.3	0
21				77	2920	97	5.7	2.1	29	11	3.8	0
22				60	1850	85	5.0	1.8	30	20	2.3	0
23				50	1870	82	12	2.0	22	27	3.5	0
24				44	896	73	42	2.9	15	27	3.7	0
25				38	618	49	56	11	10	22	2.8	0
26				31	517	42	30	12	6.9	12	.62	0
27				26	483	77	28	8.6	11	14	.01	0
28				23	382	1570	37	8.5	15	7.6	0	0
29				18	---	470	13	9.1	17	4.4	0	0
30				20	---	295	3.2	12	21	3.5	0	0
31		---		35	---	223	---	7.1	---	1.4	0	---
TOTAL	0	0	0	6326	15619.6	8668	1472.9	175.64	500.4	431.4	235.73	6.42
MEAN	0	0	0	204	558	280	49.1	5.67	16.7	13.9	7.60	.21
MAX	0	0	0	3000	2920	1570	186	14	30	28	22	2.6
MIN	0	0	0	0	4.9	42	3.2	.54	4.1	1.4	0	0
AC-FT	0	0	0	12550	30980	17190	2920	348	993	856	468	13
CAL YR 1978	TOTAL	211184.21	MEAN	579	MAX	11900	MIN	0	AC-FT	418900		
WTR YR 1979	TOTAL	33436.09	MEAN	91.6	MAX	3000	MIN	0	AC-FT	66320		

11453000 YOLO BYPASS NEAR WOODLAND, CA

LOCATION.--Lat 38°40'40", long 121°38'35", unsurveyed, Yolo County, Hydrologic Unit 18020109, on left bank 300 ft (91 m) upstream from Sacramento and Woodland railroad bridge, 6 mi (10 km) upstream from Sacramento Bypass, 6 mi (10 km) downstream from Fremont weir, and 7 mi (11 km) east of Woodland.

PERIOD OF RECORD.--October 1939 to September 1977. October 1977 to current year (high flows only). Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 3.41 ft (1.039 m) below National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1941, nonrecording gage, and Dec. 18-31, 1941, water-stage recorder, at datum 0.73 ft (0.222 m) higher. Prior to Sept. 30, 1977, a supplementary water-stage recorder 6 mi (10 km) downstream at different datum recorded low flow.

REMARKS.--Records good. Flow is from Cache Creek and Knights Landing Ridge Cut plus floodwater passing over Fremont weir. See PERIOD OF RECORD. Beginning October 1977, only flows above 1,000 ft³/s (28.3 m³/s) are computed.

AVERAGE DISCHARGE.--38 years (water years 1939-77), 3,765 ft³/s (106.6 m³/s), 2,728,000 acre-ft/yr (3.36 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 272,000 ft³/s (7,700 m³/s) Feb. 8, 1942, gage height, 32.00 ft (9.754 m); no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,430 ft³/s (154 m³/s) Feb. 24, gage height, 21.12 ft (6.437 m).

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				---	---	2250						
2				---	---	2470						
3				---	---	2080						
4				---	---	1620						
5				---	---	1210						
6				---	---	---						
7				---	---	---						
8				---	---	---						
9				---	---	---						
10				---	---	---						
11				---	---	---						
12				---	---	---						
13				---	---	---						
14				---	---	---						
15				---	---	---						
16				2900	1580	---						
17				2780	2110	---						
18				2630	2320	---						
19				2310	2600	---						
20				1340	2680	---						
21				---	3530	---						
22				---	4590	---						
23				---	4610	---						
24				---	4990	---						
25				---	5230	---						
26				---	4190	---						
27				---	3080	---						
28				---	2530	---						
29				---	---	---						
30				---	---	---						
31				---	---	---						
TOTAL				---	---	---						
MEAN				---	---	---						
MAX				---	---	---						
MIN				---	---	---						
AC-FT				---	---	---						

11453200 DRY CREEK NEAR MIDDLETOWN, CA

LOCATION.--Lat 38°44'07", long 122°38'52" in NW¼NW¼ sec.9, T.10N., R.7 W., Lake County, Hydrologic Unit 18020117, on right bank 0.3 mile (0.5 km) downstream from Kroll Creek, 2.1 miles (3.4 km) southwest of Middletown, and 2.7 miles (4.3 km) upstream from mouth.

DRAINAGE AREA.--8.35 mi² (21.63 km²).

PERIOD OF RECORD.--May 1959 to September 1972, October 1978 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 1,172.15 ft (357.271 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--14 years, 27.1 ft³/s (0.767 m³/s), 19,600 acre-ft/yr (24.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft³/s (98.3 m³/s) February 8, 1960, gage height, 9.90 ft (3.018 m); no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) Feb. 13 (1900 hrs), gage height, 6.97 ft (2.124 m), no other peak above base of 1,000 ft³/s (28.3 m³/s); no flow many days.

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	.17	.08	.39	.35	3.9	134	19	13	3.9	.94	.10	.11
2	.16	.10	.37	.35	3.8	72	17	12	3.7	.95	.09	.14
3	.16	.10	.33	.37	3.7	59	16	11	3.5	.99	.08	.12
4	.15	.11	.34	.77	4.4	45	15	10	3.3	1.0	.08	.11
5	.15	.11	.33	.77	5.7	37	14	45	3.1	.97	.08	.09
6	.13	.10	.33	.63	5.7	31	15	37	2.9	.95	.08	.07
7	.13	.10	.33	2.2	4.9	27	13	38	2.7	.88	.07	.05
8	.13	.10	.35	54	4.4	24	12	26	2.5	.84	.06	.03
9	.13	.07	.35	19	4.0	21	11	21	2.4	.83	.03	0
10	.13	.07	.35	68	3.9	19	10	18	2.3	.84	0	.03
11	.12	.09	.36	368	4.1	17	9.9	16	2.2	.78	0	.02
12	.10	.19	.38	39	4.1	16	9.1	15	2.1	.68	0	0
13	.09	.25	.35	16	445	15	8.6	13	2.0	.59	.04	0
14	.09	.19	.35	114	176	14	8.0	12	1.9	.54	.07	0
15	.09	.17	.35	177	74	15	7.5	11	1.9	.50	.10	0
16	.10	.19	.35	50	163	15	9.6	11	1.9	.45	.12	0
17	.10	.19	.97	26	51	14	8.5	9.9	1.9	.40	.11	0
18	.09	.21	.86	18	121	13	7.4	9.0	1.8	.36	.08	0
19	.09	.52	.61	13	55	12	6.8	8.5	1.8	.31	.07	0
20	.10	1.6	.53	10	150	11	6.4	8.4	1.7	.31	.08	0
21	.11	.54	.49	8.7	234	10	6.1	8.2	1.6	.33	.12	0
22	.11	.83	.48	7.3	208	9.7	6.5	7.9	1.5	.37	.13	0
23	.10	.58	.45	6.3	115	9.2	34	7.3	1.4	.32	.12	0
24	.08	.44	.45	5.7	69	8.6	28	6.7	1.3	.29	.11	0
25	.08	.39	.42	5.1	55	8.1	15	6.2	1.3	.26	.09	0
26	.09	.35	.41	4.5	64	9.6	28	5.7	1.2	.22	.08	0
27	.09	.34	.41	4.1	43	140	30	5.5	1.1	.22	.09	0
28	.08	.31	.38	3.8	213	53	20	5.2	1.0	.21	.08	.12
29	.07	.30	.38	3.5	---	32	17	4.8	.98	.19	.09	.10
30	.07	.30	.38	4.1	---	25	15	4.5	.97	.16	.13	.06
31	.08	---	.36	4.3	---	21	---	4.2	---	.13	.12	---
TOTAL	3.37	8.92	13.19	1034.84	2288.6	937.2	423.4	411.0	61.85	16.81	2.50	1.05
MEAN	.11	.30	.43	33.4	81.7	30.2	14.1	13.3	2.06	.54	.081	.035
MAX	.17	1.6	.97	368	445	140	34	45	3.9	1.0	.13	.14
MIN	.07	.07	.33	.35	3.7	8.1	6.1	4.2	.97	.13	0	0
AC-FT	6.7	18	26	2050	4540	1860	840	815	123	33	5.0	2.1

CAL YR 1978 TOTAL -- MEAN -- MAX -- MIN -- AC-FT --
WTR YR 1979 TOTAL 5202.73 MEAN 14.3 MAX 445 MIN 0 AC-FT 10320

11453600 POPE CREEK NEAR POPE VALLEY, CA

LOCATION.--Lat 38°37'48", long 122°19'52", in SW¼ sec.17, T.9 N., R.4 W., Napa County, Hydrologic Unit 18020117, on left bank 0.2 mi (0.3 km) upstream from Lake Berryessa, 0.7 mi (1.1 km) downstream from Maxwell Creek, and 5.2 mi (8.4 km) east of Pope Valley.

DRAINAGE AREA.--78.3 mi² (202.8 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 450 ft (137 m), from topographic map.

REMARKS.--Flow regulated by Dick Weeks Reservoir, increased to 2,000 acre-ft (2.47 hm³) of usable storage in December 1973, and several smaller reservoirs with additional storage of about 600 acre-ft (740,000 m³).

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--18 years (water years 1961-79), 84.3 ft³/s (2.387 m³/s), 61,080 acre-ft/yr (75.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Jan. 31, 1963, gage height, 19.79 ft (6.032 m), from rating curve extended above 7,700 ft³/s (218 m³/s); no flow many days in 1960-68, 1971-73, 1976-79.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,470 ft³/s (98.3 m³/s) Jan. 15, gage height, 9.51 ft (2.899 m); no flow for many days.

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	4.2	.30	1.0	1.3	25	466	55	26	4.1	.80	.10	.20
2	5.3	.30	1.0	1.2	13	226	48	24	4.3	1.0	.10	.20
3	5.5	.40	1.0	1.4	9.2	176	43	20	5.2	1.3	0	.20
4	5.6	.40	1.0	1.9	8.3	136	40	19	3.5	1.5	0	.20
5	5.5	.40	.80	2.2	7.7	110	38	28	3.0	1.1	0	.10
6	5.6	.40	.80	2.0	7.6	90	43	37	2.6	1.0	0	.20
7	4.4	.40	.80	2.4	7.2	75	43	36	2.0	.90	.10	.10
8	4.2	.40	.80	92	6.4	65	37	29	1.8	.80	.10	.10
9	4.1	.40	.80	41	5.7	55	34	27	1.5	.60	0	.10
10	3.9	.40	.90	22	9.3	60	32	23	1.8	.70	0	.10
11	3.8	.40	.90	1180	11	54	31	19	1.7	.70	0	0
12	3.9	.70	.90	134	11	49	30	17	1.8	.40	0	0
13	3.9	.80	1.1	40	982	45	29	16	1.8	.30	0	0
14	3.8	.70	1.1	507	719	40	27	14	1.7	.20	0	0
15	3.9	.70	1.1	1450	183	41	26	13	1.4	.20	0	0
16	3.9	.80	1.0	252	346	41	27	12	1.3	.20	.10	0
17	4.0	.80	1.7	116	172	44	26	11	1.4	.20	.10	0
18	3.9	.80	2.4	70	927	38	23	11	1.3	.10	.10	0
19	3.2	.90	1.9	47	447	35	22	9.8	1.3	.10	.10	0
20	1.7	2.2	1.5	32	815	30	21	9.7	1.9	.10	.10	0
21	1.1	2.1	1.3	25	1110	28	20	9.3	1.5	.10	.10	0
22	.90	2.2	1.3	20	862	25	20	9.3	1.3	.20	.10	0
23	.60	1.7	1.3	18	500	24	32	9.2	1.2	.10	.10	.10
24	.50	1.4	1.4	16	279	22	85	8.7	1.1	.10	.10	.10
25	4.1	1.1	1.4	16	188	20	38	7.9	.80	.10	.10	.10
26	1.4	1.1	1.4	23	224	21	41	7.3	.90	.10	.10	.10
27	.50	1.1	1.4	21	133	606	68	6.7	1.2	.10	.10	.10
28	.40	1.1	1.4	20	521	260	39	6.3	1.2	.10	.10	.10
29	.40	1.1	1.4	18	---	124	31	5.4	1.1	.10	.10	.10
30	.30	1.0	1.4	17	---	83	27	4.5	.80	.10	.10	.10
31	.30	---	1.4	23	---	68	---	4.3	---	.10	.10	---
TOTAL	94.80	26.50	37.60	4212.4	8529.4	3157	1076	480.4	56.50	13.40	2.00	2.30
MEAN	3.06	.88	1.21	136	305	102	35.9	15.5	1.88	.43	.065	.077
MAX	5.6	2.2	2.4	1450	1110	606	85	37	5.2	1.5	.10	.20
MIN	.30	.30	.80	1.2	5.7	20	20	4.3	.80	.10	0	0
AC-FT	188	53	75	8360	16920	6260	2130	953	112	27	4.0	4.6
CAL YR 1978 TOTAL	44749.30			MEAN 123	MAX 4710	MIN .30	AC-FT 88760					
WTR YR 1979 TOTAL	17688.30			MEAN 48.5	MAX 1450	MIN 0	AC-FT 35080					

11453600 POPE CREEK NEAR POPE VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANFOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	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)
FEB 28...	1115	113	317	8.4	10.5	4.7	11.1	150	30	14	28
APR 06...	1040	45	372	8.4	15.0	2.4	10.2	--	--	--	--
MAY 29...	1605	4.1	604	8.5	25.5	1.1	9.6	--	--	--	--

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 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 CONSTITUENTS, DIS- SOLVED (MG/L)
FEB 28...	9.9	12	.4	1.1	120	29	6.7	.1	27	190
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--

DATE	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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
FEB 28...	.26	.45	.48	.01	.11	.12	.05	.04	190	90
APR 06...	--	.01	.03	.01	.14	.15	.01	.00	--	--
MAY 29...	--	.01	.01	.03	.10	.13	.02	.01	--	--

SACRAMENTO RIVER BASIN

11453900 LAKE BERRYESSA NEAR WINTERS, CA

LOCATION.--Lat 38°30'48", long 122°06'13", in SE¼NW¼ sec.29, T.8 N., R.2 W., Napa County, Hydrologic Unit 18020117, near center of Monticello Dam on Putah Creek, 7.4 mi (11.9 km) west of Winters.

DRAINAGE AREA.--566 mi² (1,466 km²).

WATER-CONTENTS RECORD

PERIOD OF RECORD.--January 1957 to current year.

REVISED RECORDS.--WSP 1735: 1958-60. WSP 1931: Drainage area.

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

REMARKS.--Reservoir is formed by concrete arch-gravity dam completed November 1956. Usable capacity, 1,592,000 acre-ft (1.96 km³) between elevations 253.25 ft (77.101 m) invert of outlet valves, and 440 ft (134.1 m) crest of glory-hole spillway. Dead storage, 10,340 acre-ft (12.7 hm³). Water is released down Putah Creek and is diverted into Putah South diversion canal for irrigation of about 46,000 acres (186 km²) in the lower Sacramento Valley. Total diverted during current year was 196,700 acre-ft (243 hm³). Releases for irrigation began in May 1959. Records, including extremes, show total contents at 2400 hours.

COOPERATION.--Records furnished by Bureau of Reclamation and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,733,000 acre-ft (2.14 km³) Jan. 24, 1970, elevation, 446.67 ft (136.415 m); minimum since irrigation pool first filled, 738,600 acre-ft (911 hm³) Nov. 20, 1977, elevation, 388.04 ft (118.275 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,261,500 acre-ft (1.56 km³) Apr. 9-12, elevation, 421.47 ft (128.464 m); minimum, 1,035,000 acre-ft (1.28 hm³) Sept. 30, elevation, 407.95 ft (124.343 m).

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

380	632,400
390	765,700
400	911,200
410	1,068,000
420	1,236,000
430	1,414,000
450	1,800,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1121200	1101800	1094900	1087700	1130000	1227800	1258600	1254200	1219700	1170400	1118500	1069400
2	1120800	1101300	1094600	1087500	1130000	1230300	1258900	1253100	1218200	1169100	1116700	1068100
3	1120200	1101000	1094300	1087400	1130000	1232300	1259300	1252500	1216600	1167600	1114700	1066800
4	1119400	1100700	1093900	1087400	1129800	1233900	1259800	1251800	1215400	1165900	1112900	1065700
5	1118900	1100300	1093600	1087400	1129800	1234700	1260000	1251200	1213900	1164400	1111200	1064600
6	1118000	1100000	1093000	1087400	1129800	1236100	1260500	1251200	1212200	1163000	1109600	1063300
7	1117200	1100000	1092600	1087900	1129800	1237200	1261000	1250400	1210300	1161300	1108100	1061800
8	1116700	1099500	1092300	1090300	1129800	1237700	1261400	1249500	1208400	1159800	1106300	1060500
9	1116000	1099200	1092100	1091000	1129800	1238400	1261500	1248800	1207000	1158300	1104600	1059400
10	1115400	1098700	1092000	1092300	1129800	1239100	1261500	1248300	1205500	1156900	1102800	1058200
11	1114500	1097900	1091800	1102500	1129800	1239400	1261500	1247800	1203800	1155100	1101200	1057000
12	1113700	1097600	1091600	1103800	1130200	1239800	1261500	1246700	1201900	1153200	1099400	1055700
13	1113100	1097400	1091500	1104100	1142300	1240800	1261000	1246000	1200000	1151400	1097700	1054400
14	1112400	1097200	1091200	1111600	1151900	1241000	1260800	1245000	1198500	1149700	1096400	1052900
15	1111600	1096900	1091000	1124800	1153700	1241700	1260500	1243600	1196600	1148000	1094800	1051600
16	1110900	1096600	1090700	1126800	1160800	1241900	1260300	1242600	1194700	1146200	1093100	1050300
17	1110300	1096400	1090700	1127700	1164400	1242400	1260100	1241200	1193000	1144400	1091600	1049000
18	1109800	1096200	1091000	1128500	1169900	1242900	1259600	1239800	1191300	1142500	1090200	1047700
19	1109100	1096100	1090700	1128800	1173600	1243300	1258900	1238400	1189800	1140800	1088700	1046600
20	1108400	1096700	1090500	1129000	1184500	1243800	1258200	1237200	1188100	1139200	1087100	1045300
21	1107800	1096900	1090200	1129300	1194700	1244100	1257500	1235600	1186500	1137300	1085600	1044000
22	1107300	1096900	1089800	1129300	1204600	1244500	1256600	1234100	1185000	1135700	1083900	1042900
23	1106800	1096700	1089500	1129300	1209100	1244600	1257200	1233000	1183300	1134000	1082500	1042000
24	1106500	1096600	1089200	1129300	1211800	1245000	1256800	1231500	1182000	1132300	1080800	1040800
25	1105800	1096400	1088900	1129300	1214200	1245200	1256300	1230100	1180300	1130500	1079500	1039900
26	1105300	1096200	1088700	1129300	1216800	1246000	1256300	1228900	1178600	1128700	1078100	1038700
27	1105000	1095800	1088500	1129300	1218400	1252500	1256300	1227300	1176900	1126800	1076600	1037800
28	1104500	1095600	1088500	1129300	1223000	1255400	1255900	1225600	1175300	1125200	1075100	1037000
29	1103800	1095300	1088400	1129000	---	1256800	1255400	1223900	1173800	1123700	1073700	1035800
30	1102800	1095100	1088200	1130000	---	1257300	1254500	1222500	1172100	1122000	1072000	1035000
31	1102300	---	1087900	1130000	---	1257900	---	1220900	---	1120000	1070700	---
MAX	1121200	1101800	1094900	1130000	1223000	1257900	1261500	1254200	1219700	1170400	1118500	1069400
MIN	1102300	1095100	1087900	1087400	1129800	1227800	1254500	1220900	1172100	1120000	1070700	1035000
†	412.09	411.65	411.21	413.76	419.25	421.26	421.07	419.13	416.27	413.16	410.16	407.95
‡	-18900	-7200	-7200	+42100	+93000	+34900	-3400	-33600	-48800	-52100	-49300	-35700
††	5529	2059	1525	1232	1591	2799	5057	9541	13123	12066	8991	6918

CAL YR 1978 † +297300

WTR YR 1979 † -86200

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1977 to current year.

AT PUTAH CREEK ARM (Lat 38°37'51", long 122°16'24", Las Putas Grant, Napa County,
Hydrologic Unit 18020117)

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
OCT									
05...	1500	.50	321	8.8	24.8	--	10.7	23	1.48
05...	1502	1.0	324	8.8	23.1	--	10.6	12	2.11
05...	1504	2.0	320	8.8	22.9	--	10.6	13	2.04
05...	1506	3.0	322	8.8	22.6	--	10.4	14	1.98
05...	1508	4.0	321	8.8	22.4	--	10.1	14	1.98
05...	1510	5.0	321	8.7	22.1	--	9.8	17	1.78
05...	1512	6.0	320	8.7	21.9	--	9.2	19	1.66
05...	1513	7.0	320	8.6	21.5	--	8.5	24	1.43
05...	1514	8.0	322	8.5	21.2	--	7.4	27	1.31
05...	1515	9.0	320	8.4	20.9	--	7.1	30	1.20
05...	1516	10.0	323	8.3	20.7	--	6.4	35	1.04
05...	1517	11.0	320	8.3	20.4	--	6.1	37	.99
05...	1518	12.0	319	8.2	20.3	--	5.7	41	.89
05...	1520	13.0	323	8.1	20.0	--	4.9	33	1.10
05...	1521	14.0	323	7.8	19.5	--	3.0	7.9	2.54
05...	1522	15.0	316	7.7	18.5	--	1.4	3.4	3.38
05...	1523	16.0	307	7.6	17.8	--	.5	1.0	4.56
05...	1524	17.0	303	7.6	16.5	--	.4	.81	4.82
05...	1525	18.0	300	7.5	15.3	--	.4	.81	4.82
05...	1526	19.0	300	7.5	14.8	--	.4	.07	7.33
05...	1527	20.0	302	7.5	14.5	--	.4	.06	7.46
05...	1528	21.0	302	7.5	14.2	--	.4	.01	9.54
05...	1529	22.0	302	7.5	14.0	--	.4	.01	9.02
05...	1530	23.0	300	7.5	13.8	--	.4	.00	--
05...	1531	24.0	300	7.5	13.6	--	.4	.00	--
05...	1532	25.0	300	7.4	13.6	--	.4	.00	--
05...	1533	26.0	--	--	--	--	--	.00	--
05...	1545	--	--	--	--	3.6	--	--	--
APR									
04...	1535	.50	304	8.3	17.5	--	9.9	12	2.11
04...	1537	1.0	301	8.3	16.9	--	10.0	19	1.66
04...	1539	2.0	306	8.2	16.2	--	10.1	18	1.72
04...	1541	3.0	301	8.2	15.3	--	9.9	18	1.72
04...	1543	4.0	298	8.2	15.1	--	10.0	15	1.91
04...	1545	5.0	302	8.1	13.8	--	9.9	14	1.98
04...	1547	6.0	296	8.1	13.2	--	9.9	11	2.18
04...	1549	7.0	296	8.1	12.8	--	9.9	12	2.11
04...	1551	8.0	304	8.1	12.3	--	9.8	7.9	2.54
04...	1552	9.0	299	8.1	12.0	--	9.7	7.3	2.62
04...	1553	10.0	298	8.1	11.8	--	9.8	4.5	3.11
04...	1554	11.0	300	8.1	11.6	--	9.7	3.7	3.28
04...	1555	12.0	300	8.0	11.5	--	9.6	2.3	3.77
04...	1556	13.0	298	8.0	11.3	--	9.6	2.6	3.67
04...	1557	14.0	301	8.0	11.2	--	9.5	2.3	3.77
04...	1558	15.0	299	8.0	11.1	--	9.5	1.7	4.09
04...	1559	16.0	297	8.0	11.1	--	9.5	1.0	4.56
04...	1600	17.0	297	8.0	11.0	--	9.4	1.0	4.56
04...	1601	18.0	301	8.0	10.9	--	9.4	1.3	4.32
04...	1602	19.0	300	8.0	10.7	--	9.2	.81	4.82
04...	1603	20.0	302	7.9	10.3	--	8.9	.35	5.66
04...	1604	21.0	303	7.9	10.2	--	8.8	.28	5.88
04...	1605	22.0	303	7.9	10.2	--	8.8	.23	6.06
04...	1606	23.0	302	7.9	10.2	--	8.8	.18	6.34
04...	1607	24.0	302	7.9	10.1	--	8.8	.08	7.09
04...	1608	25.0	302	7.9	10.1	--	8.8	.07	7.33
04...	1609	26.0	302	7.9	10.1	--	8.7	.07	7.33
04...	1610	27.0	303	7.9	10.0	--	8.7	.07	7.33
04...	1611	28.0	303	7.9	9.9	--	8.7	.07	7.21
04...	1612	29.0	305	7.9	9.9	--	8.6	.07	7.21
04...	1613	30.0	--	--	--	--	--	.00	16.80
04...	1625	--	--	--	--	3.0	--	--	--
04...	1630	3.0	301	8.2	15.3	--	9.9	--	--
04...	1635	25.0	302	7.9	10.1	--	8.8	--	--
SEP									
26...	1645	.50	329	8.7	23.9	--	8.0	11	2.18
26...	1647	1.0	329	8.7	23.9	--	8.2	11	2.18
26...	1649	2.0	329	8.7	23.9	--	8.6	9.8	2.32
26...	1651	3.0	333	8.7	23.7	--	8.8	11	2.18
26...	1653	4.0	333	8.7	23.7	--	9.1	9.8	2.32
26...	1655	5.0	332	8.7	23.6	--	9.5	5.3	2.94
26...	1657	6.0	332	8.7	23.5	--	9.6	3.1	3.47
26...	1659	7.0	331	8.7	23.4	--	10.0	3.1	3.47
26...	1701	8.0	334	8.7	23.2	--	9.8	8.5	2.46
26...	1703	9.0	333	8.7	23.2	--	9.7	9.8	2.32
26...	1704	10.0	336	7.8	22.2	--	5.7	9.8	2.32
26...	1705	11.0	337	7.8	20.9	--	3.4	9.8	2.32
26...	1706	12.0	332	7.6	19.6	--	2.0	3.4	3.38
26...	1707	13.0	332	7.5	18.7	--	2.0	2.6	3.67
26...	1708	14.0	327	7.4	17.2	--	1.2	1.7	4.09
26...	1709	15.0	329	7.4	15.8	--	.9	2.1	3.87

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

SACRAMENTO RIVER BASIN
11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT PUTAH CREEK ARM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
SFP									
26...	1710	16.0	326	7.4	15.0	--	.8	1.9	3.98
26...	1711	17.0	328	7.4	14.2	--	.7	1.2	4.43
26...	1712	18.0	325	7.3	13.7	--	.5	.53	5.24
26...	1713	19.0	324	7.3	12.9	--	.4	.02	8.38
26...	1714	20.0	326	7.3	12.6	--	.3	.00	10.75
26...	1715	21.0	323	7.3	12.3	--	.2	.00	12.06
26...	1716	22.0	322	7.3	12.0	--	.2	.00	12.59
26...	1717	23.0	318	7.3	11.8	--	.2	.00	13.30
26...	1718	24.0	323	7.3	11.7	--	.2	.00	15.85
26...	1719	25.0	--	--	--	--	--	.00	19.85
26...	1725	--	--	--	--	2.40	--	--	--
26...	1755	5.0	332	8.7	23.6	--	9.5	--	--
26...	1805	13.0	329	7.4	15.8	--	.9	--	--
26...	1810	23.0	318	7.3	11.8	--	.2	--	--

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (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										
05...	1510	5.0	321	8.7	22.1	9.8	160	19	28	9.8
05...	1520	13.0	323	8.1	20.0	4.9	170	20	28	9.8
05...	1529	22.0	302	7.5	14.0	.4	160	18	27	8.9
APR										
04...	1630	3.0	301	8.2	15.3	9.9	--	--	--	--
04...	1635	25.0	302	7.9	10.1	8.8	--	--	--	--
SEP										
26...	1755	5.0	332	8.7	23.6	9.5	--	--	--	--
26...	1805	13.0	329	7.4	15.8	.9	--	--	--	--
26...	1810	23.0	318	7.3	11.8	.2	--	--	--	--

DATE	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT									
05...	11	.3	1.5	150	23	6.5	.1	16	.00
05...	11	.3	1.5	150	22	6.4	.1	17	.01
05...	11	.3	1.4	140	20	5.9	.1	17	.14
APR									
04...	--	--	--	--	--	--	--	--	.05
04...	--	--	--	--	--	--	--	--	.13
SEP									
26...	--	--	--	--	--	--	--	--	.01
26...	--	--	--	--	--	--	--	--	.02
26...	--	--	--	--	--	--	--	--	.15

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT									
05...	.01	.00	.29	.29	.29	.02	.01	210	20
05...	.01	.00	.33	.33	.34	.02	.01	200	20
05...	.16	.06	.32	.38	.52	.07	.05	190	70
APR									
04...	--	.04	.17	.21	.26	.01	.02	--	--
04...	.16	.01	.13	.14	.27	.03	.02	--	--
SEP									
26...	.01	.07	.29	.36	.37	.01	.01	--	--
26...	.01	.01	.16	.17	.19	.01	.01	--	--
26...	.15	.01	.30	.31	.46	.04	.01	--	--

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

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT LAKE CENTER (Lat 38°33'32", long 122°12'24", Las Putas Grant, Napa County,
Hydrologic Unit 18020117)

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
OCT								
05...	0920	.50	328	8.8	22.4	10.2	24	1.43
05...	0921	1.0	328	8.8	22.4	10.2	24	1.43
05...	0922	2.0	328	8.8	22.4	10.1	23	1.48
05...	0923	3.0	328	8.8	22.4	10.1	23	1.48
05...	0924	4.0	328	8.8	22.3	10.0	23	1.48
05...	0925	5.0	330	8.8	22.0	10.0	24	1.43
05...	0926	6.0	329	8.8	21.9	9.8	27	1.31
05...	0928	7.0	331	8.7	21.7	9.4	28	1.26
05...	0930	8.0	330	8.6	21.6	8.6	28	1.26
05...	0931	9.0	329	8.5	20.9	7.2	32	1.15
05...	0932	10.0	331	8.4	20.7	6.8	19	1.66
05...	0933	11.0	330	8.4	20.6	6.6	21	1.54
05...	0934	12.0	329	8.4	20.5	6.3	23	1.48
05...	0936	13.0	332	8.2	19.9	4.9	14	1.98
05...	0938	14.0	330	8.0	19.6	3.8	12	2.11
05...	0940	15.0	316	7.8	17.9	1.2	9.8	2.32
05...	0941	16.0	313	7.6	16.9	.6	9.2	2.39
05...	0942	17.0	311	7.6	15.6	.8	5.8	2.85
05...	0943	18.0	306	7.6	15.3	.9	3.1	3.47
05...	0944	19.0	308	7.6	14.9	1.1	1.5	4.20
05...	0945	20.0	309	7.6	14.5	1.2	.92	4.68
05...	0946	21.0	307	7.5	14.1	1.4	.61	5.09
05...	0947	22.0	305	7.6	13.9	1.7	.61	5.09
05...	0948	23.0	--	--	--	--	.46	5.39
05...	0949	24.0	305	7.5	13.7	1.5	.14	6.54
05...	0950	25.0	--	--	--	--	.08	7.09
05...	0951	26.0	303	7.5	13.5	1.2	.06	7.46
05...	0952	27.0	--	--	--	--	.06	7.46
05...	0953	28.0	302	7.5	13.3	1.2	.07	7.33
05...	0954	29.0	--	--	--	--	.07	7.33
05...	0955	30.0	306	7.5	13.2	1.3	.04	7.78
05...	0956	31.0	--	--	--	--	.03	8.07
05...	0957	32.0	306	7.5	13.2	1.3	.02	8.48
05...	0958	33.0	--	--	--	--	.01	8.98
05...	0959	34.0	304	7.5	13.1	1.5	.00	10.64
05...	1000	35.0	--	--	--	--	.00	12.23
05...	1001	36.0	304	7.5	13.0	1.0	.00	12.49
05...	1002	37.0	--	--	--	--	.00	13.08
05...	1003	38.0	304	7.5	13.0	1.1	.00	14.16
APR								
04...	1050	.50	293	8.3	15.6	--	10.5	1.98
04...	1052	1.0	294	8.3	14.9	--	10.6	1.72
04...	1054	2.0	290	8.2	14.8	--	10.8	1.72
04...	1056	3.0	294	8.2	14.5	--	10.9	1.79
04...	1058	4.0	292	8.2	14.4	--	10.9	1.85
04...	1100	5.0	291	8.2	14.3	--	10.8	1.85
04...	1102	6.0	291	8.2	14.3	--	10.9	1.79
04...	1104	7.0	294	8.2	13.7	--	10.7	2.04
04...	1106	8.0	292	8.1	13.5	--	10.8	2.25
04...	1108	9.0	300	8.1	12.7	--	10.7	2.18
04...	1109	10.0	299	8.0	12.0	--	10.7	2.46
04...	1110	11.0	301	8.0	11.4	--	10.5	2.77
04...	1111	12.0	301	8.0	11.2	--	10.6	3.19
04...	1112	14.0	300	7.9	10.5	--	10.2	3.57
04...	1113	16.0	299	7.9	10.3	--	10.2	3.77
04...	1114	18.0	302	7.9	10.0	--	10.1	3.57
04...	1115	20.0	303	7.9	9.9	--	9.7	3.66

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

SACRAMENTO RIVER BASIN
11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued
AT LAKE CENTER--Continued

DATE	TIME	SAMPLING DEPTH (M) <u>1</u> /	SPECIFIC CONDUCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
APR									
04...	1116	22.0	303	7.9	9.8	--	9.8	2.3	3.77
04...	1117	24.0	305	7.8	9.7	--	9.9	1.7	4.09
04...	1118	26.0	305	7.8	9.7	--	9.6	1.7	4.09
04...	1119	28.0	305	7.8	9.7	--	9.7	1.7	4.09
04...	1120	30.0	303	7.8	9.6	--	9.5	1.7	4.09
04...	1121	32.0	305	7.8	9.6	--	9.5	1.5	4.20
04...	1122	34.0	305	7.8	9.6	--	9.4	1.5	4.20
04...	1123	36.0	303	7.8	9.6	--	9.4	1.3	4.32
04...	1124	38.0	303	7.8	9.6	--	9.4	1.3	4.32
04...	1125	40.0	303	7.8	9.6	--	9.3	1.3	4.32
04...	1126	42.0	302	7.8	9.6	--	9.3	1.3	4.32
04...	1127	44.0	302	7.8	9.6	--	9.3	1.3	4.32
04...	1128	46.0	--	--	--	--	--	.00	16.80
04...	1130	--	--	--	--	3.4	--	--	--
04...	1150	3.0	294	8.2	14.5	--	10.9	--	--
04...	1200	38.0	303	7.8	9.6	--	9.4	--	--
AUG									
23...	1100	--	361	8.6	24.5	--	8.7	--	--

DATE	TIME	SAMPLING DEPTH (M) <u>1</u> /	SPECIFIC CONDUCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
SEP								
26...	1115	.50	328	8.7	23.2	8.1	16	1.85
26...	1117	1.0	328	8.7	23.2	8.1	15	1.91
26...	1119	2.0	327	8.7	23.1	8.3	14	1.98
26...	1121	3.0	327	8.7	23.0	8.4	14	1.98
26...	1123	4.0	327	8.7	22.9	8.4	14	1.98
26...	1125	5.0	326	8.7	22.9	8.4	14	1.98
26...	1127	6.0	326	8.7	22.9	8.4	14	1.98
26...	1129	7.0	326	8.7	22.9	8.3	15	1.91
26...	1131	8.0	326	8.7	22.9	8.3	15	1.91
26...	1133	9.0	324	8.7	22.9	8.3	15	1.91
26...	1135	10.0	326	8.7	22.9	8.3	15	1.91
26...	1136	11.0	331	8.7	22.8	7.8	16	1.85
26...	1137	12.0	332	7.8	20.8	1.0	21	1.54
26...	1139	13.0	342	7.6	19.2	.5	21	1.54
26...	1140	14.0	335	7.5	17.4	.6	8.5	2.46
26...	1141	15.0	331	7.4	16.3	.9	12	2.11
26...	1142	16.0	332	7.4	15.2	1.3	15	1.91
26...	1143	17.0	328	7.4	14.3	1.9	8.5	2.46
26...	1144	18.0	326	7.4	13.7	2.0	7.3	2.62
26...	1145	19.0	325	7.4	13.2	2.3	5.3	2.94
26...	1146	20.0	325	7.4	12.5	2.5	4.5	3.11
26...	1147	21.0	321	7.4	12.3	2.9	3.7	3.28
26...	1148	22.0	321	7.5	12.1	3.1	3.1	3.47
26...	1149	23.0	319	7.5	11.9	3.2	1.7	4.09
26...	1150	24.0	323	7.5	11.6	3.4	2.1	3.87
26...	1151	25.0	320	7.5	11.4	3.5	1.2	4.43
26...	1152	26.0	319	7.5	11.4	3.4	.81	4.82
26...	1153	27.0	322	7.5	11.2	3.3	.22	6.13
26...	1154	28.0	321	7.5	11.2	3.0	.06	7.36
26...	1155	29.0	321	7.5	11.1	3.1	.04	7.72
26...	1156	30.0	319	7.5	11.1	3.1	.03	8.13
26...	1157	31.0	319	7.5	11.1	3.1	.03	8.16
26...	1158	32.0	319	7.5	11.0	3.3	.09	7.04
26...	1159	33.0	319	7.5	11.0	3.4	.02	8.41
26...	1200	34.0	318	7.5	11.0	3.4	.03	8.16
26...	1201	35.0	318	7.5	10.9	3.3	.03	8.16
26...	1202	36.0	319	7.5	10.9	3.2	.02	8.83
26...	1203	37.0	318	7.5	10.9	3.0	.00	9.96
26...	1204	38.0	318	7.5	10.9	2.9	.00	11.60

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

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT LAKE CENTER--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)	
SEP										
26...	1205	39.0	319	7.5	10.9	--	2.8	.00	11.46	
26...	1206	40.0	319	7.5	10.9	--	2.8	.00	12.23	
26...	1207	41.0	319	7.4	10.9	--	2.6	.00	13.64	
26...	1210	5.0	326	8.7	22.9	--	8.4	--	--	
26...	1215	15.0	331	7.4	16.3	--	.9	--	--	
26...	1220	--	--	--	--	2.90	--	--	--	
26...	1225	38.0	318	7.5	10.9	--	2.9	--	--	
DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (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										
05...	0925	5.0	330	8.8	22.0	10.0	160	19	28	9.8
05...	0940	15.0	316	7.8	17.9	1.2	160	18	27	9.3
05...	0955	30.0	306	7.5	13.2	1.3	150	18	26	8.9
APR										
04...	1150	3.0	294	8.2	14.5	10.9	--	--	--	--
04...	1200	38.0	303	7.8	9.6	9.4	--	--	--	--
AUG										
23...	1100	--	361	8.6	24.5	8.7	160	18	28	11
SEP										
26...	1210	5.0	326	8.7	22.9	8.4	--	--	--	--
26...	1215	15.0	331	7.4	16.3	.9	--	--	--	--
26...	1225	38.0	318	7.5	10.9	2.9	--	--	--	--
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 SiO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	
OCT										
05...	11	.3	1.5	150	23	6.5	.1	16	.00	
05...	11	.3	1.5	150	21	6.3	.1	16	.02	
05...	11	.3	1.4	140	20	5.9	.1	17	.29	
APR										
04...	--	--	--	--	--	--	--	--	.02	
04...	--	--	--	--	--	--	--	--	.11	
AUG										
23...	13	.4	1.5	150	28	6.5	.1	18	.05	
SEP										
26...	--	--	--	--	--	--	--	--	.01	
26...	--	--	--	--	--	--	--	--	.01	
26...	--	--	--	--	--	--	--	--	.23	
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	
OCT										
05...	--	.00	.30	.30	.30	.02	.02	220	10	
05...	.01	.01	.29	.30	.32	.01	.02	190	20	
05...	.32	.01	.29	.30	.59	--	.03	180	40	
APR										
04...	.06	.01	.18	.19	.21	.01	.01	--	--	
04...	.15	.01	.11	.12	.23	.02	.01	--	--	
AUG										
23...	.09	.01	.04	.05	.10	.01	--	--	--	
SEP										
26...	.01	.01	.28	.29	.30	.00	.01	--	--	
26...	.00	.01	.19	.20	.21	.00	.01	--	--	
26...	.21	.01	.22	.23	.46	.03	.03	--	--	

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

SACRAMENTO RIVER BASIN

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT SPANISH FLAT ARM (Lat 38°30'46", long 122°12'29", in SE¼NE¼ sec.29, T.8 N., R.3 W., Napa County, Hydrologic Unit 18020117)

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
OCT									
06...	0910	.50	329	8.7	21.0	--	8.9	17	1.78
06...	0912	1.0	329	8.7	21.1	--	8.9	17	1.78
06...	0913	2.0	329	8.7	21.1	--	8.9	17	1.78
06...	0915	3.0	329	8.7	21.1	--	8.9	16	1.85
06...	0916	4.0	329	8.7	21.1	--	9.0	16	1.85
06...	0917	5.0	329	8.7	21.1	--	8.8	16	1.85
06...	0918	6.0	329	8.5	21.0	--	8.4	16	1.85
06...	0919	7.0	331	8.4	20.7	--	6.4	16	1.85
06...	0920	8.0	330	8.3	20.6	--	5.8	14	1.98
06...	0921	9.0	333	8.0	20.2	--	4.9	18	1.72
06...	0922	10.0	332	8.0	20.1	--	5.0	19	1.66
06...	0923	11.0	330	8.1	20.0	--	4.3	9.2	2.39
06...	0925	12.0	327	8.0	19.8	--	4.0	4.9	3.02
06...	0927	13.0	328	7.9	19.5	--	3.4	1.7	4.09
06...	0928	14.0	321	7.8	18.4	--	2.0	.81	4.82
06...	0929	15.0	316	7.6	17.8	--	1.2	.61	5.09
06...	0931	16.0	319	7.6	17.2	--	.6	.09	6.97
06...	0933	17.0	311	7.6	15.7	--	.6	.02	8.32
06...	0935	18.0	311	7.5	15.2	--	.6	.01	9.21
06...	0940	19.0	311	7.5	14.7	--	.6	.00	12.40
06...	0945	20.0	310	7.5	14.2	--	.6	.00	16.07
06...	0950	21.0	307	7.5	14.0	--	.7	.00	17.08
06...	1000	--	--	--	--	3.5	--	--	--
APR									
05...	1445	.50	342	8.6	16.5	--	10.5	8.5	2.46
05...	1447	1.0	343	8.5	16.5	--	10.5	8.5	2.46
05...	1449	2.0	346	8.4	15.4	--	10.8	8.5	2.46
05...	1451	3.0	355	8.4	14.3	--	10.6	6.2	2.77
05...	1453	4.0	344	8.3	13.9	--	10.3	7.9	2.54
05...	1455	5.0	351	8.3	13.4	--	10.2	9.2	2.39
05...	1457	6.0	346	8.2	13.3	--	10.2	7.3	2.62
05...	1459	7.0	355	8.2	12.7	--	9.9	5.8	2.85
05...	1501	8.0	354	8.2	12.1	--	9.9	4.9	3.02
05...	1502	9.0	359	8.1	11.7	--	9.7	3.7	3.28
05...	1503	10.0	356	8.1	11.4	--	9.6	3.1	3.47
05...	1504	11.0	362	8.1	11.1	--	9.5	2.1	3.87
05...	1505	12.0	358	8.2	10.8	--	9.4	1.2	4.43
05...	1506	13.0	360	8.1	10.5	--	9.3	1.2	4.43
05...	1507	14.0	359	8.1	10.5	--	9.3	1.0	4.56
05...	1508	15.0	361	8.0	10.2	--	9.2	1.0	4.56
05...	1509	16.0	362	8.0	10.2	--	9.2	1.0	4.56
05...	1510	17.0	360	8.0	10.1	--	9.2	1.0	4.56
05...	1511	18.0	357	8.0	10.1	--	9.2	1.0	4.56
05...	1512	19.0	357	8.0	10.0	--	9.2	.61	5.09
05...	1513	20.0	357	8.0	9.9	--	9.2	.81	4.82
05...	1514	21.0	357	8.0	9.9	--	9.1	.71	4.95
05...	1515	22.0	355	8.0	9.8	--	9.0	.81	4.82
05...	1516	23.0	355	8.0	9.8	--	9.0	.71	4.95
05...	1517	24.0	355	8.0	9.8	--	9.0	.23	6.06
05...	1520	--	--	--	--	2.10	--	--	--
05...	1555	3.0	355	8.4	14.3	--	10.6	--	--
05...	1600	20.0	357	8.0	9.9	--	9.2	--	--
SEP									
27...	1440	.50	329	8.6	23.0	--	8.0	11	2.18
27...	1442	1.0	329	8.6	22.9	--	8.1	9.8	2.32
27...	1444	2.0	331	8.7	22.7	--	8.4	8.5	2.46
27...	1446	3.0	328	8.7	22.6	--	8.6	8.5	2.46
27...	1448	4.0	328	8.6	22.5	--	8.7	8.5	2.46
27...	1450	5.0	328	8.7	22.4	--	8.6	8.5	2.46
27...	1452	6.0	328	8.7	22.4	--	8.7	7.3	2.62
27...	1454	7.0	327	8.7	22.4	--	8.8	6.2	2.77
27...	1456	8.0	327	8.7	22.4	--	8.9	6.8	2.69
27...	1458	9.0	327	8.7	22.4	--	8.8	7.3	2.62
27...	1500	10.0	327	8.7	22.4	--	8.8	5.3	2.94
27...	1501	11.0	327	8.6	22.3	--	8.7	3.1	3.47
27...	1502	12.0	326	8.6	22.3	--	8.6	.81	4.82
27...	1503	13.0	333	8.3	21.5	--	6.1	.00	14.76
27...	1504	14.0	340	7.7	20.1	--	2.0	.01	8.83
27...	1505	15.0	340	7.6	18.5	--	.8	.04	7.86
27...	1506	16.0	327	7.4	15.4	--	.7	.05	7.59
27...	1507	17.0	330	7.4	14.4	--	.6	.00	11.46
27...	1508	18.0	325	7.3	13.9	--	.7	.00	14.45
27...	1509	19.0	324	7.3	12.9	--	.8	.00	17.69
27...	1510	20.0	--	--	--	--	--	.00	19.31
27...	1511	21.0	--	--	--	--	--	.00	19.85
27...	1530	6.0	328	8.7	22.4	--	8.7	--	--
27...	1540	14.0	340	7.7	20.1	--	2.0	--	--
27...	1550	18.0	325	7.3	13.9	--	.7	--	--

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

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT SPANISH FLAT ARM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (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										
06...	0915	3.0	329	8.7	21.1	8.9	160	19	28	9.8
06...	0925	12.0	327	8.0	19.8	4.0	160	19	28	9.6
06...	0935	18.0	311	7.5	15.2	.6	150	18	26	9.0
APR										
05...	1555	3.0	355	8.4	14.3	10.6	--	--	--	--
05...	1600	20.0	357	8.0	9.9	9.2	--	--	--	--
SEP										
27...	1530	6.0	328	8.7	22.4	8.7	--	--	--	--
27...	1540	14.0	340	7.7	20.1	2.0	--	--	--	--
27...	1550	18.0	325	7.3	13.9	.7	--	--	--	--

DATE	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT									
06...	11	.3	1.5	150	23	6.4	.1	16	.01
06...	11	.3	1.5	150	21	6.3	.1	16	.01
06...	11	.3	1.5	140	20	6.0	.1	17	.11
APR									
05...	--	--	--	--	--	--	--	--	.02
05...	--	--	--	--	--	--	--	--	.12
SEP									
27...	--	--	--	--	--	--	--	--	.01
27...	--	--	--	--	--	--	--	--	.01
27...	--	--	--	--	--	--	--	--	.06

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT									
06...	.00	.01	.29	.30	.31	.02	.01	210	10
06...	.02	.01	.35	.36	.37	.02	.01	200	10
06...	.15	.01	.40	.41	.52	.02	.03	190	20
APR									
05...	.04	.01	.12	.13	.15	.01	.00	--	--
05...	.15	.01	.13	.14	.26	.02	.02	--	--
SEP									
27...	.01	.04	.24	.28	.29	.01	.01	--	--
27...	.01	.01	.36	.37	.38	.00	.03	--	--
27...	.05	.01	.16	.17	.23	.02	.01	--	--

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

SACRAMENTO RIVER BASIN

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT WRAGG CANYON ARM (Lat 38°30'49", long 122°09'48", in SE¼NW¼ sec.26, T.8 N., R.3 W., Napa County, Hydrologic Unit 18020117)

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
OCT									
04...	1625	.50	330	8.7	23.2	--	9.2	.11	2.18
04...	1626	1.0	330	8.7	23.2	--	9.4	11	2.25
04...	1627	2.0	329	8.7	23.0	--	9.8	9.8	2.32
04...	1628	3.0	330	8.7	22.6	--	10.0	9.8	2.32
04...	1629	4.0	330	8.7	22.0	--	10.2	9.8	2.32
04...	1630	5.0	328	8.7	21.9	--	10.2	8.5	2.46
04...	1631	6.0	330	8.7	21.7	--	10.2	11	2.18
04...	1632	7.0	327	8.6	21.5	--	9.6	19	1.66
04...	1633	8.0	326	8.6	21.3	--	9.1	14	1.98
04...	1634	9.0	328	8.5	21.2	--	9.9	15	1.91
04...	1635	10.0	328	8.4	20.9	--	9.3	17	1.78
04...	1636	11.0	329	8.2	20.7	--	7.8	14	1.98
04...	1637	12.0	327	8.2	20.3	--	7.5	17	1.78
04...	1638	13.0	330	8.0	20.1	--	6.5	13	2.04
04...	1639	14.0	328	7.9	19.6	--	5.6	4.5	3.11
04...	1640	15.0	328	7.7	18.2	--	2.9	3.1	3.47
04...	1641	16.0	317	7.6	16.8	--	2.3	1.3	4.32
04...	1642	17.0	313	7.6	16.0	--	2.0	4.5	3.11
04...	1643	18.0	309	7.6	15.3	--	2.1	1.3	4.32
04...	1644	19.0	308	7.6	14.9	--	2.1	.81	4.82
04...	1645	20.0	309	7.6	14.4	--	2.1	.26	5.97
04...	1646	21.0	306	7.6	14.0	--	2.0	.02	8.48
04...	1647	22.0	304	7.6	13.8	--	1.9	.00	13.19
04...	1648	23.0	302	7.5	13.8	--	1.7	.00	14.03
04...	1649	24.0	303	7.5	13.6	--	1.9	.00	13.77
04...	1650	26.0	301	7.5	13.4	--	2.0	.00	12.88
04...	1651	28.0	300	7.5	13.3	--	2.1	.00	9.72
04...	1652	30.0	304	7.5	13.2	--	1.9	.00	12.49
04...	1700	--	--	--	--	2.60	--	--	--
APR									
05...	1035	.50	310	8.2	15.8	--	10.4	9.2	2.39
05...	1037	1.0	310	8.2	15.8	--	10.5	8.5	2.46
05...	1039	2.0	316	8.2	15.2	--	10.8	8.5	2.46
05...	1041	3.0	316	8.2	14.4	--	11.1	8.5	2.46
05...	1043	4.0	315	8.2	14.2	--	11.1	8.5	2.46
05...	1045	5.0	311	8.2	13.9	--	10.9	9.8	2.32
05...	1047	6.0	314	8.1	13.7	--	10.8	11	2.18
05...	1049	7.0	316	8.1	13.1	--	10.6	11	2.18
05...	1051	8.0	319	8.0	12.6	--	10.6	9.8	2.32
05...	1052	9.0	321	8.0	12.2	--	10.3	7.9	2.54
05...	1053	10.0	318	8.0	11.9	--	10.2	6.2	2.77
05...	1054	11.0	320	8.0	11.5	--	10.0	4.9	3.02
05...	1055	12.0	323	7.9	11.2	--	9.8	3.7	3.28
05...	1056	13.0	325	7.9	10.7	--	9.6	3.4	3.38
05...	1057	14.0	322	7.9	10.4	--	9.7	2.3	3.77
05...	1058	15.0	326	7.8	10.0	--	9.5	2.3	3.77
05...	1059	16.0	321	7.9	10.0	--	9.5	2.6	3.67
05...	1100	17.0	320	7.9	9.8	--	9.5	3.4	3.38
05...	1101	18.0	319	7.9	9.8	--	9.5	4.1	3.19
05...	1102	19.0	319	7.9	9.8	--	9.5	4.5	3.11
05...	1103	20.0	317	7.9	9.8	--	9.5	4.1	3.19
05...	1104	21.0	317	7.9	9.8	--	9.5	4.1	3.19
05...	1105	22.0	320	7.9	9.7	--	9.5	4.1	3.19
05...	1106	23.0	320	7.9	9.7	--	9.5	4.1	3.19
05...	1107	24.0	320	7.9	9.7	--	9.5	4.1	3.19
05...	1108	25.0	320	7.8	9.7	--	9.4	4.1	3.19
05...	1109	26.0	320	7.8	9.6	--	9.4	4.1	3.19
05...	1110	27.0	320	7.8	9.6	--	9.4	4.1	3.19
05...	1111	28.0	320	7.8	9.6	--	9.4	4.1	3.19
05...	1112	29.0	320	7.8	9.6	--	9.4	3.7	3.28
05...	1113	30.0	320	7.8	9.6	--	9.4	3.4	3.38
05...	1114	31.0	319	7.8	9.5	--	9.2	3.1	3.47
05...	1115	32.0	319	7.8	9.5	--	9.2	2.8	3.57
05...	1116	33.0	319	7.8	9.5	--	9.2	2.6	3.67
05...	1117	34.0	319	7.8	9.5	--	9.2	2.6	3.67
05...	1120	--	--	--	--	2.30	--	--	--
05...	1135	3.0	316	8.2	14.4	--	11.1	--	--
05...	1145	30.0	320	7.8	9.6	--	9.4	--	--
SEP									
27...	1015	.50	335	8.7	22.7	--	8.0	9.8	2.32
27...	1017	1.0	335	8.6	22.7	--	8.1	9.8	2.32
27...	1019	2.0	335	8.6	22.6	--	8.3	9.8	2.32
27...	1021	3.0	335	8.6	22.6	--	8.5	9.2	2.39
27...	1023	4.0	335	8.6	22.6	--	8.6	9.2	2.39
27...	1025	5.0	335	8.6	22.6	--	8.8	9.8	2.32
27...	1027	6.0	335	8.6	22.6	--	8.9	9.8	2.32
27...	1029	7.0	335	8.6	22.6	--	8.9	9.8	2.32
27...	1031	8.0	335	8.6	22.6	--	8.9	9.8	2.32
27...	1033	9.0	335	8.6	22.5	--	8.8	7.9	2.54
27...	1035	10.0	336	8.5	22.3	--	8.1	4.5	3.11

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

SACRAMENTO RIVER BASIN

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11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT WRAGG CANYON ARM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANSPAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)	
SEP										
27...	1036	11.0	335	7.6	20.9	--	3.8	.23	6.06	
27...	1037	12.0	334	7.5	18.5	--	1.3	2.6	3.67	
27...	1038	13.0	336	7.4	17.2	--	1.4	2.1	3.87	
27...	1039	14.0	328	7.4	15.8	--	1.7	2.6	3.67	
27...	1040	15.0	329	7.4	15.4	--	1.7	2.1	3.87	
27...	1041	16.0	330	7.4	14.5	--	1.8	.81	4.82	
27...	1042	17.0	327	7.4	13.8	--	2.3	.92	4.68	
27...	1043	18.0	328	7.4	13.1	--	2.8	.61	5.09	
27...	1044	19.0	326	7.4	12.7	--	3.2	.81	4.82	
27...	1045	20.0	325	7.4	12.2	--	3.3	.61	5.09	
27...	1046	21.0	323	7.4	12.1	--	3.4	.13	6.64	
27...	1047	22.0	322	7.4	12.0	--	3.4	.03	8.04	
27...	1048	23.0	319	7.4	11.8	--	3.4	.01	9.50	
27...	1049	24.0	318	7.4	11.7	--	3.4	.01	9.68	
27...	1050	25.0	320	7.4	11.6	--	3.4	.00	10.64	
27...	1051	26.0	320	7.4	11.5	--	3.3	.00	11.53	
27...	1052	27.0	320	7.4	11.3	--	3.5	.00	10.58	
27...	1053	28.0	317	7.4	11.3	--	3.6	.00	10.10	
27...	1054	29.0	317	7.4	11.2	--	3.5	.00	10.69	
27...	1055	30.0	321	7.4	11.2	--	3.5	.00	11.68	
27...	1056	31.0	321	7.4	11.2	--	3.5	.00	13.90	
27...	1057	32.0	321	7.4	11.1	--	3.4	.00	16.30	
27...	1058	33.0	--	--	--	--	--	.00	19.85	
27...	1100	--	--	--	--	2.30	--	--	--	
27...	1130	5.0	335	8.6	22.6	--	8.8	--	--	
27...	1135	15.0	329	7.4	15.4	--	1.7	--	--	
27...	1145	29.0	317	7.4	11.2	--	3.5	--	--	
DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (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										
04...	1630	5.0	328	8.7	21.9	10.2	160	18	28	9.9
04...	1641	16.0	317	7.6	16.8	2.3	160	18	27	9.2
04...	1650	26.0	301	7.5	13.4	2.0	150	19	26	9.0
APR										
05...	1135	3.0	316	8.2	14.4	11.1	--	--	--	--
05...	1145	30.0	320	7.8	9.6	9.4	--	--	--	--
SEP										
27...	1130	5.0	335	8.6	22.6	8.8	--	--	--	--
27...	1135	15.0	329	7.4	15.4	1.7	--	--	--	--
27...	1145	29.0	317	7.4	11.2	3.5	--	--	--	--
DATE	TIME	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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
04...	12		.3	1.5	150	22	6.3	.1	16	.01
04...	11		.3	1.5	140	20	6.0	.1	16	.09
04...	11		.3	1.5	140	20	5.8	.1	17	.26
APR										
05...	--	--	--	--	--	--	--	--	--	.01
05...	--	--	--	--	--	--	--	--	--	.10
SEP										
27...	--	--	--	--	--	--	--	--	--	.01
27...	--	--	--	--	--	--	--	--	--	.01
27...	--	--	--	--	--	--	--	--	--	.18
DATE	TIME	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (UG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT										
04...		.01	.00	.36	.36	.37	.02	.01	200	10
04...		.05	.00	.35	.35	.44	.01	.01	180	10
04...		.29	.01	.31	.32	.58	.03	.03	190	10
APR										
05...		.04	.01	.25	.26	.27	.01	.01	--	--
05...		.14	.01	.13	.14	.24	.01	.02	--	--
SEP										
27...		.01	.02	.24	.26	.27	.03	.01	--	--
27...		.01	.01	.28	.29	.30	.01	.01	--	--
27...		.18	.01	.21	.22	.40	.00	.01	--	--

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

SACRAMENTO RIVER BASIN

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT DAM (Lat 38°30'48", long 122°06'16", Napa County, Hydrologic Unit 18020117)

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMPLING DEPTH (M) 1/	SPECIFIC CONDUCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/ METER)
OCT								
04...	1245	.50	329	8.7	23.4	9.5	17	1.78
04...	1248	1.0	330	8.7	22.5	9.6	14	1.98
04...	1251	2.0	328	8.7	22.3	9.6	13	2.04
04...	1253	3.0	328	8.7	22.1	9.6	13	1.98
04...	1255	4.0	328	8.7	22.0	--	15	1.91
04...	1258	5.0	328	8.7	22.0	9.4	15	1.91
04...	1300	6.0	326	8.7	21.9	--	16	1.85
04...	1302	7.0	326	8.6	21.9	9.2	18	1.72
04...	1304	8.0	326	8.6	21.9	--	24	1.43
04...	1306	9.0	328	8.4	21.1	5.8	32	1.15
04...	1308	10.0	326	8.2	20.9	--	33	1.10
04...	1310	11.0	324	8.2	20.5	4.8	37	.99
04...	1311	12.0	323	8.1	20.4	--	33	1.10
04...	1312	13.0	326	8.0	20.1	3.6	30	1.20
04...	1314	14.0	319	7.8	19.4	--	25	1.37
04...	1315	15.0	318	7.7	17.5	.9	21	1.54
04...	1318	16.0	307	7.6	16.0	2.0	21	1.54
04...	1321	17.0	306	7.6	15.0	2.7	18	1.72
04...	1324	18.0	307	7.6	14.6	3.0	15	1.91
04...	1327	19.0	306	7.6	14.2	3.6	11	2.18
04...	1330	20.0	304	7.6	14.0	3.9	9.2	2.39
04...	1333	21.0	301	7.6	13.8	3.9	9.2	2.39
04...	1336	22.0	302	7.6	13.7	4.0	8.5	2.46
04...	1339	24.0	300	7.6	13.5	4.2	6.8	2.69
04...	1342	26.0	299	7.7	13.3	4.4	6.8	2.69
04...	1345	28.0	300	7.7	13.2	4.4	6.2	2.77
04...	1348	30.0	299	7.7	13.2	4.5	5.3	2.94
04...	1351	32.0	299	7.7	13.1	4.5	6.2	2.77
04...	1354	34.0	298	7.7	13.0	3.9	5.3	2.94
04...	1357	36.0	298	7.7	13.0	3.6	3.8	3.28
04...	1400	38.0	298	7.6	13.0	3.5	2.1	3.87
04...	1402	40.0	298	7.6	12.9	3.5	1.7	4.09
04...	1404	42.0	--	--	--	--	.92	4.68
04...	1406	44.0	--	--	--	--	.61	5.09
04...	1408	46.0	--	--	--	--	1.3	4.32
04...	1410	48.0	--	--	--	--	1.2	4.44
04...	1412	50.0	--	--	--	--	.53	5.24
04...	1414	52.0	--	--	--	--	.39	5.54
04...	1416	54.0	--	--	--	--	.28	5.88
APR								
03...	1600	.50	366	8.3	17.2	--	10.2	2.25
03...	1602	1.0	362	8.3	16.8	--	10.5	2.32
03...	1604	2.0	366	8.3	14.9	--	11.5	2.39
03...	1606	3.0	367	8.3	14.6	--	12.1	2.62
03...	1608	4.0	364	8.3	14.5	--	12.6	2.69
03...	1610	5.0	363	8.2	14.2	--	13.2	2.54
03...	1612	6.0	363	8.2	14.0	--	13.4	2.32
03...	1614	7.0	365	8.2	13.7	--	13.5	2.04
03...	1616	8.0	362	8.2	13.3	--	13.5	2.04
03...	1618	9.0	365	8.2	12.9	--	13.2	1.91
03...	1619	10.0	368	8.2	12.6	--	13.0	1.79
03...	1620	12.0	367	8.2	12.2	--	12.3	1.85
03...	1621	14.0	364	8.1	11.9	--	12.0	1.85
03...	1622	16.0	371	8.0	11.1	--	11.5	1.91
03...	1623	18.0	374	8.0	10.7	--	10.7	1.98
03...	1624	20.0	370	7.9	10.3	--	10.6	2.11
03...	1625	22.0	374	7.9	10.1	--	10.6	2.18

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

SACRAMENTO RIVER BASIN

471

11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMPLING DEPTH (M) 1/	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	LIGHT TRANSMISSION 1 METER PATH-LENGTH (%)	LIGHT ATTENUATION COEFFICIENT (ALPHA/METER)
APR									
03...	1626	24.0	369	7.9	9.8	--	10.4	11	2.25
03...	1627	26.0	375	7.9	9.7	--	10.2	9.8	2.32
03...	1628	28.0	372	7.9	9.6	--	10.0	7.9	2.54
03...	1629	30.0	369	7.9	9.5	--	9.9	7.3	2.62
03...	1630	32.0	370	7.9	9.4	--	9.5	6.2	2.77
03...	1631	34.0	369	7.9	9.3	--	9.4	5.8	2.85
03...	1632	36.0	369	7.9	9.3	--	9.4	4.9	3.02
03...	1633	38.0	368	7.9	9.3	--	9.5	4.5	3.11
03...	1634	40.0	373	7.9	9.2	--	9.5	4.5	3.11
03...	1635	42.0	--	--	--	--	--	4.5	3.11
03...	1636	44.0	373	7.9	9.2	--	9.5	4.1	3.19
03...	1637	46.0	--	--	--	--	4.4	3.4	3.38
03...	1638	48.0	371	7.9	9.2	--	9.4	3.7	3.28
03...	1639	50.0	--	--	--	--	--	3.4	3.38
03...	1640	52.0	371	7.9	9.1	--	9.3	3.1	3.47
03...	1641	54.0	373	7.9	9.1	--	9.2	3.1	3.47
03...	1642	56.0	371	7.8	9.1	--	9.2	3.1	3.47
03...	1643	58.0	371	7.8	9.1	--	9.1	2.1	3.87
03...	1644	60.0	371	7.8	9.1	--	9.0	1.7	4.09
03...	1645	62.0	371	7.8	9.1	--	8.9	.92	4.68
03...	1646	64.0	371	7.8	9.1	--	8.9	1.0	4.56
03...	1647	66.0	--	--	--	--	--	.00	15.65
03...	1650	--	--	--	--	2.40	--	--	--
03...	1740	3.0	367	8.3	14.6	--	12.1	--	--
03...	1750	40.0	373	7.9	9.2	--	9.5	--	--
AUG									
23...	1235	--	346	--	24.5	--	9.1	--	--
SEP									
25...	1500	.50	335	8.6	23.2	--	8.0	11	2.25
25...	1502	1.0	336	8.6	23.2	--	8.1	11	2.25
25...	1504	2.0	336	8.6	23.2	--	8.2	11	2.25
25...	1506	3.0	336	8.6	23.2	--	8.3	11	2.25
25...	1508	4.0	336	8.6	23.2	--	8.5	11	2.25
25...	1510	5.0	336	8.6	23.2	--	8.7	11	2.25
25...	1512	6.0	336	8.6	23.2	--	8.8	11	2.18
25...	1514	7.0	336	8.6	23.2	--	8.6	11	2.18
25...	1516	8.0	336	8.6	23.2	--	8.4	11	2.18
25...	1518	9.0	336	8.6	23.2	--	8.4	11	2.18
25...	1520	10.0	336	8.6	23.2	--	8.4	13	2.04
25...	1522	11.0	339	8.5	22.5	--	4.3	17	1.79
25...	1523	12.0	333	7.7	21.5	--	1.6	19	1.66
25...	1524	13.0	328	7.6	18.0	--	1.0	19	1.66
25...	1525	14.0	327	7.4	16.2	--	1.5	20	1.60
25...	1526	15.0	331	7.4	15.0	--	1.9	20	1.60
25...	1527	16.0	329	7.5	14.2	--	2.4	18	1.72
25...	1528	17.0	330	7.5	13.2	--	3.1	15	1.91
25...	1529	18.0	322	7.5	12.8	--	3.8	14	1.98
25...	1530	19.0	323	7.5	12.2	--	4.0	12	2.11
25...	1531	20.0	321	7.6	11.9	--	4.5	12	2.11
25...	1532	21.0	321	7.6	11.7	--	4.7	11	2.18
25...	1533	22.0	320	7.6	11.6	--	4.8	11	2.25
25...	1534	23.0	319	7.6	11.4	--	5.0	11	2.18
25...	1535	24.0	316	7.6	11.4	--	5.1	11	2.18
25...	1536	25.0	319	7.6	11.2	--	5.2	11	2.18
25...	1537	26.0	319	7.6	11.2	--	5.3	11	2.25
25...	1538	27.0	318	7.6	11.1	--	5.4	12	2.11
25...	1539	28.0	318	7.6	11.0	--	5.5	12	2.11
25...	1540	29.0	316	7.6	11.0	--	5.5	12	2.11
25...	1541	30.0	316	7.6	10.9	--	5.6	13	2.04
25...	1542	32.0	315	7.6	10.8	--	5.7	11	2.18
25...	1543	34.0	315	7.6	10.8	--	5.6	13	2.04
25...	1544	36.0	318	7.6	10.7	--	5.1	9.2	2.39
25...	1545	38.0	320	7.6	10.7	--	5.0	8.5	2.46
25...	1546	40.0	320	7.6	10.6	--	4.8	7.3	2.62
25...	1547	41.0	318	7.6	10.6	--	4.8	3.4	3.38
25...	1548	42.0	318	7.6	10.6	--	4.8	2.1	3.87
25...	1549	43.0	318	7.6	10.6	--	4.6	2.6	3.67
25...	1550	44.0	318	7.6	10.6	--	4.6	2.3	3.77
25...	1551	45.0	318	7.6	10.6	--	4.6	2.1	3.87
25...	1552	46.0	318	7.6	10.6	--	4.6	1.0	4.56
25...	1553	47.0	318	7.6	10.6	--	4.5	1.0	4.56
25...	1554	48.0	318	7.6	10.6	--	4.5	.31	5.78
25...	1555	49.0	318	7.6	10.6	--	4.5	.24	6.04
25...	1556	50.0	318	7.6	10.6	--	4.3	.22	6.11

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

SACRAMENTO RIVER BASIN
11453900 LAKE BERRYESSA NEAR WINTERS, CA--Continued

AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)	
SEP										
25...	1557	51.0	318	7.6	10.6	--	4.2	.22	6.11	
25...	1558	52.0	318	7.6	10.6	--	4.2	.20	6.20	
25...	1559	53.0	318	7.6	10.5	--	4.2	.21	6.19	
25...	1600	54.0	318	7.5	10.5	--	4.1	.18	6.30	
25...	1601	55.0	318	7.5	10.5	--	4.0	.18	6.34	
25...	1602	56.0	320	7.5	10.5	--	3.9	.14	6.54	
25...	1603	57.0	320	7.5	10.5	--	3.6	.11	6.77	
25...	1604	58.0	320	7.5	10.5	--	3.5	.07	7.23	
25...	1605	59.0	321	7.5	10.5	--	3.4	.06	7.36	
25...	1606	60.0	321	7.5	10.5	--	3.2	.05	7.51	
25...	1607	61.0	322	7.5	10.5	--	2.9	.04	7.92	
25...	1608	62.0	--	--	--	--	--	.01	8.94	
25...	1610	--	--	--	--	2.30	--	--	--	
25...	1715	5.0	336	8.6	23.2	--	8.7	--	--	
25...	1720	13.0	328	7.6	18.0	--	1.0	--	--	
25...	1725	56.0	320	7.5	10.5	--	3.9	--	--	
DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (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										
04...	1300	6.0	326	8.7	21.9	--	160	19	27	9.8
04...	1315	15.0	318	7.7	17.5	.9	150	18	26	9.5
04...	1400	38.0	298	7.6	13.0	3.5	150	18	26	9.0
APR										
03...	1740	3.0	367	8.3	14.6	12.1	--	--	--	--
03...	1750	40.0	373	7.9	9.2	9.5	--	--	--	--
AUG										
23...	1235	--	346	--	24.5	9.1	160	18	29	11
SEP										
25...	1715	5.0	336	8.6	23.2	8.7	--	--	--	--
25...	1720	13.0	328	7.6	18.0	1.0	--	--	--	--
25...	1725	56.0	320	7.5	10.5	3.9	--	--	--	--
DATE	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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	
OCT										
04...	12	.3	1.5	150	22	6.3	.1	16	.00	
04...	12	.3	1.5	140	21	6.0	.1	16	.01	
04...	11	.3	1.5	140	20	5.8	.1	16	.32	
APR										
03...	--	--	--	--	--	--	--	--	.00	
03...	--	--	--	--	--	--	--	--	.08	
AUG										
23...	13	.4	1.4	150	28	6.6	.1	18	.00	
SEP										
25...	--	--	--	--	--	--	--	--	.01	
25...	--	--	--	--	--	--	--	--	.01	
25...	--	--	--	--	--	--	--	--	.04	
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	
OCT										
04...	.01	.01	.31	.32	.32	.01	.01	220	20	
04...	.02	.00	.24	.24	.25	.01	.02	190	10	
04...	.34	.01	.27	.28	.60	.04	.04	180	10	
APR										
03...	.01	.01	.17	.18	.18	.00	.02	--	--	
03...	--	.01	.10	.11	.19	.00	.02	--	--	
AUG										
23...	.03	.01	.18	.19	.19	.07	--	--	--	
SEP										
25...	.01	.01	.29	.30	.31	.00	.01	--	--	
25...	.01	.00	.20	.20	.21	.00	.01	--	--	
25...	.04	.01	.26	.27	.31	.00	.03	--	--	

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

11454000 PUTAH CREEK NEAR WINTERS, CA

LOCATION.--Lat 38°30'55", long 122°04'51", in NE¼NE¼ sec.28, T.8 N., R.2 W., Yolo County, Hydrologic Unit 18020109, on left bank 1 mi (2 km) downstream from Cold Canyon, 1.3 mi (2.1 km) downstream from Monticello Dam, and 6 mi (10 km) west of Winters.

DRAINAGE AREA.--574 mi² (1,487 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1930 to current year.

REVISED RECORDS.--WSP 901: 1937-38(M). WSP 1285: 1932(M), 1935-36(M), 1940(M), 1942-43(M), 1951, 1952(M). WSP 1565: 1957. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 160.75 ft (48,997 m) National Geodetic Vertical Datum of 1929 (river-profile survey). June 28, 1930, to Feb. 29, 1940, at datum about 1 ft (0.3 m) higher.

REMARKS.--Records good. Flow regulated by Lake Berryessa (station 11453900) beginning January 1957.

AVERAGE DISCHARGE (adjusted for change in contents and evaporation from Lake Berryessa).--49 years, 511 ft³/s (14.47 m³/s), 370,200 acre-ft/yr (456 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,000 ft³/s (2,290 m³/s) Feb. 27, 1940, gage height, 30.5 ft (9.30 m) present datum, from rating curve extended above 30,000 ft³/s (850 m³/s); no flow Sept. 6-15, 1950, July 26 to Sept. 1, Sept. 6-9, 1955. Maximum discharge since construction of Monticello Dam in 1957, 16,300 ft³/s (462 m³/s) Jan. 24, 1970, gage height, 18.85 ft (5.745 m); minimum daily, 6.1 ft³/s (0.17 m³/s) Dec. 19, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1905, that of Feb. 27, 1940, on basis of records for station at Winters.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 790 ft³/s (22.4 m³/s) July 16, gage height, 8.46 ft (2.579 m); minimum daily, 19 ft³/s (0.538 m³/s) Feb. 15.

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	240	126	65	72	46	54	86	451	666	640	690	540
2	270	126	65	67	46	50	78	478	672	641	760	518
3	277	126	73	50	50	49	78	528	655	642	766	514
4	304	90	78	38	53	42	89	515	618	624	728	514
5	291	71	60	59	52	36	96	463	624	600	643	504
6	292	79	46	82	48	57	96	438	668	582	594	490
7	288	77	46	85	45	71	96	435	687	577	600	503
8	246	75	56	76	50	65	95	414	679	599	645	506
9	235	81	71	60	53	52	86	379	664	630	685	453
10	255	90	76	55	53	53	105	371	644	671	665	451
11	263	94	76	60	53	59	136	440	658	715	647	496
12	249	95	76	25	53	59	162	501	687	718	616	529
13	268	82	76	67	64	54	189	532	734	700	594	536
14	290	73	63	86	68	49	200	569	722	703	583	560
15	269	73	72	76	19	50	227	608	719	734	617	549
16	245	73	91	38	25	50	270	646	701	772	643	512
17	227	73	82	65	22	50	288	658	661	735	628	513
18	218	73	81	74	41	49	326	639	647	683	607	504
19	218	73	81	72	45	60	393	629	653	681	581	474
20	218	73	81	68	57	61	425	629	626	687	570	466
21	190	73	74	64	49	55	455	635	610	673	559	438
22	172	73	58	64	48	55	454	623	619	642	573	414
23	172	67	50	64	39	55	453	614	649	641	585	409
24	163	62	59	71	28	55	462	639	662	677	562	395
25	158	62	66	77	22	55	468	632	665	715	549	387
26	164	63	51	68	37	61	420	620	654	708	556	375
27	144	71	35	50	50	72	305	619	654	689	560	346
28	126	70	97	54	50	33	361	594	638	665	585	319
29	125	66	99	59	---	26	425	580	639	662	595	329
30	126	66	76	57	---	49	444	574	665	669	592	340
31	126	---	76	46	---	82	---	633	---	677	579	---
TOTAL	6829	2396	2156	1949	1266	1668	7768	17086	19840	20752	19157	13884
MEAN	220	79.9	69.5	62.9	45.2	53.8	259	551	661	669	618	463
MAX	304	126	99	86	68	82	468	658	734	772	766	560
MIN	125	62	35	25	19	26	78	371	610	577	549	319
AC-FT	13550	4750	4280	3870	2510	3310	15410	33890	39350	41160	38000	27540
CAL YR 1978 TOTAL	112616											
WTR YR 1979 TOTAL	114751											
MEAN 309												
MEAN 314												
MAX 755												
MAX 772												
MIN 15												
MIN 19												
AC-FT 223400												
AC-FT 227600												
MEAN ‡ 820												
MEAN ‡ 293												
AC-FT ‡ 593800												
AC-FT ‡ 211800												

‡ Adjusted for change in contents and evaporation from Lake Berryessa.

SACRAMENTO RIVER BASIN

11454000 PUTAH CREEK NEAR WINTERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

CHEMICAL ANALYSES: Water years 1952-66, 1973 to current year.

WATER TEMPERATURES: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1965 to current year.

INSTRUMENTATION.--Temperature recorder since Nov. 19, 1965.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 22.0°C May 21, 1967; minimum recorded, 6.5°C on several days in 1967, 1968, and 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 14.5°C on several days during October; minimum recorded, 8.0°C Jan. 29 to Feb. 1, Feb. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY AS (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 12...	1045	76	341	8.0	11.5	15	10.5	--	--	160	17
MAR 07...	1550	71	370	7.9	13.0	7.0	11.6	4	1.1	170	21
JUL 11...	1400	718	325	8.3	12.0	--	11.9	3	.9	160	18

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	ALKA- LITY (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, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
DEC 12...	--	10	--	--	150	--	6.8	178	.24
MAR 07...	28	13	--	.4	150	--	8.0	211	.29
JUL 11...	28	10	12	.3	150	22	6.0	183	.25

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 12...	.05	.00	--	.02	--	.20	--	.02	.01	--
MAR 07...	--	--	.08	--	.00	--	.20	.02	.01	2.5
JUL 11...	.14	--	.14	--	.00	--	.20	.02	.01	2.8

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)	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)
DEC 12...	1045	0	100	--	0	0	10	0	0	20	.1
MAR 07...	1550	0	100	--	0	0	0	0	0	20	.0
JUL 11...	1400	90	100	200	0	0	0	10	0	10	.0

11454000 PUTAH CREEK NEAR WINTERS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	13.0	13.5	12.5	13.5	12.5	10.0	9.5	9.5	8.0	10.5	8.5
2	14.0	13.0	14.0	12.5	13.0	12.0	10.0	9.5	9.5	8.5	10.0	8.5
3	14.0	13.0	14.0	12.5	13.0	12.0	10.0	9.5	9.5	8.0	10.0	9.5
4	14.0	13.0	14.0	12.5	13.0	12.0	10.5	10.0	10.0	8.5	11.5	9.5
5	14.5	13.0	14.0	12.5	13.0	12.0	11.0	10.5	10.5	8.5	12.0	10.0
6	14.0	13.0	13.5	12.5	12.0	11.0	11.0	10.0	10.5	9.0	12.5	10.5
7	14.0	13.0	14.0	12.5	11.5	11.0	10.5	10.0	10.5	9.0	12.5	10.0
8	14.0	13.0	14.0	12.5	12.0	10.5	10.5	10.5	10.0	9.0	12.0	10.0
9	14.0	13.0	14.0	12.5	12.5	11.5	11.0	10.5	10.5	9.0	12.5	9.5
10	14.0	13.0	13.0	12.0	12.5	11.5	11.0	10.5	10.5	9.0	12.0	10.5
11	14.0	13.0	12.5	12.0	12.5	11.5	11.5	10.5	10.5	9.5	12.0	9.5
12	14.5	13.0	12.5	12.0	12.5	12.0	11.5	10.5	10.0	9.5	12.5	9.5
13	14.0	13.0	13.0	12.5	12.5	11.5	10.5	9.5	10.0	9.5	11.0	10.0
14	14.0	13.0	13.0	12.0	12.0	11.0	10.0	10.0	10.0	9.0	10.5	10.0
15	14.5	13.0	12.5	12.0	12.0	11.0	9.5	8.5	9.5	9.0	10.5	10.0
16	14.0	13.0	13.0	12.5	11.5	11.0	9.5	8.5	10.5	9.5	9.5	9.0
17	14.5	13.0	13.5	12.0	12.0	11.5	10.0	8.5	10.0	9.0	11.0	9.5
18	14.0	13.0	13.5	12.5	12.0	11.5	10.5	9.5	9.5	9.0	10.5	9.5
19	14.0	13.0	13.0	12.5	11.5	11.0	10.0	9.0	10.5	9.0	12.0	9.5
20	14.0	13.0	13.5	13.0	11.5	10.5	10.0	9.0	10.0	8.5	12.5	9.0
21	14.0	13.0	13.5	13.0	11.0	10.5	10.5	9.5	9.5	8.5	11.5	9.5
22	14.5	13.0	13.0	12.5	11.0	10.5	10.0	9.0	9.5	8.5	10.5	9.5
23	14.0	12.5	13.5	12.5	10.5	10.5	10.0	9.0	10.0	8.5	12.0	9.5
24	14.0	12.5	13.0	12.5	11.0	10.0	10.0	9.5	10.0	9.5	12.5	9.0
25	14.0	13.0	13.0	12.0	11.0	10.5	9.5	8.5	10.0	10.0	12.0	9.5
26	14.0	13.0	13.0	12.0	10.5	10.0	10.0	8.5	11.5	10.0	10.5	9.5
27	14.0	13.0	13.0	12.0	10.0	10.0	9.5	8.5	10.5	9.0	11.5	9.5
28	14.5	13.0	13.0	12.0	11.0	10.0	9.5	8.5	10.5	9.0	12.0	10.5
29	14.0	12.5	13.5	12.5	11.0	10.0	9.5	8.0	---	---	12.0	10.5
30	14.0	12.5	13.5	13.0	10.5	9.5	9.0	8.0	---	---	12.0	10.5
31	13.0	12.5	---	---	10.0	9.5	9.0	8.0	---	---	12.0	9.0
MONTH	14.5	12.5	14.0	12.0	13.5	9.5	11.5	8.0	11.5	8.0	12.5	8.5
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	9.0	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.0	11.0
2	12.0	9.0	11.0	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.0
3	12.5	9.5	11.0	9.5	11.5	10.0	11.5	10.5	12.0	11.0	12.5	11.5
4	12.5	9.5	10.5	9.5	11.5	10.0	11.5	10.5	12.0	11.0	12.0	11.0
5	12.0	9.5	10.5	9.5	11.5	10.5	11.5	10.5	12.0	11.0	12.5	11.0
6	11.0	9.5	10.5	9.5	11.0	10.5	11.5	10.5	12.0	11.0	12.5	11.5
7	12.5	9.5	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5
8	12.0	9.5	11.0	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.0
9	12.0	9.5	11.0	9.5	11.0	10.0	11.0	10.5	12.0	11.0	12.5	11.0
10	11.5	9.0	11.5	9.5	11.5	10.0	11.5	10.5	12.0	11.0	12.5	11.0
11	12.0	9.5	11.0	9.5	11.5	10.0	11.5	10.5	12.0	11.0	12.5	11.0
12	12.0	9.5	11.0	10.0	11.5	10.0	11.5	10.5	12.0	11.0	12.0	11.0
13	11.5	9.5	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5
14	12.0	9.5	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.0	11.0
15	11.5	9.5	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5
16	10.5	9.5	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5
17	10.5	9.0	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5
18	10.5	9.0	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.0	11.0
19	10.5	9.0	11.0	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.0
20	10.5	9.0	11.0	10.0	11.5	10.0	11.5	10.5	12.0	11.0	12.0	11.0
21	10.5	9.0	11.0	10.0	11.5	10.0	11.0	10.5	12.0	11.0	12.5	11.0
22	10.0	9.5	11.0	10.0	11.5	10.0	12.0	10.5	12.0	11.0	12.5	11.0
23	10.5	9.5	11.0	10.0	11.5	10.0	12.0	11.0	12.0	11.0	12.5	11.0
24	10.5	9.5	11.0	10.0	11.5	10.5	11.5	11.0	12.0	11.0	12.5	11.5
25	10.5	9.5	11.0	10.0	11.5	10.0	11.5	11.0	12.0	11.0	11.5	11.0
26	10.0	9.5	11.0	10.0	11.5	10.0	11.5	11.0	12.0	11.0	12.0	11.0
27	11.0	9.5	11.0	10.0	11.5	10.5	12.0	10.5	12.0	11.0	12.5	11.5
28	11.0	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.0	11.0	12.5	11.5
29	10.5	9.5	11.0	10.0	11.5	10.0	12.0	11.0	11.5	11.0	12.5	11.0
30	11.0	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.0	11.0	12.5	11.5
31	---	---	11.0	10.0	---	---	12.0	11.0	12.0	11.0	---	---
MONTH	12.5	9.0	11.5	9.5	11.5	10.0	12.0	10.5	12.0	11.0	12.5	11.0

11455420 SACRAMENTO RIVER AT RIO VISTA, CA

LOCATION.--Lat 38°09'35", long 121°41'05", in Los Ulpinos Land Grant, Solano County, Hydrologic Unit 18020109,
at center of lift span on drawbridge at Rio Vista.

PERIOD OF RECORD.--

SEDIMENT RECORDS: Water year 1979.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	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. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV											
29...	1205	10.5	27	44	56	68	79	88	92	97	100
JAN											
18...	1040	7.0	239	38	49	61	74	86	95	99	100
FEB											
21...	1220	10.0	103	51	58	70	81	91	96	100	--
MAR											
21...	1025	10.0	24	--	--	--	--	--	97	99	100
APR											
25...	1010	16.5	37	--	--	--	--	--	98	100	--
MAY											
25...	1325	18.0	38	--	--	--	--	--	99	100	--
AUG											
20...	1050	20.0	21	--	--	--	--	--	97	100	--
SEP											
13...	1020	22.5	18	--	--	--	--	--	95	97	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE (DEG C)	NUMBER OF SAM- PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
NOV												
29...	1205	10.5	5	8	58	97	99	100	--	--	--	--
29...	1206	--	--	1	6	50	90	100	--	--	--	--
29...	1207	--	--	0	4	48	88	98	99	100	--	--
29...	1208	--	--	1	5	26	67	94	98	99	100	--
29...	1209	--	--	2	19	62	90	100	--	--	--	--
JAN												
18...	1025	7.0	5	8	59	96	99	99	100	--	--	--
18...	1026	--	--	10	24	82	97	99	100	--	--	--
18...	1027	--	--	5	16	73	98	100	--	--	--	--
18...	1028	--	--	0	2	15	74	95	98	99	100	--
18...	1029	--	--	2	5	32	80	92	96	98	100	--
FEB												
21...	1140	10.0	5	25	73	88	96	100	--	--	--	--
21...	1141	--	--	10	20	63	92	100	--	--	--	--
21...	1142	--	--	3	6	51	91	100	--	--	--	--
21...	1143	--	--	1	2	15	74	97	99	100	--	--
21...	1144	--	--	18	46	74	91	99	100	--	--	--
MAR												
21...	1013	11.0	5	1	23	79	97	100	--	--	--	--
21...	1014	--	--	5	18	76	98	100	--	--	--	--
21...	1015	--	--	1	9	69	96	100	--	--	--	--
21...	1016	--	--	1	3	15	63	87	94	98	99	100
21...	1017	--	--	1	7	26	76	88	92	95	99	100
APR												
25...	1000	16.5	5	12	70	94	98	100	--	--	--	--
25...	1001	--	--	0	10	65	94	100	--	--	--	--
25...	1002	--	--	0	4	54	98	100	--	--	--	--
25...	1003	--	--	0	2	23	78	98	100	--	--	--
25...	1004	--	--	0	6	32	95	99	100	--	--	--
MAY												
25...	1310	18.0	4	22	83	95	99	100	--	--	--	--
25...	1311	--	--	3	18	72	95	99	99	100	--	--
25...	1312	--	--	1	3	66	94	99	99	100	--	--
25...	1313	--	--	0	1	12	72	96	99	99	100	--
JUL												
25...	0935	22.0	5	14	67	99	100	--	--	--	--	--
25...	0936	--	--	8	27	87	99	99	100	--	--	--
25...	0937	--	--	6	17	69	97	99	100	--	--	--
25...	0938	--	--	4	10	37	81	98	99	100	--	--
25...	0939	--	--	4	12	30	85	96	98	99	100	--

11455420 SACRAMENTO RIVER AT RIO VISTA, CA

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE, WATER (DEG C)	NUMBER OF SAM- PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
Aug											
20...	1035	20.0	5	6	18	51	92	99	99	99	100
20...	1036	--	--	2	6	23	67	82	90	96	100
20...	1037	--	--	2	8	71	99	99	100	--	--
20...	1038	--	--	2	6	49	91	99	100	--	--
20...	1039	--	--	11	67	93	98	100	--	--	--
SEP											
13...	1025	22.5	5	10	79	98	99	99	100	--	--
13...	1026	--	--	6	27	92	98	99	100	--	--
13...	1027	--	--	2	7	60	95	99	99	100	--
13...	1028	--	--	1	2	37	88	99	99	100	--
13...	1029	--	--	3	7	21	72	93	97	99	100

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	TUR- BID- ITY (NTU)
NOV				
29...	1200	10.5	20	10
JAN				
18...	1025	7.0	221	95
18...	1040	7.0	239	100
FEB				
02...	1030	6.0	30	18
03...	0940	5.5	27	18
04...	0745	5.5	28	16
04...	1145	6.0	26	18
06...	0735	6.0	32	17
07...	0815	8.0	30	14
09...	0720	9.0	30	16
10...	1755	11.0	32	16
11...	0705	9.5	30	15
12...	0700	10.0	26	14
13...	0640	10.0	29	17
14...	0810	10.5	31	16
15...	1555	11.0	26	15
16...	1145	10.5	64	36
17...	0815	10.0	86	60
18...	1605	10.0	115	85
19...	1530	10.5	125	65
20...	1030	10.0	92	60
21...	1040	10.0	77	60
21...	1140	--	57	55
21...	1155	--	86	50
21...	1210	--	84	50
21...	1305	--	112	55
22...	1500	--	136	70
23...	1530	--	182	75
24...	1545	--	304	90
25...	0920	--	158	80
26...	0735	--	142	50
27...	0650	--	119	40
28...	0705	--	94	37
MAR				
01...	0715	--	63	55
02...	0720	--	42	40
03...	0730	--	44	50
04...	0735	--	44	40
05...	0715	--	50	45
06...	0700	--	39	33
07...	0655	--	34	23
08...	0650	--	35	23
09...	0650	--	37	23
10...	0645	--	43	23
11...	0625	--	43	25
12...	0745	--	43	25
13...	0805	--	48	22
14...	0635	--	49	22
14...	0810	--	51	26
15...	0650	--	32	18
15...	0810	--	46	24
16...	0645	--	30	18
16...	0705	--	28	18
17...	0745	--	16	23
18...	0655	--	22	15
19...	0700	--	23	15
20...	0645	--	19	12
21...	0710	--	26	15
21...	1010	--	21	13
21...	1015	--	22	15

SACRAMENTO RIVER BASIN

11455420 SACRAMENTO RIVER AT RIO VISTA, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	TUR- BID- ITY (NTU)
MAR				
22...	0700	--	25	14
23...	0700	--	29	17
24...	0725	--	35	18
25...	0650	--	39	19
26...	0700	--	41	18
27...	0730	--	50	19
28...	0725	--	50	20
29...	0720	--	56	24
30...	0725	--	47	20
31...	0730	--	44	22
APR				
01...	0730	--	157	120
02...	0730	--	131	110
03...	0730	--	56	50
04...	0745	--	40	29
05...	0715	--	36	28
06...	0805	--	38	22
07...	0805	--	39	21
08...	0805	--	49	27
09...	0805	--	51	27
10...	0810	--	38	10
11...	0815	--	55	23
12...	0805	--	56	22
13...	0705	--	54	22
17...	0630	--	35	18
18...	0635	--	32	18
19...	0630	--	31	17
20...	0655	--	35	18
21...	0645	--	29	17
22...	0705	--	43	19
23...	0745	--	47	22
24...	0650	--	81	21
25...	0730	--	26	21
25...	0955	--	42	18
25...	1000	--	34	17
26...	0740	--	57	20
27...	0740	--	49	19
28...	0735	--	44	15
29...	0735	--	28	16
30...	0730	--	26	15
MAY				
01...	0730	--	32	16
02...	0705	--	30	15
03...	0700	--	30	15
04...	0805	--	26	45
05...	0805	--	26	11
08...	0805	--	38	17
09...	0715	--	38	17
10...	0700	--	38	17
11...	0645	--	42	17
12...	0720	--	43	17
13...	0710	--	48	20
14...	0725	--	28	17
15...	0710	--	29	17
16...	0700	--	28	15
17...	0700	--	27	15
18...	0700	--	28	15
19...	0705	--	23	12
20...	0720	--	29	14
21...	0715	--	38	17
22...	0650	--	37	16
23...	0740	--	46	18
24...	0730	--	44	17
25...	0720	--	41	17
25...	1240	--	33	20
25...	1300	--	33	17
26...	0725	--	52	18
27...	0730	--	39	17
28...	0730	--	27	15
29...	0730	--	24	15
31...	0705	--	22	14
JUN				
01...	0650	--	25	15
02...	0655	--	21	12
03...	0650	--	22	12
04...	0640	--	30	14
05...	0700	--	34	15
06...	0640	--	36	16
07...	0635	--	44	18
08...	0635	--	56	20
09...	0640	--	56	20
10...	0650	--	40	20
11...	0640	--	40	25
12...	0640	--	38	25
13...	0650	--	38	20
14...	0705	--	40	25

11455420 SACRAMENTO RIVER AT RIO VISTA, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	TUR- BID- ITY (NTU)
JUN				
15...	0700	--	46	25
16...	0700	--	46	25
17...	0705	--	41	20
18...	0750	--	57	20
19...	0645	--	62	20
20...	0730	--	70	25
21...	0735	--	62	25
22...	0730	--	50	25
23...	0735	--	56	25
24...	0730	--	60	30
25...	0730	--	60	25
26...	0735	--	68	30
27...	0700	--	48	25
28...	0655	--	44	25
29...	0805	--	44	25
JUL				
26...	0715	--	27	15
27...	0805	--	30	14
28...	0805	--	22	12
29...	0805	--	25	12
30...	0805	--	29	13
31...	0805	--	23	11
AUG				
01...	0810	--	19	9.0
02...	0805	--	20	8.0
03...	0710	--	29	11
04...	0730	--	30	11
05...	0710	--	28	11
06...	0710	--	35	13
07...	0710	--	39	14
08...	0710	--	38	15
09...	0730	--	39	14
10...	0725	--	27	14
11...	0730	--	32	15
12...	0730	--	28	14
13...	0715	--	32	13
14...	0725	--	24	11
15...	0735	--	24	9.0
16...	0735	--	27	11
17...	0730	--	28	11
18...	0730	--	28	10
19...	0730	20.0	32	11
20...	0735	20.0	33	11
20...	1000	20.0	89	11
20...	1030	20.0	26	11
20...	1035	20.0	23	9.0
20...	1100	20.0	32	13
20...	1110	20.0	33	10
20...	1115	--	46	12
20...	1130	--	30	12
20...	1135	--	22	9.0
20...	1150	--	22	9.0
20...	1200	--	26	10
20...	1215	--	27	10
20...	1230	--	17	9.0
20...	1235	--	32	9.0
20...	1300	--	19	8.0
21...	0730	--	34	12
22...	0730	--	34	11
23...	0730	--	37	13
24...	0720	--	25	12
25...	0720	--	27	12
26...	0730	--	25	12
27...	0805	--	24	12
28...	0805	--	24	11
29...	0805	--	26	11
30...	0810	--	20	10
31...	0730	--	23	9.0
SEP				
01...	0730	20.5	33	12
02...	0735	21.0	32	12
03...	0725	20.0	27	12
04...	0725	20.0	30	12
05...	0730	20.0	36	14
06...	0705	21.0	38	15
07...	0710	22.0	34	15
08...	0740	20.0	29	14
09...	0725	20.0	30	15
10...	0725	20.0	29	14
11...	0705	21.0	38	15
12...	0735	22.0	25	12
13...	0735	22.0	17	10
13...	1005	22.5	26	10

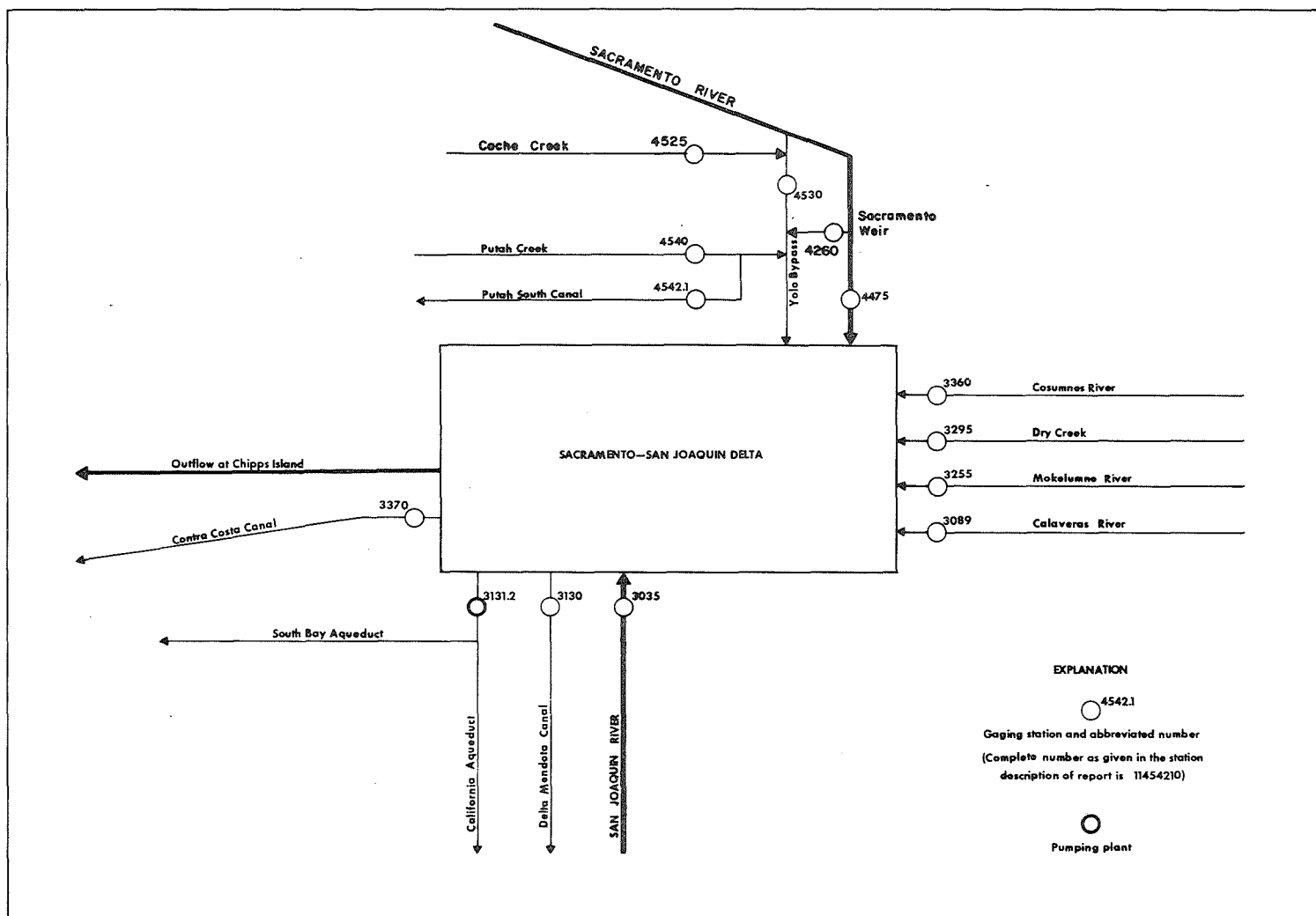


FIGURE 12.--Schematic diagram showing principal inflows and diversions, Sacramento-San Joaquin Delta.

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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 1978 TO SEPTEMBER 1979

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													
204.6	208.1	172.9	321.8	396.4	532.0	208.6	155.2	134.1	82.00	89.22	109.5	2615	
11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM													
4.38	2.33	1.61	17.88	31.47	17.38	5.33	13.58	13.96	14.42	14.97	11.78	149.1	
11325500 MOKELUMNE RIVER AT WOODBRIDGE													
44.02	23.68	16.44	18.84	34.48	42.86	18.85	23.97	44.34	24.38	24.67	25.18	341.7	
11329500 DRY CREEK NEAR GALT													
0.05	0.01	0	12.85	42.30	33.28	6.41	2.14	0.15	0.04	0	0.02	97.24	
11336000 COSUMNES RIVER AT MCCONNELL													
0	1.00	2.23	37.08	68.83	84.22	56.32	57.19	8.15	0.52	0.24	0	315.8	
11426000 SACRAMENTO WEIR SPILL													
0	0	0	0	0.39	0	0	0	0	0	0	0	0.39	
11447500 SACRAMENTO RIVER AT SACRAMENTO													
767.8	740.4	811.8	1426	1802	1793	984.6	1106	726.4	1009	946.0	866.8	13000	
114530000 YOLO BYPASS NEAR WOODLAND ^{1/}													
--	--	--	23.72	87.35	19.10	--	--	--	--	--	--	130.2	
11454000 PUTAH CREEK NEAR WINTERS													
13.55	4.75	4.28	3.87	2.51	3.31	15.41	33.89	39.35	41.16	38.00	27.54	227.6	
Total	1034	980.3	1009	1862	2466	2525	1296	1392	966.4	1172	1113	1041	16877

Diversions, in thousands of acre-feet													
Month													Water year
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
11313000 DELTA-MENDOTA CANAL													
181.5	190.8	195.5	166.0	68.14	122.2	189.4	183.9	177.7	279.8	280.3	260.7	2296	
11313120 CALIFORNIA AQUEDUCT (DELTA PUMPING PLANT)													
126.9	135.2	168.8	80.75	90.34	143.4	156.9	184.5	178.6	282.4	346.5	277.7	2172	
11337000 CONTRA COSTA CANAL													
6.18	5.28	5.39	4.03	2.98	4.14	5.26	9.67	11.77	13.70	12.85	10.24	91.49	
11454210 PUTAH SOUTH CANAL													
10.62	2.22	1.73	1.81	1.32	1.63	12.46	31.08	36.28	37.55	34.39	25.56	196.7	
Total	325.2	333.5	371.4	252.6	162.8	271.4	364.0	409.2	404.4	613.4	674.0	574.2	4756

1. Flow not computed below 1000 ft³/s.

NOTE.--Minor inflow streams and diversions are not included.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected.

Records collected at partial-record 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 discharge at crest-stage stations.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Sacramento River basin						
11341900	Dog Creek at Delta, CA	Lat 40°56'17", long 122°25'13", in SE¼NE¼ sec.34, T.36 N., R.5 W., Shasta County, Hydrologic Unit 18020005, 0.1 mi (0.2 km) upstream from mouth, 0.5 mi (0.8 km) southwest of Delta, and 25 mi (40 km) north of Redding.	17.3	1975-79	11-30-78 8-28-79	b 6.00 b 3.58
*11365500	Squaw Creek above Shasta Lake, CA	Lat 40°51'25", long 122°05'08", in SE¼ sec.29, T.35 N., R.2 W., Shasta County, Hydrologic Unit 18020003, 1.3 mi (2.1 km) upstream from Salt Creek, 2 mi (3 km) upstream from Shasta Lake, and 10 mi (16 km) west of town of Montgomery Creek.	64.0	1945-66†, 1967-75a, 1976-79	8-13-79	b 16.5
11376030	Manzanita Creek above Reflection Lake, at Manzanita Lake, CA	Lat 40°32'08", long 121°33'28", in NE¼SE¼ sec.18, T.31 N., R.4 E., Shasta County, Hydrologic Unit 18020118, Lassen Volcanic National Park, 0.3 mi (0.4 km) east of town of Manzanita Lake, and 6.6 mi (10.6 km) east of Viola.	7.06	1979	9-11-79	b 8.66
11376035	Manzanita Creek at outlet of Manzanita Lake, at Manzanita Lake, CA	Lat 40°32'09", long 121°34'12", in NE¼SW¼ sec.18, T.31 N., R.4 E., Shasta County, Hydrologic Unit 18020118, Lassen Volcanic National Park, 0.5 mi (0.7 km) west of town of Manzanita Lake, and 5.9 mi (9.5 km) east of Viola.	11.5	1979	8-9-79 9-11-79	b 4.55 b 4.36
11426500	North Fork American River near Colfax, CA	Lat 39°02'25", long 120°54'06", in SE¼SW¼ sec.19, T.14 N., R.10 E., Placer County, Hydrologic Unit 18020128, 400 ft (122 m) downstream from Shirttail Canyon and 5.0 mi (8.0 km) southeast of Colfax.	308	1911-41†, 1977-79	3-6-79 5-31-79 7-30-79	1,000 1,000 630
*11433430	Buckeye Canyon Creek tributary near Green- wood, CA	Lat 38°55'18", long 120°57'46", in SE¼NW¼ sec.3, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, 3.3 mi (5.3 km) northwest of Greenwood, and 3.5 mi (5.6 km) northeast of Cool.	.08	1972-79	12-1-78 1-16-79 3-14-79 6-26-79	b .02 .12 b .02 0
*11433440	Wildcat Canyon Creek near Cool, CA	Lat 38°55'11", long 120°58'11", in NE¼SE¼ sec.4, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, 3.3 mi (5.3 km) northeast of Cool and 3.5 mi (5.6 km) northwest of Greenwood.	.30	1972-79	12-1-78 1-16-79 3-14-79 6-26-79	b .08 .31 b .06 0

See footnotes at end of table.

Discharge measurements made at low-flow partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Sacramento River basin--Continued						
*11433450	Browns Bar Canyon Creek near Cool, CA	Lat 38°54'52", long 120°58'42", in SE¼SW¼ sec.4, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, 2.7 mi (4.3 km) northeast of Cool and 3.8 mi (6.1 km) northwest of Greenwood.	0.75	1972-79	12-1-78 1-16-79 3-14-79 6-27-79	0.76 2.33 b .40 0
*11433900	Paymaster Creek near Cool, CA	(Revised) Lat 38°53'43", long 120°59'50", in SW¼NE¼ sec.17, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, on left bank 400 ft (122 m) upstream from culvert on Paymaster Trail, 1.1 mi (1.8 km) northeast of Cool.	.19	1972-79	12-1-78 1-16-79 3-14-79 6-27-79	.98 .74 b .12 0

* Also a crest-stage partial-record station.

† Operated as a continuous-record gaging station.

a Published as a miscellaneous measurement.

b Base flow.

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 1979

					Annual maximum		
Station No.	Station name	Location	Drain- age area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
Eagle Lake basin							
10359270	Aspen Creek near West- wood, CA	Lat 40°42'47", long 121°04'36", in NE¼NE¼ sec.21, T.33 N., R.8 E., Lassen County, Hydrologic Unit 18080003, in Lassen National Forest, at culvert on Forest Service Road 34N28, 3.7 mi (6.0 km) northwest of Harvey Valley Ranger Station, and 27.5 mi (44.2 km) north of Westwood.	4.70	1970-73†, 1974-79	--	--	0
10359290	Pine Creek tributary near Susanville, CA	Lat 40°43'44", long 120°52'44", in NW¼NW¼ sec.17, T.33 N., R.10 E., Lassen County, Hydrologic Unit 18080002, in Lassen National Forest, at culvert on Forest Service Road 35N5, 28 mi (45 km) north of Susanville.	4.70 (low flow) 16.8 (extreme flood flow)	1971-73†, 1974-79	2-13-79	3.40	14
Sacramento River basin							
11352900	Beaver Creek near Hat Creek, CA	Lat 40°49'47", long 121°14'54", in NE¼NE¼ sec.12, T.34 N., R.6 E., Lassen County, Hydrologic Unit 18020003, in Lassen National Forest, at culvert on Forest Service Road 35N10, 13.6 mi (21.9 km) east of Hat Creek, and 15 mi (24 km) south of Pittville.	23.2	1970-73a, 1974-79	5-6-79	2.27	66
11355400	Bunchgrass Creek near Manzanita Lake, CA	Lat 40°39'10", long 121°37'36", in NE¼SW¼ sec.3, T.32 N., R.3 E., Shasta County, Hydrologic Unit 18020118, in Lassen National Forest, at culvert on Forest Service Road 32N46, 8.7 mi (14.0 km) northwest of town of Manzanita Lake.	.62	1970-73†, 1974-79	5-2-79	2.59	11

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS

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)
Sacramento River basin--Continued							
*11365500	Squaw Creek above Shasta Lake, CA	Lat 40°51'25", long 122°05'08", in SE¼ sec.29, T.35 N., R.2 W., Shasta County, Hydrologic Unit 18020003, 1.3 mi (2.1 km) upstream from Salt Creek, 2 mi (3 km) upstream from Shasta Lake, and 10 mi (16 km) west of town of Montgomery Creek.	64.0	1944-66a, 1969-79	3-27-79	10.19	1,010
11376100	South Fork Bailey Creek near Manzanita Lake, CA	Lat 40°28'45", long 121°35'46", unsurveyed, Shasta County, Hydrologic Unit 18020118, in Lassen National Forest, at culvert on Forest Service Road 31N12F, 4.4 mi (7.1 km) southwest of town of Manzanita Lake, and 5.2 mi (8.4 km) southeast of Viola.	3.67	1970-73†, 1974-79	3-1-79	7.28	57
11381810	Snake Creek near Paskenta, CA	Lat 39°59'38", long 122°47'25", in SE¼NW¼ sec.29, T.25 N., R.8 W., Tehama County, Hydrologic Unit 18020114, in Mendocino National Forest, at culvert on Forest Service Road 23N01, 14.5 mi (23.3 km) north- west of Paskenta.	2.45	1972-73†, 1974-79	3-27-79	76.68	53
11382950	North Fork Calf Creek near Butte Meadows, CA	Lat 40°09'44", long 121°31'58", in SW¼SW¼ sec.28, T.27 N., R.4 E., Tehama County, Hydrologic Unit 18020119, in Lassen National Forest, at culvert on Forest Service Road 27N12, 1.8 mi (2.9 km) upstream from Deer Creek, 5.6 mi (9.0 km) north of Butte Meadows, and 11.2 mi (18.0 km) south of town of Mill Creek.	1.26	1970-73†, 1974-79	5-20-79	--	0.6
11384400	South Fork Stony Creek near Stony- ford, CA	Lat 39°17'46", long 122°45'07", in NW¼SW¼ sec.27, T.17 N., R.8 W., Colusa County, Hydrologic Unit 18020115, in Mendocino National Forest, at culvert on Forest Service Road 18N1, 12.5 mi (20.1 km) south- west of Stonyford.	2.52	1970-73†, 1974-79	3-27-79	23.66	133
11386200	South Fork Elk Creek near Elk Creek, CA	Lat 39°34'12", long 122°40'37", in SW¼SW¼ sec.20, T.19 N., R.7 W., Glenn County, Hydrologic Unit 18020115, in Mendocino National Forest, at culvert on Forest Service Road 20N1, 7.8 mi (12.6 km) southwest of town of Elk Creek.	2.56	1970-73†, 1974-79	3-27-79	19.77	44
11389650	Scotts John Creek near Stirling City, CA	Lat 40°06'33", long 121°25'33", in SE¼NE¼ sec.17, T.26 N., R.5 E., Butte County, Hydrologic Unit 18020120, in Lassen National Forest, at culvert on Forest Service Road 26N27, 15 mi (24 km) northeast of Stirling City.	3.76	1970-73†, 1974-79	6-6-78 5-2-79	3.63 3.53	b 58 52
11397900	Benner Creek near Chester, CA	Lat 40°23'02", long 121°16'24", in SE¼SE¼ sec.11, T.29 N., R.6 E., Plumas County, Hydrologic Unit 18020121, in Lassen National Forest, at culvert on Forest Service Road 29N12, 5.6 mi (9.0 km) northwest of Chester.	7.67	1970-73†, 1974-79	5-20-79	3.53	39

See footnotes at end of table.

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)
Sacramento River basin--Continued							
*11433430	Buckeye Canyon Creek tributary near Greenwood, CA	Lat 38°55'18", long 120°57'46", in SE¼NW¼ sec.3, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, 3.3 mi (5.3 km) northwest of Greenwood and 3.5 mi (5.6 km) northeast of Cool.	0.08	1972-73c, 1974-79	1-11-79	0.63	2.9
*11433440	Wildcat Canyon Creek near Cool, CA	Lat 38°55'11", long 120°58'11", in NE¼SE¼ sec.4, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, 3.3 mi (5.3 km) northeast of Cool and 3.5 mi (5.6 km) northeast of Greenwood.	.30	1972-73c, 1974-79	1-11-79	.95	12
*11433450	Browns Bar Canyon Creek near Cool, CA	Lat 38°54'52", long 120°58'42", in SE¼SW¼ sec.4, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, 2.7 mi (4.3 km) northeast of Cool and 3.8 mi (6.1 km) northwest of Greenwood.	.75	1972-73c, 1974-79	1-11-79	1.73	35
*11433900	Paymaster Creek near Cool, CA	(Revised) Lat 38°53'43", long 120°59'50", in SW¼NE¼ sec.17, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, on left bank 400 ft (122 m) upstream from culvert on Paymaster Trail, and 1.1 mi (1.8 km) north- east of Cool.	.19	1972-73c, 1974-79	1-11-79	1.27	15

* Also a low-flow partial-record station.

‡ Data for water years prior to 1973 published in Floods from Small Drainage Areas, Compilation, October 1958 to September 1973.

a Operated as a continuous-record gaging station.

b Revised.

c Published as miscellaneous measurement.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SACRAMENTO RIVER BASIN
11453555 PUTAH CREEK ABOVE LAKE BERRYESSA, CA

LOCATION.--Lat 38°42'15", long 122°22'50", in NE¼NW¼ sec.23, T.10 N., R.5 W., Napa County, Hydrologic Unit 18020117, at inflow to Lake Berryessa.

DRAINAGE AREA.--236 mi² (611 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	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)
FEB 27...	1430	534	274	8.4	11.5	2.9	11.0	150	20	14	28
APR 06...	1445	174	378	8.8	17.0	1.5	11.4	--	--	--	--
MAY 29...	1400	42	454	8.6	23.5	.70	9.1	--	--	--	--

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 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)
FEB 27...	6.2	8	.2	.7	130	16	5.0	.1	24	174
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, ORGANIC TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
FEB 27...	.24	.33	.35	.03	.16	.19	.07	.05	150	40
APR 06...	--	.03	--	.01	.08	.09	.01	.00	--	--
MAY 29...	--	.01	.01	.02	.18	.20	.02	.01	--	--

11453565 ETICUERA CREEK NEAR KNOXVILLE, CA

LOCATION.--Lat 38°42'52", long 122°15'36", in sec.14, T.10 N., R.4 W., Napa County, Hydrologic Unit 18020117, 0.3 mi (0.5 km) upstream from Toll Canyon, 8.9 mi (14.3 km) southeast of Knoxville.

DRAINAGE AREA.--29.3 mi² (75.9 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to current year.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	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)
FEB 28...	0945	21	1040	8.5	9.0	1.4	11.2	470	160	63	76
APR 06...	0910	8.0	1210	8.5	14.5	1.4	10.1	--	--	--	--
MAY 30...	0845	.89	1290	8.2	17.0	3.0	7.9	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 to SEPTEMBER 1979

SACRAMENTO RIVER BASIN--Continued
11453565 ETICUERA CREEK NEAR KNOXVILLE, CA--Continued

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 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)
FEB 28...	63	22	1.3	2.4	310	250	35	.2	21	701
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 30...	--	--	--	--	--	--	--	--	--	--

DATE	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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
FEB 28...	.95	.55	--	.01	.16	.17	.04	.06	1500	20
APR 06...	--	.01	--	.01	.16	.17	.02	.00	--	--
MAY 30...	--	.01	.02	.01	.20	.21	.02	.00	--	--

NORTH FORK AMERICAN RIVER BELOW SERENA CREEK, CA

LOCATION.--Lat 39°15'15", long 120°22'53", T.16 N., R.14 E., Placer County, Hydrologic Unit 18020128.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	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)
AUG 02...	1200	224	7.5	16.0	8.7	49	81	2	27	3.2	5.9

DATE	SODIUM PERCENT	SODIUM+ AD- SORP- TION RATIO	POTAS- SIUM, 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 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
AUG 02...	13	.3	7.5	1.6	79	5.5	4.1	.1	20	111	115

DATE	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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOS, DIS- SOLVED (MG/L AS P)
AUG 02...	.15	.02	.00	.01	.09	.10	.12	.03	.002	.00

DATE	TIME	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 02...	1200	120	0	140	120	90	30	20	10	9	1.5

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SACRAMENTO RIVER BASIN--Continued
YOLO BYPASS AT LIBERTY ISLAND (EAST), CA

(NOT PREVIOUSLY PUBLISHED)

LOCATION.--Lat 38°15'07", long 121°40'17" (unsurveyed), T.5 N., R.3 E., Solano County, Hydrologic Unit 18020109,
6.9 mi (11.1 km) east of Dozier.

PERIOD OF RECORD.--

SEDIMENT RECORDS: Water years 1973-75, 1978.

TURBIDITY: Water years 1973-74, 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	TUR- BID- ITY (NTU)
JAN				
20...	1115	11.0	640	400
23...	1245	9.5	563	300
FEB				
13...	1125	9.0	896	500
13...	1230	--	--	150
15...	1005	10.0	288	180
17...	1230	10.5	212	150
MAR				
15...	1105	13.5	180	230
20...	1000	16.0	76	45

Siskiyou County

MacDoel area

SITE NUMBER 415339121574901 LOCAL NUMBER 047N001W27B01M

4.8 MI NORTHEAST OF MACDOEL. CABLE TOOL. UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 2 IN, DEPTH 40 FT, CASED TO 40 FT, PERFORATED 30-40 FT. ALTITUDE OF LSD 4233 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1951 TO CURRENT YEAR.

HIGHEST WATER LEVEL 4.8 FEET BELOW LAND SURFACE DATUM APR 17, 1975.

LOWEST WATER LEVEL 15.1 FEET BELOW LAND SURFACE DATUM NOV 26, 1951.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	8.5	APR 03, 1979	9.1

Grenada area

SITE NUMBER 413823122311401 LOCAL NUMBER 044N006W27B01M

.8 MI SOUTH OF GRENADA. HYDRAULIC ROTARY DOMESTIC WATER TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 6 IN, DEPTH 110 FT, CASED TO 110 FT, PERFORATED 50-110 FT. ALTITUDE OF LSD 2560 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1975 TO CURRENT YEAR.

HIGHEST WATER LEVEL 11.2 FEET BELOW LAND SURFACE DATUM NOV 04, 1975.

LOWEST WATER LEVEL 15.6 FEET BELOW LAND SURFACE DATUM NOV 01, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	15.0	APR 04, 1979	12.5

Edgewood area

SITE NUMBER 412818122261801 LOCAL NUMBER 042N005W20J01M

1.6 MI NORTHWEST OF EDGEWOOD. UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 8 IN, DEPTH 40 FT, CASED TO 40 FT. ALTITUDE OF LSD 2882 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1953 TO CURRENT YEAR.

HIGHEST WATER LEVEL 2.0 FEET BELOW LAND SURFACE DATUM OCT 03, 1972.

LOWEST WATER LEVEL 7.6 FEET BELOW LAND SURFACE DATUM OCT 19, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	6.4	APR 04, 1979	5.6

Modoc County

Fort Bidwell area

SITE NUMBER 415254120082201 LOCAL NUMBER 046N016E04Q01M

2 MI NORTH OF FORT BIDWELL. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 200 FT, CASED TO 200 FT. ALTITUDE OF LSD 4600 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 67.0 FEET BELOW LAND SURFACE DATUM APR 24, 1973.

LOWEST WATER LEVEL 84.9 FEET BELOW LAND SURFACE DATUM NOV 01, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	83.0	MAR 27, 1979	78.1

GROUND-WATER LEVELS

Modoc County--Continued

Davis Creek area

SITE NUMBER 414402120224501 LOCAL NUMBER 045N014E17P01M

6.4 MI WEST OF DAVIS CREEK. CABLE TOOL. UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 18 IN, DEPTH 222 FT, CASSED TO 222 FT. ALTITUDE OF LSD 4798 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1957 TO PRESENT.

HIGHEST WATER LEVEL 45.1 FEET BELOW LAND SURFACE DATUM MAR 15, 1972.

LOWEST WATER LEVEL 64.3 FEET BELOW LAND SURFACE DATUM OCT 10, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10, 1978	64.3	MAR 27, 1979	52.5

Lake City area

SITE NUMBER 413714120110601 LOCAL NUMBER 043N016E06R02M

2 MI SOUTHEAST OF LAKE CITY. CABLE TOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 12 IN, DEPTH 300 FT, CASSED TO 300 FT, PERFORATED 50-300 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 44.8 FEET BELOW LAND SURFACE DATUM MAR 16, 1977.

LOWEST WATER LEVEL 72.0 FEET BELOW LAND SURFACE DATUM SEP 17, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	66.6	MAR 27, 1979	50.0

Cedarville area

SITE NUMBER 413300120101401 LOCAL NUMBER 043N016E32K01M

1.6 MI NORTH OF CEDARVILLE. HYD. ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 290 FT, CASSED TO 290 FT, PERFORATED 140-160 FT. ALTITUDE OF LSD 4645 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1971 TO PRESENT.

HIGHEST WATER LEVEL 94.0 FEET BELOW LAND SURFACE DATUM MAR 16, 1977.

LOWEST WATER LEVEL 124.5 FEET BELOW LAND SURFACE DATUM NOV 01, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	116.0	MAR 27, 1979	112.5

Alturas area

SITE NUMBER 412516120434601 LOCAL NUMBER 041N011E05L03M

9.2 MI SOUTHWEST OF ALTURAS. CABLE TOOL DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 8 IN, DEPTH 47 FT, CASSED TO 47 FT. ALTITUDE OF LSD 4320 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1965 TO CURRENT YEAR.

HIGHEST WATER LEVEL 7.6 FEET BELOW LAND SURFACE DATUM MAR 28, 1979.

LOWEST WATER LEVEL 8.2 FEET BELOW LAND SURFACE DATUM OCT 09, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1978	8.2	MAR 28, 1979	7.6

Modoc County--Continued

Eagleville area

SITE NUMBER 411722120061501 LOCAL NUMBER 040N016E36G02M

2 MI SOUTH OF EAGLEVILLE. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAMETER 14 IN, DEPTH 400 FT, CASSED TO 400 FT, PERFORATED 63-400 FT. ALTITUDE OF LSD 4625 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 60.2 FEET BELOW LAND SURFACE DATUM MAR 27, 1973.

LOWEST WATER LEVEL 105.0 FEET BELOW LAND SURFACE DATUM NOV 01, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	92.0	MAR 27, 1979	76.0

Shasta County

McArthur area

SITE NUMBER 410342121281001 LOCAL NUMBER 037N004E11A01M

4 MI WEST OF MCARTHUR. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 6 IN, DEPTH 185, CASSED TO 185 FT, PERFORATIONS 74-94 FT. ALTITUDE OF LSD 3310 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1959 TO CURRENT YEAR.

HIGHEST WATER LEVEL 26.5 FEET BELOW LAND SURFACE DATUM MAY 09, 1978.

LOWEST WATER LEVEL 43.0 FEET BELOW LAND SURFACE DATUM OCT 12, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1978	43.0	MAR 29, 1979	27.0

Redding area

SITE NUMBER 403242122185001 LOCAL NUMBER 031N004W16H01M

4 MILES SOUTHEAST OF REDDING. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 5 IN, DEPTH 140 FT, CASSED TO 140 FT, PERFORATIONS 70-140 FT. ALTITUDE OF LSD 512 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1968 TO CURRENT YEAR.

HIGHEST WATER LEVEL 97.8 FEET BELOW LAND SURFACE DATUM APR 01, 1969.

LOWEST WATER LEVEL 135.1 FEET BELOW LAND SURFACE DATUM SEP 22, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 1978	126.9	DEC 20, 1978	113.8	FEB 23, 1979	110.6	APR 20, 1979	109.2
NOV 14	117.4	JAN 18, 1979	112.2	MAR 09	100.0	AUG 23	126.0

Olinda area

SITE NUMBER 402318122233001 LOCAL NUMBER 029N005W11A02M

4 MI SOUTH OF OLINDA. CABLETOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 360 FT, CASSED TO 360 FT, PERFORATED 110-150 FT. ALTITUDE 518 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 44.8 FEET BELOW LAND SURFACE DATUM MAR 05, 1959.

LOWEST WATER LEVEL 120.5 FEET BELOW LAND SURFACE DATUM AUG 04, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1978	65.5	DEC 20, 1978	67.5	FEB 23, 1979	57.2	APR 20, 1979	58.5
NOV 14	70.0	JAN 18, 1979	60.0	MAR 09	56.8		

GROUND-WATER LEVELS

Lassen County

Ravendale area

SITE NUMBER 405156120275201 LOCAL NUMBER 035N013E26J02M

1.8 MI NORTHWEST OF RAVENDALE. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM UNKNOWN. DEPTH UNKNOWN. ALTITUDE OF LSD 5296 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 49.4 FEET BELOW LAND SURFACE DATUM MAR 26, 1979.

LOWEST WATER LEVEL 49.7 FEET BELOW LAND SURFACE DATUM OCT 17, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
MAR 26, 1979	49.4

Susanville area

SITE NUMBER 402334120353401 LOCAL NUMBER 029N012E11B01M

1 MI SOUTHEAST OF SUSANVILLE. UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 10 IN. DEPTH 120 FT Cased to 120 FT, PERFORATED 105-120 FT. ALTITUDE OF LSD 4125 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 4.8 FEET BELOW LAND SURFACE DATUM FEB 16, 1973.

LOWEST WATER LEVEL 17.7 FEET BELOW LAND SURFACE DATUM JUN 28, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	13.5	MAR 26, 1979	7.4

Standish area

SITE NUMBER 402106120231201 LOCAL NUMBER 029N014E22Q01M

.7 MILES EAST OF STANDISH. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DEPTH 91 FT. ALTITUDE OF LSD 4023 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 3.5 FEET BELOW LAND SURFACE DATUM APR 12, 1958.

LOWEST WATER LEVEL 40.7 FEET BELOW LAND SURFACE DATUM OCT 17, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	30.2	MAR 26, 1979	20.5

Tehama County

Red Bluff area

SITE NUMBER 400757122122201 LOCAL NUMBER 026N003W04K01M

3.2 MI SOUTHEAST OF RED BLUFF. UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 12 IN. DEPTH 149 FT. Cased to 149 FT. ALT OF LSD 300 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1929 TO CURRENT YEAR.

HIGHEST WATER LEVEL 60.4 FEET BELOW LAND SURFACE DATUM MAR 19, 1958.

LOWEST WATER LEVEL 102.8 FEET BELOW LAND SURFACE DATUM OCT 18, 1963.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 1978	70.9	MAR 16, 1979	64.3

Tehama County--Continued

Tehama area

SITE NUMBER 400225122134901 LOCAL NUMBER 025N003W08E01M

4.5 MI WEST OF TEHAMA. CABLETOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 14 IN 0-144 FT. DIAM 12 IN 144-420 FT, DEPTH 420 FT, CASSED TO 420 FT, PERFORATED 55-134, 149-420. ALTITUDE OF LSD 420 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 40.5 FEET BELOW LAND SURFACE DATUM APR 18, 1978.

LOWEST WATER LEVEL 90.5 FEET BELOW LAND SURFACE DATUM JUN 19, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1978	73.	DEC 18, 1978	49.	FEB 21, 1979	44.5	APR 17, 1979	43.8
NOV 15	56.5	JAN 19, 1979	48.4	MAR 14	43.0	AUG 21	84.2

Corning area

SITE NUMBER 395556122100201 LOCAL NUMBER 024N003W14K01M

.4 MILES NORTH OF CORNING. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 7 IN, DEPTH 124, CASSED TO 124 FT, PERFORATED 118-124 FT. ALTITUDE OF LSD 297. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1955 TO CURRENT YEAR.

HIGHEST WATER LEVEL 51.3 FEET BELOW LAND SURFACE DATUM APR 12, 1975.

LOWEST WATER LEVEL 90.3 FEET BELOW LAND SURFACE DATUM OCT 08, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 1978	67.3	MAR 16, 1979	53.3

Glenn County

Willows area

SITE NUMBER 393111122155901 LOCAL NUMBER 019N004W12E01M

3.6 MILES WEST OF WILLOWS. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 6 IN, DEPTH 162 FT, CASSED TO 162 FT, PERFORATED 150-162 FT. ALTITUDE OF LSD 174. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1964 TO CURRENT YEAR.

HIGHEST WATER LEVEL 50.7 FEET BELOW LAND SURFACE DATUM JAN 21, 1964.

LOWEST WATER LEVEL 113. FEET BELOW LAND SURFACE DATUM AUG 11, 1975.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1978	63.6	DEC 19, 1978	61.	FEB 21, 1979	58.5	APR 18, 1979	56.7
NOV 15	62.	JAN 16, 1979	60.	MAR 14	57.2	AUG 21	58.1

Butte County

Durham area

SITE NUMBER 393646121471601 LOCAL NUMBER 020N002E06Q01M

2 MI SOUTH OF DURHAM. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 14 IN, DEPTH 383 FT, CASSED TO 383 FT, PERFORATED 10-44 FT. ALTITUDE OF LSD 135 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 5.7 FEET BELOW LAND SURFACE DATUM MAR 15, 1974.

LOWEST WATER LEVEL 31.4 FEET BELOW LAND SURFACE DATUM OCT 18, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	22.6	MAR 13, 1979	12.9

GROUND-WATER LEVELS

Butte County--Continued

Biggs area

SITE NUMBER 392451121451101 LOCAL NUMBER 018N002E16F01M

2 MILES WEST OF BIGGS. STOCK WATER - TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 14 IN, DEPTH 60 FT, CASED TO 60 FT, PERFORATED 20-60 FT. ALTITUDE OF LSD 80 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1947 TO CURRENT YEAR.

HIGHEST WATER LEVEL 2.6 FEET BELOW LAND SURFACE DATUM APR 24, 1980.

LOWEST WATER LEVEL 9.1 FEET BELOW LAND SURFACE DATUM OCT 30, 1953.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 25, 1978	7.3

Sierra County

Sierraville area

SITE NUMBER 393448120221001 LOCAL NUMBER 020N014E13Q02M

.4 MI NORTHWEST OF SIERRAVILLE. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 31 FT, CASED TO 31 FT. ALTITUDE OF LSD 4986 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 0.3 FEET ABOVE LAND SURFACE DATUM MAR 31, 1962.

LOWEST WATER LEVEL 6.3 FEET BELOW LAND SURFACE DATUM MAR 21, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 18, 1978	3.6

Lake County

Lakeport area

SITE NUMBER 390355122565601 LOCAL NUMBER 014N010W15H01M

NEAR LAKEPORT. DRILLED IRRIGATION WATER-TABLE WELL. DIAM 12 IN, DEPTH 108 FT, PERFORATED 96-108 FT. ALTITUDE OF LSD 1,445 FT. BEGINNING 1963 MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1963 TO CURRENT YEAR. DWR BASIN 5-014.

HIGHEST WATER LEVEL 4. FEET BELOW LAND SURFACE DATUM JAN 27, 1969.

LOWEST WATER LEVEL 57.1 FEET BELOW LAND SURFACE DATUM NOV 02, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
MAR 14, 1979	10.4

Finley area

SITE NUMBER 385952122523301 LOCAL NUMBER 013N009W05R05M

NEAR FINLEY. DRILLED IRRIGATION WATER-TABLE WELL. DIAM 8 IN, DEPTH 185 FT, PERFORATIONS 72-165 FT ALTITUDE OF LSD 1355 FT. BEGINNING 1977 MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1977 TO CURRENT YEAR. DWR BASIN 5-015.

HIGHEST WATER LEVEL 10.5 FEET BELOW LAND SURFACE DATUM MAR 17, 1978.

LOWEST WATER LEVEL 49.0 FEET BELOW LAND SURFACE DATUM NOV 03, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08, 1978	30.0	MAR 14, 1979	19.7

Colusa County

Arbuckle area

SITE NUMBER 390327122054201 LOCAL NUMBER 014N002W16N02M

4 MI NORTHWEST OF ARBUCKLE. CABLETOOL DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 8 IN, DEPTH 136 FT, CASED TO 136 FT, PERFORATED 124-136 FT. ALTITUDE OF LSD 120 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 30.4 FEET BELOW LAND SURFACE DATUM JAN 13, 1959.

LOWEST WATER LEVEL 74. FEET BELOW LAND SURFACE DATUM JUN 19, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	69.0	DEC 19, 1978	64.5	FEB 21, 1979	62.8	APR 18, 1979	63.3
NOV 16	69.0	JAN 16, 1979	64.0	MAR 12	61.9	AUG 22	71.2

Yolo County

Woodland area

SITE NUMBER 384129121455101 LOCAL NUMBER 010N002E29A01M

1.2 MI NORTHWEST OF WOODLAND. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 8 IN, DEPTH 120 FT. ALTITUDE OF LSD 55 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 32.2 FEET BELOW LAND SURFACE DATUM MAR 31, 1980.

LOWEST WATER LEVEL 45.9 FEET BELOW LAND SURFACE DATUM SEP 26, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1978	40.3	DEC 21, 1978	39.6	MAR 27, 1979	36.4	SEP 27, 1979	38.2
NOV 27	39.7						

SITE NUMBER 383949121450201 LOCAL NUMBER 010N002E33R01M

.8 MI SOUTHEAST OF WOODLAND. IRRIGATION WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 12 IN, DEPTH 216 FT. ALTITUDE OF LSD 52 FT. MEASUREMENTS FURNISHED BY COUNTY. RECORDS AVAILABLE 1951 TO CURRENT YEAR

HIGHEST WATER LEVEL 20.3 FEET BELOW LAND SURFACE DATUM APR 23, 1952.

LOWEST WATER LEVEL 67.1 FEET BELOW LAND SURFACE DATUM MAR 09, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 19, 1978	45.6

Davis area

SITE NUMBER 383248121505501 LOCAL NUMBER 008N001E15B01M

6.4 MILES WEST OF DAVIS. STOCK WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 10 IN, DEPTH 117 FT. ALTITUDE OF LSD 83 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1931 TO CURRENT YEAR.

HIGHEST WATER LEVEL 15.5 FEET BELOW LAND SURFACE DATUM MAY 16, 1941.

LOWEST WATER LEVEL 39.4 FEET BELOW LAND SURFACE DATUM NOV 14, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1978	27.9	JAN 25, 1979	29.7	MAY 30, 1979	27.5	SEP 27, 1979	27.4
30	28.4	FEB 26	29.6	JUN 25	26.7		
NOV 27	29.	MAR 27	29.2	JUL 27	26.1		
DEC 21	29.1	MAY 02	27.3	AUG 30	26.8		

GROUND-WATER LEVELS

Placer County

Pleasant Grove area

SITE NUMBER 385054121232301 LOCAL NUMBER 012N005E35E02M

5.6 MI NORTHEAST OF PLEASANT GROVE. IRRIGATION WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 12 IN, DEPTH 352 FT. ALTITUDE OF LSD 90 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1949 TO CURRENT YEAR.

HIGHEST WATER LEVEL 28.7 FEET BELOW LAND SURFACE DATUM APR 06, 1950.

LOWEST WATER LEVEL 99.6 FEET BELOW LAND SURFACE DATUM OCT 26, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1978	99.4	APR 03, 1979	84.5

Sacramento County

Florin area

SITE NUMBER 383143121200001 LOCAL NUMBER 008N006E21N02M

4 MI NORTHEAST OF FLORIN. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAMETER 10 IN, DEPTH 175 FT. ALTITUDE OF LSD 65 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1962 TO CURRENT YEAR.

HIGHEST WATER LEVEL 61.6 FEET BELOW LAND SURFACE DATUM MAR 15, 1963.

LOWEST WATER LEVEL 81.6 FEET BELOW LAND SURFACE DATUM OCT 19, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	81.2	OCT 16, 1978	81.5	MAR 23, 1979	76.8

Elk Grove area

SITE NUMBER 382627121172801 LOCAL NUMBER 007N006E23P01M

4.8 MI NORTHEAST OF ELK GROVE. CABLETOOL DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAMETER 12 IN 0-42 FT, 8 IN 42-144 FT, DEPTH 144 FT, CASSED TO 144 FT. ALTITUDE OF LSD 77 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1968 TO CURRENT YEAR.

HIGHEST WATER LEVEL 77.3 FEET BELOW LAND SURFACE DATUM MAR 25, 1969.

LOWEST WATER LEVEL 105.2 FEET BELOW LAND SURFACE DATUM AUG 30, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	101.3	JAN 24, 1979	97.1	MAY 01, 1979	97.3	JUL 31, 1979	103.3
NOV 28	99.8	FEB 27	96.3	29	99.2	AUG 29	103.5
DEC 18	98.	MAR 26	95.3	JUN 22	100.8	SEP 26	102.3

Clay area

SITE NUMBER 382039121131901 LOCAL NUMBER 006N007E28E01M

3.2 MI WEST OF CLAY. DOMESTIC WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 14 IN, DEPTH 225 FT. ALTITUDE OF LSD 75 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 34.4 FEET BELOW LAND SURFACE DATUM FEB 11, 1953.

LOWEST WATER LEVEL 117.2 FEET BELOW LAND SURFACE DATUM AUG 29, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1978	114.3	NOV 28, 1978	111.3	DEC 18, 1978	109.	MAR 15, 1979	105.8
OCT 26	114.9						

GROUND-WATER LEVELS

497

Solano County

Dixon area

SITE NUMBER 382419121513301 LOCAL NUMBER 007N001E33R01M

4 MI SOUTHWEST OF DIXON. UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 6 IN, DEPTH 86 FT.
ALTITUDE OF LSD 60 FT. MEASUREMENTS FURNISHED BY DWR, USGS, USBR. RECORDS AVAILABLE 1941 TO CURRENT
YEAR.

HIGHEST WATER LEVEL 0.8 FEET BELOW LAND SURFACE DATUM FEB 19, 1969.

LOWEST WATER LEVEL 29.4 FEET BELOW LAND SURFACE DATUM JUL 15, 1949.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1978	11.6	JAN 25, 1979	9.5	APR 30, 1979	4.8	JUL 24, 1979	8.0
NOV 28	12.1	FEB 23	6.5	MAY 30	7.0	AUG 30	6.6
DEC 19	12.2	MAR 21	7.5	JUN 25	7.5	SEP 25	7.4

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Modoc County

Alturas area

Station number 412933120323201 Local identifier 042N012E11J01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUL 10...	0955	444	380	7.3	17.2

Shasta County

McArthur area

Station number 410125121260901 Local identifier 037N005E19P02M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUL 09...	1140	225	215	8.3	19.4

Anderson area

Station number 402716122145601 Local identifier 030N003W18P02M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUN 11...	0930	52	270	6.6	17.2

Lassen County

Bieber area

Station number 410754120043001 Local identifier 038N008E17K01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUL 09...	1520	180	220	7.5	17.2

Termo area

Station number 405155120273601 Local identifier 035N013E25N01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUL 13...	0820	209	910	7.2	12.8

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Lassen County--Continued

Leavitt area

Station number 402238120322801 Local identifier 029N013E17C05M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 01...	1425	52	450	7.1	20.0

Tehama County

Dairyville area

Station number 400608122051601 Local identifier 026N002W15M01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
MAY 25...	0820	164	225	7.1	21.1

Corning area

Station number 395600122102901 Local identifier 024N003W14M01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
MAY 24...	0900	170	240	7.3	22.2

Glenn County

Princeton area

Station number 392545122073401 Local identifier 018N002W07F01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 23...	1235	240	625	7.9	20.0

Butte County

Briggs area

Station number 392448121424501 Local identifier 018N002E14K01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUN 22...	1240	327	320	7.5	19.4

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Colusa County

Colusa area

Station number 391341122005601 Local identifier 016N001W19F03M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUL 02...	1210	240	395	8.2	19.4

Arbuckle area

Station number 385706122024301 Local identifier 013N002W26A01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JUL 19...	1215	462	760	7.5	23.9

Yolo County

Dunnigan area

Station number 385020121503602 Local identifier 012N001E34Q002M

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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
MAY 04...	1396	730	8.6	21.5	49	0	14	3.5	160	87	9.9

DATE	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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
MAY 04...	3.1	221	35	95	.2	38	483	.66	1100	40

Station number 385020121503601 Local identifier 012N001E34Q01M

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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
MAY 04...	2120	2210	8.4	21.0	90	0	27	5.5	470	92	22

DATE	SODIUM+ POTAS- SIUM, 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 S04)	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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
MAY 04...	470	3.1	180	10	660	.2	17	1310	1.78	12000	40

QUALITY OF GROUND WATER

501

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Solano County

Dozier area

Station number 382103121470901 Local identifier 006N002E19J01M

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JUL 06...	1030	182	1430	7.7	19.0	500	130

DATE	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	ALKA- LINITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JUL 06...	32	100	120	2.4	370	180

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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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