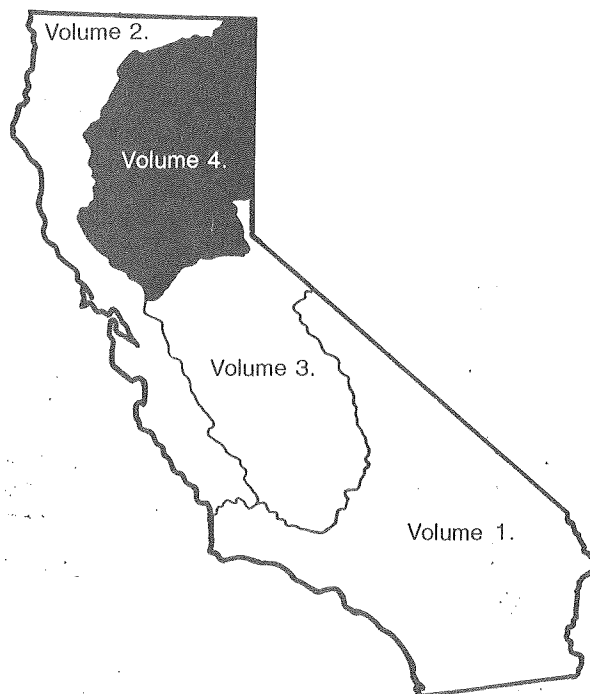




Water Resources Data California Water Year 1983

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-83-4
Prepared in cooperation with the California Department of
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1983

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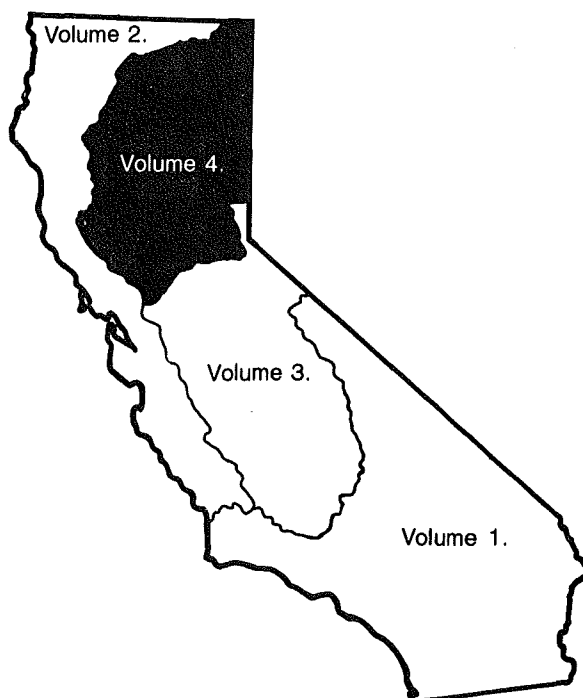


Water Resources Data California

Water Year 1983

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

by R.P. Fogelman, J.R. Mullen, W.F. Shelton, R.G. Simpson, D.A. Grilk



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-83-4
Prepared in cooperation with the California Department of
Water Resources and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, SECRETARY

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in California write to
District Chief, Water Resources Division
U.S. Geological Survey
Room W-2235, Federal Building
2800 Cottage Way
Sacramento, California 95825

PREFACE

This volume of the annual hydrologic data report of California is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in 4 volumes:

- Volume 1. 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

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the individuals contributing significantly to the collection, processing, and tabulation of the data are given on page V.

This report was prepared in cooperation with the California Department of Water Resources and with other agencies under the general supervision of Timothy J. Durbin, District Chief, California.

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16. Abstract (Limit: 200 words) Water-resources data for the 1983 water year for California consists of records of stage, discharge, and water quality of streams; stage and contents in lakes and reservoirs; and water levels and water quality in wells. Volume 4 contains discharge records for 153 gaging stations; stage and contents for 25 lakes and reservoirs; precipitation data for 2 stations; water quality for 7 stations; and water levels for 147 observation wells. Also included is one low-flow partial-record station. Additional water data are 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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WATER RESOURCES DIVISION

California District

E. Jerre McClelland, Assistant District Chief for Hydrologic Data

Kenneth W. Lee, Operations Chief, Northern California

Richard M. Adorador, Hydrologic Technician
Allan J. Asquith, Hydrologic Technician
Kristen D. Evenson, Hydrologic Technician
William E. Faulkender, Hydrologic Technician
Michael F. Friebe, Hydrologic Technician
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Gail L. Keeter, Hydrologic Technician
Byron R. Laurence, Hydrologic Technician
Rodd C. Lindberg, Hydrologic Technician
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John Evan M. Shay, Hydrologic Technician
M. Kathy Shay, Computer Technician
Michael R. Simpson, Electronics Technician
Teresa M. Templin, Clerk Typist
Donald E. Underwood, Hydrologic Technician
Barbara Van Ummerson, Hydrologic Clerk
Lisa M. Wulfert, Clerk Typist

Stuart H. Hoffard, Hydrologist
Rick T. Iwatsubo, Biologist
Verrie F. Pearce, Supervisory Hydrologic Technician

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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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WATER RESOURCES DATA FOR CALIFORNIA, 1983

Volume 4

INTRODUCTION

Water-resources data for the 1983 water year for California consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and records of water levels in selected observation wells. Records for a few pertinent streamflow and water-quality stations in bordering States are also included. These data, a contribution to the National Water Data System, were collected by the Geological Survey and cooperating local, State, and Federal agencies in California.

Records of discharge or stage of streams and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface-Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from 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-83-4." 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.

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

COOPERATION

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

California Department of Water Resources, David N. Kennedy, Director.
 Georgetown Divide Public Utility District, Charles F. Gierau, General Manager.
 Modoc County Department of Public Works, Jerry K. Grove, Director.
 Oroville-Wyandotte Irrigation District, Fritz Steppat, General Manager and Chief Engineer.
 Paradise Irrigation District, C. Phillip Kelly, Jr., Manager.
 Sacramento Regional County Sanitation District, William S. Hyde, Water Quality Division.
 Siskiyou County Flood Control and Water Conservation District, David A. Gravenkamp, Director.
 Yolo County Flood Control and Water Conservation District, James F. Eagan, General Manager.

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

The following organizations aided in collecting records: Pacific Gas and Electric Company; Sacramento Municipal Utility District; Nevada and Oroville-Wyandotte Irrigation Districts; Placer and Yuba County Water Agencies.

SUMMARY OF HYDROLOGIC CONDITIONS

The 1983 water year was one of the wettest recorded in California. Rainfall exceeded 200 percent of normal which makes it one of the wettest years of the century. In 1983, an unusual occurrence known as El Nino/Southern Oscillation caused rises in water temperature of the ocean surface and major reversals in wind patterns near the Equator. The high-pressure ridge near the Equator was intensified while the low-pressure system over the Gulf of Alaska became extremely low. As a result, climatological changes occurred and the South American coast received record rainfall and had ocean temperatures of 30°C. Severe storms on the central California coast resulted from the fast movement of air and intensified jet stream caused by the El Nino/Southern Oscillation.

At Clear Lake, storm runoff caused the lake to rise 17 ft to its highest recorded level. Extensive flooding occurred and the town of Lakeport was inundated. Snowpack in the Sierra Nevada had one of the largest depths on record with a seasonal total of 796 in. measured at Norden, near Donner Pass. The only larger depth in more than 100 years of record at that site is 819 in. in 1938. The record snowpack combined with the previous wet year caused many landslides. In April, a slide that blocked the South Fork American River caused the closure of U.S. Highway 50 for more than a month. Thirteen of the 19 counties included in this volume were declared national disaster areas by June 1983.

Surface Water

Runoff was greater than normal during the 1983 water year for the area included in this volume and averaged 337 percent of the median runoff for water years 1951-80. Runoff at four representative gaging stations for which long-term records are available ranged from a minimum of 174 percent of the median for Sacramento River at Keswick in the northern part of the Sacramento Valley to a maximum of 228 percent for Thomes Creek at Paskenta in the western side of Sacramento Valley (fig. 1).

During the 1983 water year, divisional data (data from similar meteorological areas) indicate that precipitation was 48 percent greater than normal, which exceeded monthly normals for 9 months of the year.

There were no peaks of discharge for the period of record despite the record annual precipitation. The Sacramento River at Butte City had a peak discharge of 157,000 ft³/s with project levees on March 2, which approached the record discharge of 1958. The mean annual discharge, however, did exceed the previous maximum for the period of record. Upstream, the Sacramento River exceeded flood stages at Vina, Tehama, and Bend Bridges. The flood stage at Tehama Bridge set a new record.

Record quantities of snowmelt runoff occurred in many Sierra basins, but there was no peak discharge for period of record despite a record snow-water content that ranged from 215 percent of normal for the Pit River basin to 360 percent of normal for the Tule River. The lack of snowmelt peaks is attributed to the mild temperatures that prevailed and extended the length of the runoff period.

Ground Water

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

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

At an observation well near Zamora in southern Sacramento Valley, water levels followed previous seasonal trends, but rose 3 to 4 ft higher than the previous year. The highest 1983 water level was 2.29 ft above land surface on June 24, 1983, and the lowest level was 13.58 ft below land surface on October 16, 1982. Near Butte City, in northern Sacramento Valley, water levels during much of the year rose 2 to 3 ft higher than during the previous year. The lowest water level was 17.03 ft below land surface on October 1, 1982, and the highest water level recorded was 5.52 ft on March 3, 1983.

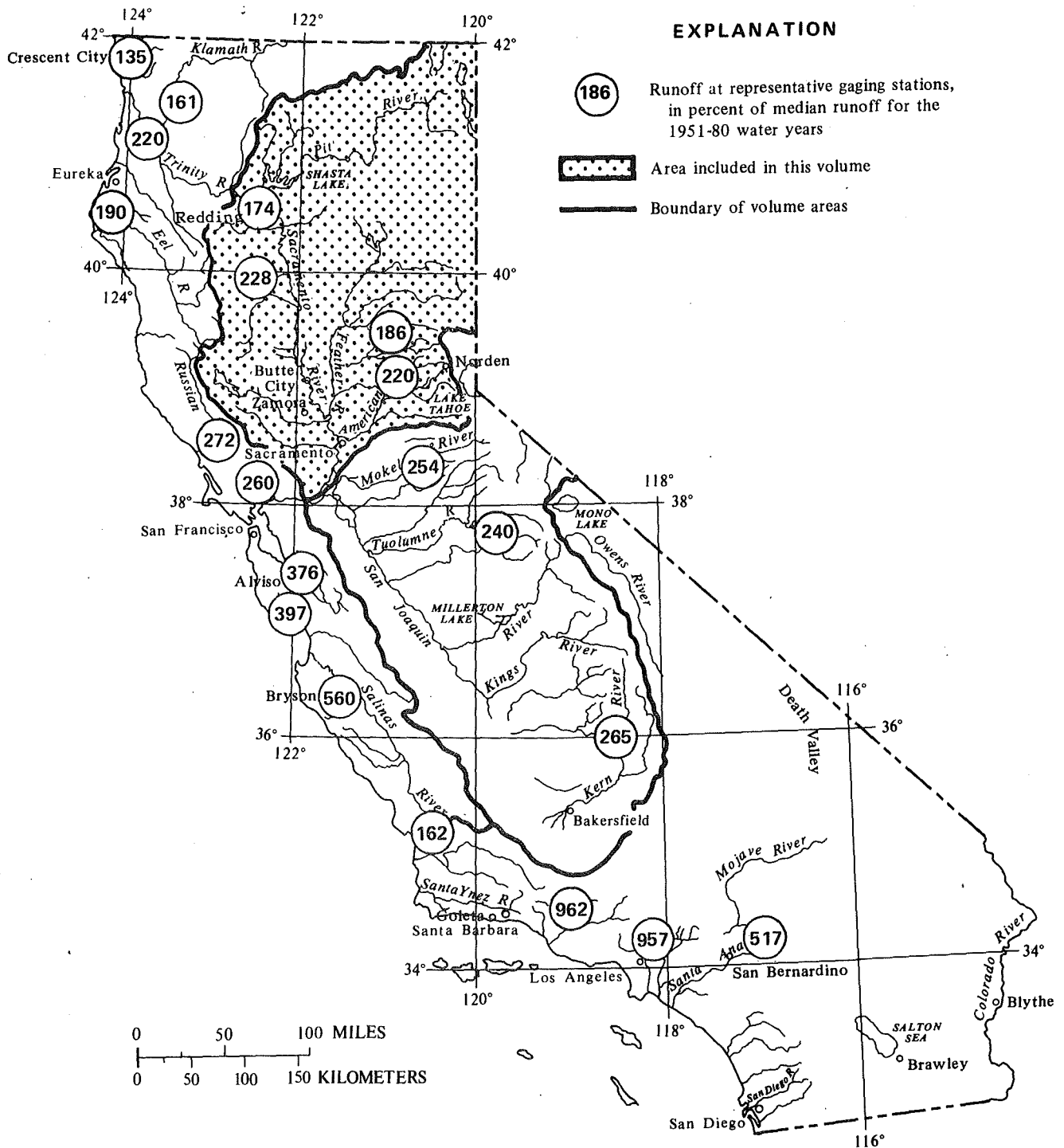


FIGURE 1. — Runoff for the 1983 water year.

Water Quality

Water samples collected at the three NASQAN stations reported in this volume were analyzed for water-quality constituents. Water quality at these sites was similar to that recorded in previous years. Significant changes were not evident in any of the constituents sampled, and concentrations did not exceed maximum permissible standards recommended by the U.S. Environmental Protection Agency or other public health standards or guidelines.

The largest density of fecal-coliform bacteria in water sampled from Susan River near Susanville ranged from K1 to 720 col/100 mL (an increase from a maximum of 310 col/100 mL reported in 1982). Fecal-streptococci densities ranged from K2 to 1,900 col/100 mL (an increase from a maximum of 130 col/100 mL in 1982). At Sacramento River near Freeport, fecal-coliform and fecal-streptococci densities were smaller in 1983 than in 1982.

Sediment

Suspended-sediment discharge and concentration were monitored daily at four stations and periodically at six stations in the area included in this volume. The large variation in precipitation, drainage-basin characteristics, and stream regulation at these stations results in significant differences in sediment-discharge rates and concentrations.

Sediment discharge was above normal during the 1983 water year, as indicated by comparison with the 1968-82 mean sediment discharge at two of the daily stations. Annual sediment discharge was 160 percent of the mean for Feather River near Gridley and 163 percent for Sacramento River at Freeport.

During the 1983 water year, sediment discharge for the four stations monitored daily ranged from 126,000 ton/yr for Feather River near Gridley to 3.83 million ton/yr for Sacramento River at Freeport. Annual sediment discharge per square mile of drainage area ranged from a minimum of 35 ton/mi² for Feather River near Gridley, which is a highly regulated station, to a maximum of 4,510 ton/mi² for Thomes Creek at Paskenta (not regulated).

Runoff resulting from major storms from late January to mid-March transported the largest percentage of the sediment during the year for Stony Creek near Orland and Thomes Creek near Paskenta. Sediment was more evenly distributed at the Feather River and Sacramento River stations during the year because of the affect of snowmelt and flow regulation. Maximum sediment discharge ranged from 5,530 ton/d (4 percent of annual total) for Feather River near Gridley to 432,000 ton/d (17 percent of annual total) for Stony Creek near Orland. Maximum daily concentrations ranged from 72 mg/L for Feather River near Gridley to 5,790 mg/L for Thomes Creek at Paskenta.

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

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

Cubic foot per second (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 fluid plus suspended sediment), that passes a given point within a given period of time.

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

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

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

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

$$\bar{d} = \sum_{i=1}^s \frac{n_i}{n} \log^2 \frac{n_i}{n},$$

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.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed acidic, and solutions with a pH greater than 7 are termed basic. Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by 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.

Plankton--Continued

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 into 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 chemicals and biochemical precipitates and decomposed organic material such as humas. The quantity, characteristics, and cause of 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 any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

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

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

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

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

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

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

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

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

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

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submerged 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.....	Insects
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	<u>Hexagenia</u>
Species.....	<u>limbata</u>

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 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 the dissolved and suspended phases of the sample. A knowledge of the expected form is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90 degrees from the path of incident light source (see also p. 27).

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 a 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 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 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.

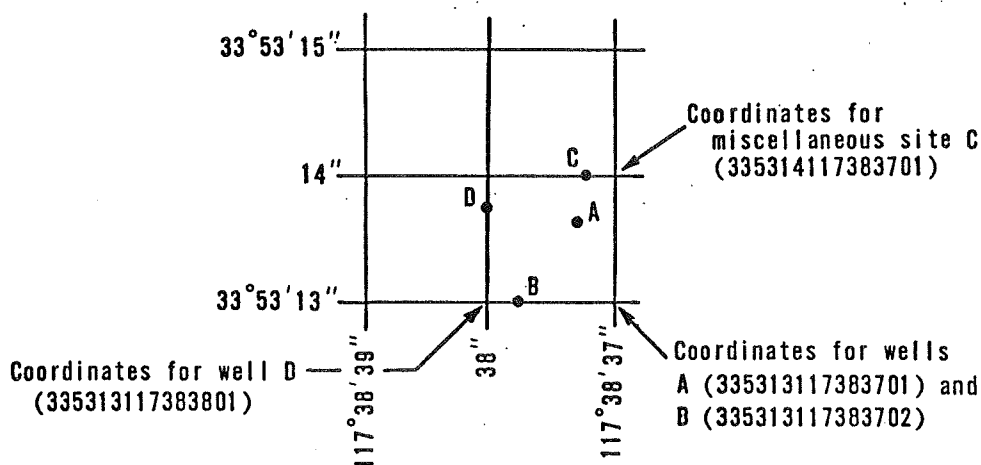


FIGURE 2.--System for numbering wells and miscellaneous sites (latitude and longitude)

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.

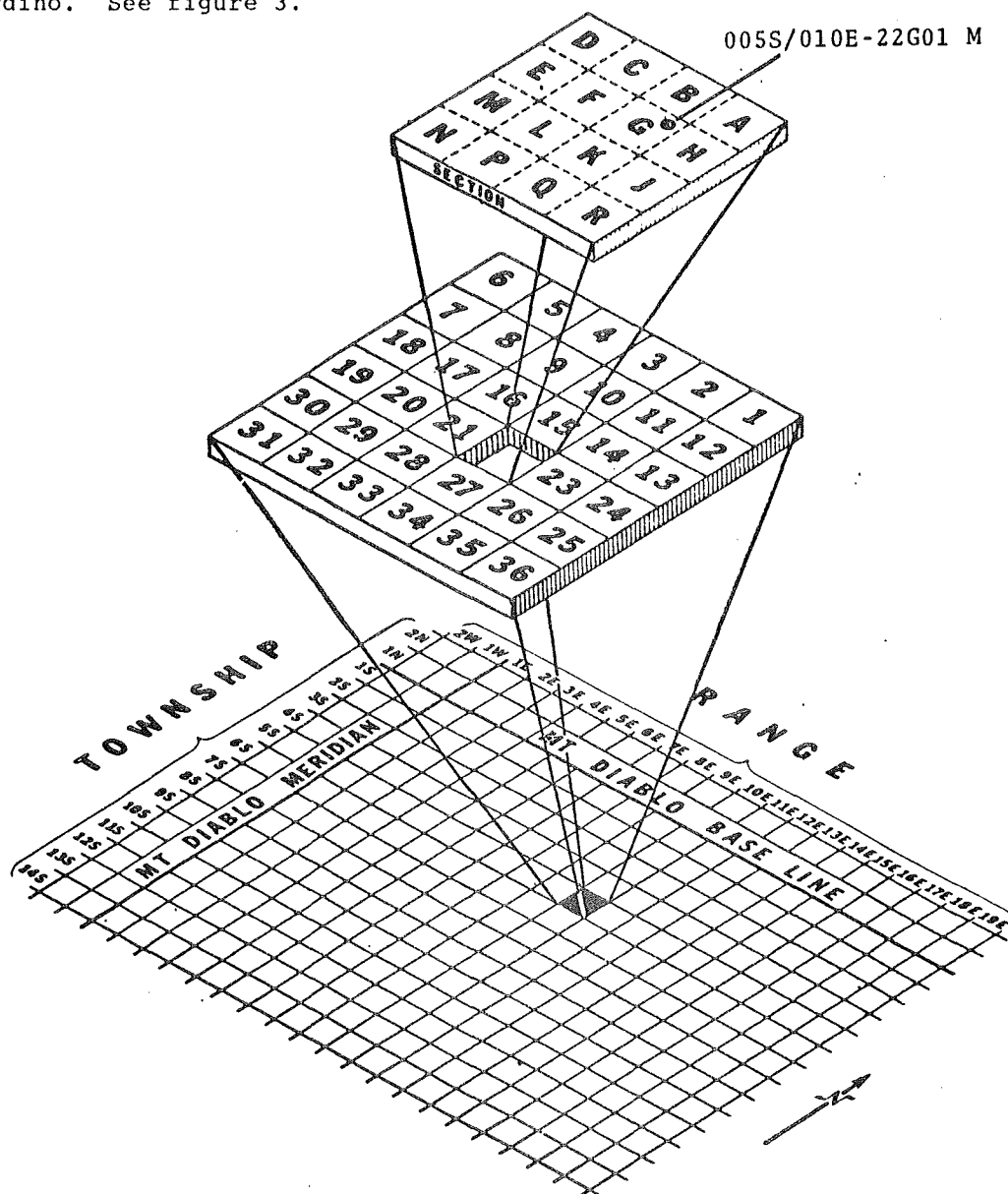


FIGURE 3.--California well-numbering system.

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:

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

National stream-quality accounting network (continued)Volume 3:

11187000 Kern River at Kernville, CA
11218500 Kings River below North Fork, near Trimmer, 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 areas where contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency 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 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 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 to 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 discharges 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 "LOCATION" 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 10.

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 in 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 gage, 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 CURRENT YEAR; if they are, all independent peaks (including the maximum for the year) above the selected base, with the time of occurrence and corresponding gage heights, are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

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

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days in 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; "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 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 230-81, "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 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.

pH

At some stations, pH is measured on a continual basis. The results are reported as maximum, minimum, and mean values for each day and month. The mean pH values reported were computed from the pH values recorded by the monitor and is equal to the negative logarithm of the geometric mean of the hydrogen-ion activity.

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 daily 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 concentration and particle-size distribution data are determined from samples collected with depth-integrating samplers at one or more verticals across a measuring cross-section. The concentration data are then combined with water discharge data to compute suspended-sediment discharge. Samples of surface bed material are also collected and the particle size distribution of these samples are published along with the suspended-sediment data. The sampling and computational methods used are in accordance with those described in the U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapters C1 and C3.

Sediment samples are generally taken on a daily or every other day basis at stations where a daily sediment record is published. 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 sediment and streamflow and 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. 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 for the sediment moving within 0.25 ft (0.076 m) of the stream-bed. Sediment moving in this portion of the flow cannot be sampled with standard suspended-sediment samplers.

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

Turbidity

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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

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

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

In this report basin names and numbers, for example Sacramento Valley (5-21), are from "California's Ground Water," California Department of Water Resources Bulletin No. 118, 1975, 135 p.

Thirty-seven 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, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

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

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
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- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
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- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 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.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
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- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
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- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 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
(National stream-quality accounting network station)

LOCATION.--Lat 40°25'03", long 120°40'15", in SW 1/4 NE 1/4 sec.31, T.30 N., R.12 E., Lassen County, Hydrologic Unit 18080003, on left bank 0.5 mi west of Susanville, and 1.1 mi upstream from Piute Creek.

DRAINAGE AREA.--184 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1900 to December 1905 (gage heights only August 1901 to January 1903), March to May 1913 (gage heights only), February 1917 to June 1921, October 1950 to current year. Published as "near Susanville" 1900-1905. Discharge records for August to December 1901 and January 1903, published in WSP 300, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 4,225.72 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1950, nonrecording gages at several sites in vicinity of old powerplant 0.9 mi upstream at various datums.

REMARKS.--Records good except those for the winter periods, which are fair. Flow regulated by McCoy Flat Reservoir and Hog Flat Reservoir, combined usable capacity, 25,300 acre-ft. Diversions for irrigation of 1,400 acres above station.

AVERAGE DISCHARGE.--39 years (water years 1901, 1904-5, 1918-20, 1951-83), 98.3 ft³/s, 71,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,850 ft³/s Jan. 24, 1970, gage height, 8.89 ft in gage well, 10.4 ft, from floodmarks, from rating curve extended above 1,000 ft³/s on basis of slope-area measurement at gage height 6.62 ft and contracted-opening measurement at gage height 8.89 ft; no flow Aug. 15, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,850 ft³/s Mar. 13, gage height, 6.69 ft; minimum daily, 13 ft³/s Oct. 16-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	30	71	40	116	717	298	330	866	131	112	78
2	14	26	55	40	104	604	301	340	809	140	114	74
3	14	24	52	41	92	480	270	422	828	134	112	72
4	14	22	57	43	81	384	243	616	794	130	110	69
5	15	21	54	45	79	353	224	715	732	123	114	67
6	15	21	51	56	78	316	212	635	677	113	104	63
7	16	20	47	70	103	321	212	603	619	103	111	58
8	16	20	38	72	115	337	232	599	372	94	118	55
9	15	20	37	62	137	384	248	573	343	89	112	52
10	15	22	35	54	159	564	236	541	308	81	112	51
11	14	20	34	48	151	750	222	502	318	72	112	49
12	16	20	34	46	437	588	209	504	294	65	111	47
13	15	19	32	45	527	2050	192	523	315	58	109	45
14	14	18	31	44	287	1010	184	555	331	55	105	42
15	14	18	30	44	234	658	182	602	367	54	105	41
16	13	19	30	45	203	497	195	623	383	52	105	32
17	13	21	62	46	215	408	216	636	365	48	100	20
18	13	189	45	67	412	348	229	681	345	48	98	15
19	13	121	38	85	287	301	270	735	327	46	106	14
20	14	64	71	64	230	283	318	772	301	44	101	16
21	14	46	351	57	199	275	352	827	283	42	98	18
22	21	41	168	56	189	256	383	885	261	40	100	18
23	37	38	113	54	197	232	388	996	243	37	97	23
24	27	32	78	337	193	230	350	1070	201	35	93	22
25	90	31	70	193	197	211	323	1040	184	79	91	20
26	265	30	61	383	194	190	290	1040	179	85	89	20
27	51	31	53	586	185	186	277	1000	154	85	86	23
28	33	74	48	268	259	176	310	1010	130	85	84	19
29	28	174	43	196	---	170	325	1030	125	84	81	19
30	47	110	41	157	---	218	323	1060	124	82	79	22
31	39	---	39	133	---	373	---	952	---	80	79	---
TOTAL	940	1342	1969	3477	5660	13870	8014	22417	11578	2414	3148	1164
MEAN	30.3	44.7	63.5	112	202	447	267	723	386	77.9	102	38.8
MAX	265	189	351	586	527	2050	388	1070	866	140	118	78
MIN	13	18	30	40	78	170	182	330	124	35	79	14
AC-FT	1860	2660	3910	6900	11230	27510	15900	44460	22960	4790	6240	2310
CAL YR 1982	TOTAL	64146.9	MEAN	176	MAX	1810	MIN	6.7	AC-FT	127200		
WTR YR 1983	TOTAL	75993.0	MEAN	209	MAX	2050	MIN	13	AC-FT	150700		

HONEY LAKE BASIN

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 1978-81.
 SEDIMENT RECORDS: Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 16...	1400	20	147	7.9	1.5	665	1.1	12.0	98	K11	K17
JAN 13...	1415	41	139	7.5	.0	675	2.9	13.0	100	K3	30
MAR 08...	1500	311	83	7.2	6.0	675	7.0	11.4	103	K1	K2
MAY 10...	1145	542	67	7.5	4.0	650	11	11.8	106	--	K31
JUL 18...	1340	49	101	8.1	17.0	650	1.5	8.4	102	K15	K9
SEP 27...	1500	20	142	8.3	13.0	655	23	9.2	102	720	1900

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 16...	69	0	16	7.1	5.3	14	.3	1.6	75	<5.0	2.1
JAN 13...	56	0	13	5.8	5.1	16	.3	1.4	63	<5.0	4.2
MAR 08...	39	0	9.7	3.6	3.9	17	.3	.90	45	3.6	1.5
MAY 10...	30	0	6.9	3.1	2.5	15	.2	.80	34	2.4	1.2
JUL 18...	47	0	11	4.8	3.8	15	.2	1.2	54	1.6	.70
SEP 27...	61	1	13	6.9	5.5	16	.3	2.3	60	6.2	7.2

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
NOV 16...	<.10	32	102	--	.14	<.10	<.06	.80	.02	.02	.02
JAN 13...	<.10	29	100	--	.14	<.10	<.06	.40	.04	.05	<.01
MAR 08...	<.10	26	68	76	.09	<.10	<.06	.50	.07	.06	.03
MAY 10...	<.10	18	53	56	.07	--	<.06	.60	.09	.05	.03
JUL 18...	<.10	25	74	81	.10	<.10	.05	.50	.03	.02	<.01
SEP 27...	<.10	29	116	110	.16	<.10	.02	.70	.06	.04	.06

See footnotes at end of table.

10356500 SUSAN RIVER AT SUSANVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 16...	1400	10	<1	25	.8	<1	<1	<3	<1	63	2
JAN 13...	1415	50	<1	33	<.5	<1	<1	<3	2	52	<1
MAY 10...	1145	80	<1	24	<.5	<1	<1	<3	19	180	2
SEP 27...	1500	60	<1	34	<.5	<1	<1	<3	5	180	1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 16...	6	18	.1	<10	1	<1	<1	110	<6	30
JAN 13...	8	9	.1	<10	1	1	1	110	<6	5
MAY 10...	7	12	.2	<10	1	<1	<1	54	<6	14
SEP 27...	6	18	.1	<10	3	<1	<1	110	<6	12

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 16...	1400	20	1.5	6	.32
JAN 13...	1415	41	.0	5	.55
MAR 08...	1500	311	6.0	14	12
MAY 10...	1145	542	4.0	87	127
JUL 18...	1340	49	17.0	4	.53
SEP 27...	1500	20	13.0	43	2.3

HONEY LAKE BASIN

10358500 WILLOW CREEK NEAR SUSANVILLE, CA

LOCATION.--Lat 40°29'21", long 120°32'10", in SW 1/4 NE 1/4 sec.5, T.30 N., R.13 E., Lassen County, Hydrologic Unit 18080003, on left bank 4 mi upstream from Peters Valley Creek, and 8 mi northeast of Susanville.

DRAINAGE AREA.--90.4 mi², 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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--33 years, 35.0 ft³/s, 25,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 816 ft³/s Feb. 1, 1963, gage-height, 5.59 ft; minimum daily, 6.8 ft³/s on several days during August 1981.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	1700	433	4.66	Mar. 1	1700	*524	4.91
Feb. 13	0045	371	4.47	Mar. 13	1900	479	4.79
Feb. 18	1700	305	4.23	Mar. 25	0330	211	3.84

Minimum daily, 8.7 ft³/s Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	38	74	28	138	461	124	100	23	11	14	28
2	28	37	68	27	120	470	115	97	21	12	14	28
3	28	36	62	28	96	371	108	92	21	12	14	28
4	28	35	59	28	99	252	102	88	23	12	14	28
5	28	34	54	28	102	198	93	82	23	12	14	28
6	28	33	51	30	88	171	87	78	22	13	14	28
7	27	33	46	36	101	159	83	73	22	13	14	27
8	27	32	40	46	133	149	80	69	22	12	14	27
9	27	32	39	47	209	143	76	65	20	12	14	29
10	26	32	36	42	244	150	72	64	20	12	13	30
11	27	32	35	39	221	159	68	62	19	12	12	30
12	27	32	34	38	280	145	67	61	18	14	9.1	27
13	26	32	35	36	355	391	64	60	18	14	9.0	27
14	26	32	34	35	249	435	62	59	17	14	9.0	27
15	26	32	35	35	186	320	58	59	17	13	8.9	27
16	26	31	33	38	169	244	56	57	16	12	8.9	21
17	26	32	43	49	155	218	56	57	15	12	8.7	16
18	25	45	43	91	222	201	57	56	15	14	8.7	16
19	25	53	42	139	219	174	60	55	14	15	9.0	17
20	26	45	45	102	162	155	66	55	14	16	9.0	15
21	26	41	84	73	141	178	67	55	14	15	9.1	17
22	26	41	92	60	126	172	67	51	14	15	9.5	27
23	27	41	85	53	117	164	65	45	13	15	9.7	28
24	28	39	81	276	111	171	67	39	13	15	11	32
25	36	39	66	316	107	196	75	36	13	15	14	38
26	61	38	54	223	116	151	77	33	12	15	17	35
27	52	38	47	302	126	137	76	31	12	15	20	35
28	46	47	39	342	247	122	93	29	12	15	23	35
29	43	79	35	235	---	113	101	28	11	15	23	34
30	42	84	32	188	---	102	100	27	11	15	28	34
31	40	---	30	157	---	147	---	25	---	15	33	---
TOTAL	962	1195	1553	3167	4639	6619	2342	1788	505	422	428.6	819
MEAN	31.0	39.8	50.1	102	166	214	78.1	57.7	16.8	13.6	13.8	27.3
MAX	61	84	92	342	355	470	124	100	23	16	33	38
MIN	25	31	30	27	88	102	56	25	11	11	8.7	15
AC-FT	1910	2370	3080	6280	9200	13130	4650	3550	1000	837	850	1620
CAL YR 1982	TOTAL	14376.5	MEAN	39.4	MAX	544	MIN	8.3	AC-FT	28520		
WTR YR 1983	TOTAL	24439.6	MEAN	67.0	MAX	470	MIN	8.7	AC-FT	48480		

SACRAMENTO RIVER BASIN

11341400 SACRAMENTO RIVER NEAR MT SHASTA, CA

LOCATION.--Lat 41°15'56", long 122°18'32", in SE 1/4 SE 1/4 sec.33, T.40 N., R.4 W., Siskiyou County, Hydrologic Unit 18020005, on left bank 200 ft upstream from Stink Creek, 0.3 mi upstream from Southern Pacific Railroad bridge, 1.7 mi downstream from Box Canyon Dam, and 3.3 mi south of town of Mt. Shasta.

DRAINAGE AREA.--135 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records fair. Flow regulated by Box Canyon Dam 1.7 mi upstream beginning December 1968, capacity, 26,100 acre-ft. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE (adjusted for change in contents in Lake Siskiyou).--24 years, 263 ft³/s, 190,500 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,980 ft³/s Jan. 26, gage height, 7.76 ft; minimum daily, 65 ft³/s Aug. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	74	139	262	145	363	1410	855	641	1750	759	180	67		
2	75	137	254	139	355	1600	830	618	1440	813	174	90		
3	75	137	249	135	351	1450	758	632	1410	723	167	104		
4	75	135	247	120	342	1240	479	820	1490	688	163	107		
5	72	135	242	118	342	1230	369	827	1490	689	155	103		
6	75	132	186	118	342	1210	369	762	1560	722	150	102		
7	80	132	143	117	342	851	369	723	1710	670	146	101		
8	78	132	141	115	355	443	310	719	1810	619	154	99		
9	77	132	141	112	408	453	240	708	1850	618	216	97		
10	77	131	140	111	390	1020	243	667	1740	560	216	96		
11	135	130	138	117	386	1550	309	500	1430	289	152	91		
12	313	128	140	116	498	1430	434	396	1170	336	103	85		
13	330	128	139	115	523	2170	475	403	1110	526	69	84		
14	233	118	139	120	681	1610	429	573	1130	369	69	80		
15	144	103	151	130	668	957	428	857	1180	454	69	80		
16	136	103	693	160	663	779	430	987	1180	423	111	79		
17	112	104	1260	250	643	725	433	1000	1280	342	139	78		
18	112	114	882	450	929	525	434	1110	1270	342	70	80		
19	112	112	162	650	865	482	613	1350	1070	204	74	79		
20	112	110	297	442	639	497	812	1530	884	67	97	77		
21	121	110	661	429	618	623	813	1810	788	81	106	81		
22	137	110	719	412	612	1150	1080	1970	860	184	167	86		
23	359	110	577	454	507	1090	1320	2170	1050	215	139	111		
24	490	110	248	627	342	876	1110	2260	1010	220	77	113		
25	428	110	141	854	342	592	828	2350	932	220	109	105		
26	249	110	140	1990	411	246	678	2380	883	217	160	100		
27	288	118	139	2460	567	139	621	2430	687	209	150	98		
28	281	172	142	1310	902	189	694	2450	815	204	150	96		
29	230	272	145	1220	---	495	805	2680	826	196	138	95		
30	170	277	146	1050	---	803	726	2530	798	192	65	94		
31	143	---	141	364	---	895	---	2150	---	188	65	---		
TOTAL	5393	3991	9205	14950	14386	28730	18294	41003	36603	12339	4000	2758		
MEAN	174	133	297	482	514	927	610	1323	1220	398	129	91.9		
MAX	490	277	1260	2460	929	2170	1320	2680	1850	813	216	113		
MIN	72	103	138	111	342	139	240	396	687	67	65	67		
AC-FT	10700	7920	18260	29650	28530	56990	36290	81330	72600	24470	7930	5470		
MEAN a	138	144	286	478	531	929	637	1328	1213	397	126	94.1		
AC-FT a	8470	8540	17600	29370	29510	57150	37920	81680	72160	24380	7760	5600		
b	23920	24540	23880	23600	24580	24740	26370	26720	26280	26190	26020	26150		
CAL YR 1982	TOTAL	114084	MEAN	313	MAX	1760	MIN	66	AC-FT	226300	MEAN a	310	AC-FT a	224500
WTR YR 1983	TOTAL	191652	MEAN	525	MAX	2680	MIN	65	AC-FT	380100	MEAN a	525	AC-FT a	380100

a Adjusted for change in contents in Lake Siskiyou.

b 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, 1.0°C on several days in January and February 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 17.5°C August 21; minimum recorded, 2.5°C December 28, 29.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11341400 SACRAMENTO RIVER NEAR MT SHASTA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11342000 SACRAMENTO RIVER AT DELTA, CA

LOCATION.--Lat 40°56'23", long 122°24'58", in SW 1/4 NW 1/4 sec.35, T.36 N., R.5 W, Shasta County, Hydrologic Unit 18020005, Bureau of Reclamation property, on left bank 0.2 mi downstream from Dog Creek, 0.6 mi south-east of Delta, and 2.8 mi south of Lamoine.

DRAINAGE AREA.--425 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

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

AVERAGE DISCHARGE.--39 years, 1,210 ft³/s, 876,600 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,600 ft³/s Jan. 26, gage height, 17.95 ft; minimum daily, 254 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	579	1580	897	3660	20900	6220	3740	4520	1950	569	418
2	258	519	1230	933	3110	18800	5190	3290	3910	1990	547	407
3	257	485	1050	899	2710	15500	4430	3110	3730	1800	532	420
4	256	462	998	868	2400	9300	3560	3200	3890	1780	518	418
5	254	443	955	793	2280	8870	3000	4490	3890	1850	502	412
6	257	430	920	773	3490	7720	2740	4420	4090	1950	490	409
7	279	418	782	770	3800	7540	2570	3660	4270	1800	481	407
8	268	437	719	792	4570	6300	2490	3240	4440	1570	476	403
9	262	425	678	777	7100	5890	2370	2920	4540	1440	516	400
10	258	409	647	756	6680	9140	2220	2700	4260	1410	531	394
11	255	399	614	777	5340	7860	2100	2410	3580	1150	512	391
12	398	391	620	783	7960	10000	2080	2240	2970	1100	448	383
13	465	385	610	771	7070	16000	2060	2270	2840	1380	390	376
14	458	379	579	759	5520	9580	1910	2470	2880	1290	390	372
15	345	356	1010	772	4690	6660	1840	2910	2920	1170	384	368
16	313	350	10800	872	4210	5350	1840	3050	2930	1130	386	363
17	295	450	10100	890	4260	4770	1920	3110	3140	984	452	362
18	283	1050	4630	2390	9660	4110	1970	3350	3030	943	405	363
19	282	831	2360	2900	6900	3540	2580	3940	2610	876	387	363
20	284	680	2270	2130	5040	3450	2910	4320	2370	640	427	357
21	429	585	8120	1810	4180	3630	2850	4880	2140	614	430	357
22	1440	540	6120	1760	3640	5110	3800	5320	2250	668	488	390
23	1870	549	3870	2280	3380	5560	6020	5650	2470	719	545	475
24	1130	532	2520	9160	2950	6890	5530	5760	2420	713	422	449
25	2110	499	1890	5910	3170	5230	4340	6000	2250	694	420	419
26	1690	477	1580	19100	3250	4030	3580	6100	2260	674	466	402
27	855	655	1370	17800	7210	4980	3400	6400	2010	654	464	400
28	701	2250	1220	8530	11600	3930	4410	6600	2070	638	462	397
29	759	3490	1110	7550	---	5230	5340	7000	2050	624	462	390
30	978	2310	1020	6560	---	11800	4520	6500	1980	603	420	414
31	689	---	953	4560	---	9000	---	5650	---	588	397	---
TOTAL	18636	21765	72925	106322	139830	246670	99790	130700	92710	35392	14319	11879
MEAN	601	726	2352	3430	4994	7957	3326	4216	3090	1142	462	396
MAX	2110	3490	10800	19100	11600	20900	6220	7000	4540	1990	569	475
MIN	254	350	579	756	2280	3450	1840	2240	1980	588	384	357
AC-FT	36960	43170	144600	210900	277400	489300	197900	259200	183900	70200	28400	23560
CAL YR 1982	TOTAL	557114	MEAN	1526	MAX	12200	MIN	236	AC-FT	1105000		
WTR YR 1983	TOTAL	990938	MEAN	2715	MAX	20900	MIN	254	AC-FT	1966000		

SACRAMENTO RIVER BASIN

11344000 NORTH FORK PIT RIVER AT ALTURAS, CA

LOCATION.--Lat 41°28'56", long 120°32'16", in SE 1/4 NW 1/4 sec.13, T.42 N., R.12 E., Modoc County, Hydrologic Unit 18020002, on right bank 10 ft downstream from Estes Street bridge in Alturas, and 1.2 mi upstream from confluence of North and South Forks.

DRAINAGE AREA.--212 mi², 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 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 upstream.

REMARKS.--Records fair. Flow is regulated by many small irrigation ponds and Dorris Reservoir, capacity 11,100 acre-ft. Diversions above station for irrigation of about 7,100 acres. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--12 years, 67.0 ft³/s, 48,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,350 ft³/s Jan. 14, 1980, gage height, 13.45 ft from rating curve extended above 1,300 ft³/s on basis of flow-over-dam computation at 11.90 ft; minimum daily, 0.01 ft³/s July 20, Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft³/s May 1, gage height, 11.16 ft; minimum daily, 0.47 ft³/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	17	36	15	31	223	328	857	490	62	1.9	1.1
2	.65	18	27	15	30	253	288	713	470	50	1.9	1.1
3	3.2	18	24	16	26	245	238	509	440	46	2.0	1.1
4	26	16	67	15	21	321	205	477	410	43	2.1	1.1
5	7.2	12	51	16	25	228	178	489	380	47	2.1	1.1
6	5.5	10	57	26	22	175	161	607	355	40	1.8	1.1
7	6.7	9.4	41	78	24	136	152	490	350	35	1.3	.85
8	4.3	8.3	23	113	26	124	156	414	330	32	1.3	.87
9	2.2	8.5	21	60	48	131	165	382	330	26	1.1	.87
10	2.1	8.7	19	42	131	153	168	326	300	22	1.1	.87
11	4.3	23	17	32	261	391	158	286	270	18	.98	.90
12	6.5	18	17	28	160	492	148	266	240	16	.62	.96
13	6.6	11	18	27	378	921	132	268	190	15	.71	1.1
14	6.1	10	17	24	200	583	123	278	170	11	1.2	1.3
15	14	24	17	23	136	400	117	322	155	9.2	1.5	1.3
16	8.3	15	16	22	98	302	117	302	140	7.3	1.6	1.4
17	6.2	17	34	22	71	250	135	315	130	8.9	1.4	1.4
18	5.6	110	38	21	106	222	156	345	150	6.3	1.2	1.4
19	4.5	95	30	20	103	185	203	394	140	4.0	.80	1.4
20	3.4	47	28	22	83	164	223	440	130	5.1	.47	1.3
21	5.0	34	150	25	71	157	280	496	125	6.0	.54	1.1
22	5.3	25	154	30	71	152	286	523	110	5.6	5.8	.96
23	5.8	21	56	34	94	150	259	530	105	5.6	12	.96
24	7.9	16	42	45	89	139	234	533	102	5.4	4.1	.96
25	7.9	14	36	77	91	161	233	538	100	4.8	1.9	1.2
26	45	14	30	53	83	171	284	531	94	4.4	1.5	1.5
27	30	14	26	58	78	181	280	527	88	3.6	1.7	2.0
28	11	17	22	50	90	234	215	515	86	3.2	1.7	5.3
29	30	33	17	45	---	203	197	544	80	3.0	1.3	8.0
30	28	47	15	39	---	290	227	529	74	2.3	1.1	5.8
31	23	---	15	35	---	600	---	521	---	2.1	1.0	---
TOTAL	322.90	730.9	1161	1128	2647	8337	6046	14267	6534	549.8	59.72	50.30
MEAN	10.4	24.4	37.5	36.4	94.5	269	202	460	218	17.7	1.93	1.68
MAX	45	110	154	113	378	921	328	857	490	62	12	8.0
MIN	.65	8.3	15	15	21	124	117	266	74	2.1	.47	.85
AC-FT	640	1450	2300	2240	5250	16540	11990	28300	12960	1090	118	100

CAL YR 1982 TOTAL 29798.38 MEAN 81.6 MAX 1540 MIN .26 AC-FT 59110
WTR YR 1983 TOTAL 41833.62 MEAN 115 MAX 921 MIN .47 AC-FT 82980

11345500 SOUTH FORK PIT RIVER NEAR LIKELY, CA

LOCATION.--Lat 41°13'51", long 120°26'10", in NE 1/4 SE 1/4 sec.11, T.39 N., R.13 E., Modoc County, Hydrologic Unit 18020002, on left bank 250 ft downstream from highway bridge, 1.4 mi downstream from West Valley Creek, and 3.5 mi east of Likely.

DRAINAGE AREA.--247 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, at site 1,000 ft downstream at different datum.

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

AVERAGE DISCHARGE.--55 years, 79.9 ft³/s, 57,890 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,150 ft³/s May 31, gage height, 5.14 ft; minimum daily, 9.3 ft³/s Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	42	21	12	29	34	49	267	1130	218	236	165
2	38	39	22	13	28	39	47	352	1050	239	219	164
3	37	38	24	16	28	42	51	303	966	223	213	164
4	37	38	29	19	27	47	45	280	910	208	210	162
5	37	38	46	22	26	41	38	303	901	191	205	165
6	36	37	30	27	26	40	34	279	846	181	207	165
7	40	36	17	35	27	36	35	264	796	179	220	162
8	38	25	12	32	28	34	40	267	770	167	228	180
9	37	12	12	29	29	32	48	264	750	158	227	188
10	35	13	13	26	34	29	53	252	727	150	221	174
11	34	14	13	25	41	66	56	245	731	142	218	159
12	33	15	14	23	44	54	65	235	710	153	216	157
13	32	15	15	23	51	107	74	241	641	180	216	128
14	32	16	16	22	43	83	74	254	587	178	216	113
15	32	17	18	20	43	58	72	282	536	173	214	114
16	32	18	21	21	35	43	70	286	486	168	205	118
17	32	18	22	22	33	38	73	285	448	164	199	114
18	31	35	20	24	45	34	74	310	417	162	182	114
19	31	36	20	25	43	31	77	347	393	154	192	92
20	32	29	29	22	37	28	92	387	370	155	226	75
21	32	25	35	19	34	28	106	437	358	184	209	93
22	33	20	20	19	35	28	113	493	338	223	202	110
23	33	20	14	21	38	27	112	551	317	228	181	112
24	33	19	12	25	36	25	110	578	303	240	144	118
25	44	20	10	35	36	25	116	648	290	252	134	115
26	60	18	9.3	48	36	28	117	647	275	251	127	116
27	45	18	9.4	73	35	40	115	688	267	253	122	103
28	40	19	9.6	42	33	49	119	830	254	252	118	87
29	41	19	10	38	---	52	126	951	241	248	119	86
30	63	19	10	34	---	59	140	1060	229	244	143	85
31	46	---	11	30	---	86	---	1110	---	241	162	---
TOTAL	1166	728	564.3	842	980	1363	2341	13696	17037	6159	5931	3898
MEAN	37.6	24.3	18.2	27.2	35.0	44.0	78.0	442	568	199	191	130
MAX	63	42	46	73	51	107	140	1110	1130	253	236	188
MIN	31	12	9.3	12	26	25	34	235	229	142	118	75
AC-FT	2310	1440	1120	1670	1940	2700	4640	27170	33790	12220	11760	7730
CAL YR 1982	TOTAL	36214.3	MEAN	99.2	MAX	350	MIN	9.3	AC-FT	71830		
WTR YR 1983	TOTAL	54705.3	MEAN	150	MAX	1130	MIN	9.3	AC-FT	108500		

SACRAMENTO RIVER BASIN

11348500 PIT RIVER NEAR CANBY, CA

LOCATION.--Lat 41°24'22", long 120°55'36", in NW 1/4 SW 1/4 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 southwest of Canby.

DRAINAGE AREA.--1,431 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--January 1904 to December 1905, May 1929 to current year (1929-31 incomplete).

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 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 upstream at different datum.

REMARKS.--Records good except those for the winter periods, which are fair. Flow regulated by many small reservoirs, total capacity about 144,000 acre-ft. Diversions for irrigation of about 39,000 acres above station. See schematic diagram of Pit and McCloud River basins.

AVERAGE DISCHARGE.--53 years (water years 1905, 1932-83), 249 ft³/s, 180,400 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,570 ft³/s Mar. 14, gage height, 7.01 ft; minimum daily, 52 ft³/s Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	172	218	72	200	966	1540	694	1370	336	130	90
2	209	177	209	74	182	1380	1530	1140	1440	300	127	77
3	164	145	169	78	164	1150	1340	1560	1540	292	120	68
4	134	128	161	88	149	938	1010	1570	1630	298	105	64
5	139	133	236	120	140	886	796	1620	1610	260	82	65
6	126	115	208	166	143	701	660	1600	1550	227	80	84
7	118	108	191	297	152	588	569	1540	1470	172	72	100
8	118	110	162	453	184	512	515	1500	1380	148	52	103
9	113	107	146	545	281	477	488	1390	1260	139	57	99
10	112	105	118	338	524	479	497	1230	1140	153	60	84
11	110	109	105	220	710	763	516	1060	1080	119	66	79
12	102	117	103	165	949	1220	499	893	1040	121	106	135
13	97	113	100	150	1050	1990	487	786	1020	113	97	150
14	93	103	101	140	1180	2450	469	725	996	99	80	140
15	90	86	99	132	799	2270	445	704	944	119	73	124
16	87	87	118	130	568	1910	415	733	853	118	54	99
17	95	98	259	129	442	1570	399	746	740	125	59	86
18	91	131	308	128	548	1070	402	760	585	132	91	91
19	83	247	237	126	656	783	431	778	541	150	100	94
20	80	265	201	125	583	653	485	806	502	149	143	88
21	81	233	568	135	458	583	568	842	464	156	229	89
22	78	193	930	160	390	575	685	899	434	105	256	89
23	93	167	535	228	366	578	719	953	442	71	341	95
24	97	130	264	359	370	562	688	976	502	71	294	100
25	108	108	170	460	378	558	659	1040	435	71	235	107
26	134	95	145	435	384	595	662	1110	433	66	156	112
27	160	109	125	415	374	599	706	1170	373	80	129	93
28	176	114	100	385	468	674	713	1220	346	113	125	91
29	159	157	76	342	---	675	629	1250	350	116	132	84
30	164	235	69	269	---	677	581	1280	346	108	126	81
31	173	---	70	226	---	1030	---	1330	---	107	104	---
TOTAL	3803	4197	6501	7090	12792	29862	20103	33905	26816	4634	3881	2861
MEAN	123	140	210	229	457	963	670	1094	894	149	125	95.4
MAX	219	265	930	545	1180	2450	1540	1620	1630	336	341	150
MIN	78	86	69	72	140	477	399	694	346	66	52	64
AC-FT	7540	8320	12890	14060	25370	59230	39870	67250	53190	9190	7700	5670

CAL YR 1982 TOTAL 139572.2 MEAN 382 MAX 4690 MIN 2.0 AC-FT 276800
WTR YR 1983 TOTAL 156445.0 MEAN 429 MAX 2450 MIN 52 AC-FT 310300

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

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

DRAINAGE AREA.--3,761 mi², excluding Goose Lake basin.

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

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

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

AVERAGE DISCHARGE.--8 years, 1,967 ft³/s, 1,425,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s Jan. 14, 1980, gage height, 14.78 ft from crest-stage gage; minimum daily, 819 ft³/s Feb. 1, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1974 reached a stage of 14.8 ft, from floodmarks on right bank, discharge 22,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s Mar. 15, gage height, 11.77 ft from crest-stage gage; minimum daily, 1,420 ft³/s Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420	1650	2340	1800	2320	5780	7600	3950	3510	1890	1540	1670
2	1420	1650	2390	1750	2330	6790	8300	4190	3390	1930	1490	1670
3	1460	1640	2020	1760	2450	7090	8200	4420	3650	1970	1620	1680
4	1600	1600	1980	1760	2350	6790	7300	4600	3650	1910	1530	1680
5	1600	1690	1930	1770	2300	6170	6300	4760	3530	1860	1540	1640
6	1520	1660	1940	1770	2240	5630	5300	4840	3410	1790	1530	1560
7	1560	1640	2000	1820	2410	5310	4350	4850	3520	1790	1550	1560
8	1550	1600	1880	2080	2690	5000	3900	4720	3490	1790	1520	1520
9	1530	1600	1720	2360	2690	4780	3550	4740	3420	1730	1520	1590
10	1580	1590	1850	2450	4250	4560	3400	4570	3350	1660	1540	1510
11	1530	1830	1670	2360	5020	4700	3500	4340	3340	1610	1520	1600
12	1500	1550	1670	2140	5160	5700	3650	4180	3190	1600	1510	1600
13	1500	1690	1690	2000	6550	8200	3700	3930	3070	1570	1520	1570
14	1560	1520	1590	1900	7080	10200	3630	3740	2940	1610	1520	1550
15	1490	1570	1670	1870	6870	11400	3630	3680	2910	1580	1530	1560
16	1500	1610	1680	2060	5880	10600	3530	3650	2800	1570	1530	1560
17	1510	1600	2190	2260	5040	9200	3440	3450	2420	1600	1480	1550
18	1510	1780	3610	2420	4500	7800	3360	3350	2730	1560	1550	1530
19	1540	2020	3090	3250	5560	6700	3290	3310	2490	1560	1570	1580
20	1560	2040	2640	3420	5520	5900	3280	3260	2420	1560	1570	1530
21	1550	2010	3900	3020	5010	5400	3400	3330	2230	1570	1550	1590
22	1530	1920	4560	2760	4400	5050	3550	3300	2080	1570	1590	1600
23	1550	1860	4710	2530	4060	4700	3740	3410	2020	1620	1570	1620
24	1590	1780	3770	3470	3840	4600	3890	3210	2040	1670	1480	1650
25	1520	1680	2860	4370	3690	4600	4020	3080	2030	1600	1630	1680
26	1730	1680	2370	4100	3890	4700	4020	3360	2080	1600	1570	1770
27	1680	1570	2330	5050	4290	4900	4040	3650	2070	1620	1590	1820
28	1740	1770	2100	4960	4750	5100	3930	3390	2010	1550	1670	1820
29	1660	2130	1960	4310	---	5500	3910	3430	1950	1610	1750	1740
30	1720	2210	1870	3710	---	5900	3830	3490	1920	1540	1710	1690
31	1780	---	1800	3140	---	6600	---	3500	---	1560	1650	---
TOTAL	48490	52140	73780	84420	117140	195350	131540	119680	83660	51650	48440	48690
MEAN	1564	1738	2380	2723	4184	6302	4385	3861	2789	1666	1563	1623
MAX	1780	2210	4710	5050	7080	11400	8300	4850	3650	1970	1750	1820
MIN	1420	1520	1590	1750	2240	4560	3280	3080	1920	1540	1480	1510
AC-FT	96180	103400	146300	167400	232300	387500	260900	237400	165900	102400	96080	96580

CAL YR 1982 TOTAL 940970 MEAN 2578 MAX 14700 MIN 1130 AC-FT 1866000
WTR YR 1983 TOTAL 1054980 MEAN 2890 MAX 11400 MIN 1420 AC-FT 2093000

NOTE: No gage-height record Mar. 11 to Apr. 12.

11355500 HAT CREEK NEAR HAT CREEK, CA

LOCATION.--Lat 40°41'12", long 121°25'25", in NW 1/4 SE 1/4 sec.28, T.33 N., R.5 E., Shasta County, Hydrologic Unit 18020003, on right bank 0.8 mi northeast of Old Station Post Office, and 8 mi southeast of Hat Creek Post Office.

DRAINAGE AREA.--162 mi², 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, from topographic map. July 1926 to April 1928 at site 0.5 mi upstream at different datum. May 1928 to July 1965 at site 80 ft upstream at datum 2.76 ft higher.

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

AVERAGE DISCHARGE.--56 years, 141 ft³/s, 102,200 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0245	393	4.05
Mar. 13	1015	235	3.18
June 10	2300	*456	4.42

Minimum daily, 143 ft³/s Dec. 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	178	161	144	157	171	178	164	320	345	221	180
2	153	173	161	145	157	169	176	164	298	345	223	178
3	153	171	161	149	155	169	172	166	295	308	220	177
4	153	170	160	152	153	168	171	170	312	306	213	176
5	152	169	160	153	156	167	169	171	315	326	212	171
6	153	168	159	154	156	166	168	169	319	324	209	170
7	153	168	157	154	158	168	168	168	336	308	210	169
8	153	168	153	153	157	165	169	170	341	274	206	169
9	152	165	156	152	157	166	169	168	357	264	206	168
10	151	166	157	151	158	172	168	167	371	258	203	167
11	151	164	154	151	157	174	169	166	388	261	200	164
12	151	164	155	151	169	173	168	168	343	268	195	164
13	150	163	155	151	167	218	166	169	332	281	193	165
14	150	162	155	150	162	202	165	172	352	295	193	168
15	150	162	152	150	162	191	164	176	357	284	190	168
16	149	162	155	153	160	185	163	178	354	262	189	168
17	149	166	158	151	162	182	165	180	369	260	187	167
18	149	179	155	154	174	180	165	184	373	244	185	167
19	150	171	156	153	165	176	166	191	338	240	188	166
20	151	167	160	151	163	175	168	199	322	235	190	166
21	154	165	166	150	162	174	168	208	306	234	196	166
22	198	164	156	153	163	174	169	219	322	237	200	168
23	283	163	153	152	164	173	171	235	331	234	195	170
24	196	161	148	161	163	173	170	245	326	231	187	170
25	207	158	147	155	164	170	168	249	318	229	185	168
26	275	157	156	177	162	169	166	257	324	224	184	167
27	193	160	154	175	163	170	166	275	322	223	182	168
28	182	166	145	166	163	168	166	284	315	225	180	168
29	192	166	143	163	---	168	164	302	309	226	180	171
30	202	165	143	159	---	171	164	300	308	228	179	172
31	185	---	143	158	---	188	---	309	---	230	179	---
TOTAL	5292	4981	4794	4791	4509	5435	5039	6343	9973	8209	6080	5076
MEAN	171	166	155	155	161	175	168	205	332	265	196	169
MAX	283	179	166	177	174	218	178	309	388	345	223	180
MIN	149	157	143	144	153	165	163	164	295	223	179	164
AC-FT	10500	9880	9510	9500	8940	10780	9990	12580	19780	16280	12060	10070
CAL YR 1982	TOTAL	61462	MEAN	168	MAX	313	MIN	117	AC-FT	121900		
WTR YR 1983	TOTAL	70522	MEAN	193	MAX	388	MIN	143	AC-FT	139900		

RESERVOIRS IN PIT AND MCCLLOUD RIVER BASINS, CA

11361400 LAKE BRITTON NEAR BURNEY.--Lat 41°01'20", long 121°40'32", in SW 1/4 SW 1/4 sec.30, T.37 N., R.3 E., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, at control house on right bank 200 ft upstream from dam on Pit River, 1.1 mi downstream from Clark Creek, 1.3 mi northwest of Burney Falls, and 9 mi north of Burney. DRAINAGE AREA, 4,607 mi². 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. Dead storage, 30 acre-ft. Normal operating pool is from elevation 2,744.0 ft, capacity, 26,183 acre-ft to 2,757.0 ft, capacity, 40,626 acre-ft. 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 Jan. 25, 1970, elevation, 2,761.55 ft; minimum total contents, 26,755 acre-ft Oct. 9, 1976, elevation, 2,744.60 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 42,231 acre-ft Mar. 15, elevation, 2,758.25 ft; minimum, 29,242 acre-ft Dec. 14, elevation, 2,747.10 ft.

11363920 IRON CANYON RESERVOIR NEAR BIG BEND.--Lat 41°02'41", long 121°58'52", in SW 1/4 SE 1/4 sec.21, T.37 N., R.1 W., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, in control house on left bank 500 ft upstream from Iron Canyon Dam on Iron Canyon Creek, 3.7 mi northwest of Big Bend. DRAINAGE AREA, 11.1 mi². 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 between elevations 2,525.00 ft, invert of sluice pipe and 2,665.00 ft, crest of spillway. No dead storage. Water is diverted from Lake McCloud through a tunnel to Iron Canyon Reservoir and then 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 May 16, 22, 1977, elevation, 2,663.60 ft; normal minimum since initial operation of reservoir, 2,860 acre-ft May 23, 24, 29, June 2, 7, 9, 14, 23, 24, 1966, elevation, 2,590.00 ft. Reservoir drained for inspection Feb. 10, 1971. Contents reduced to 195 acre-ft, elevation, 2,540.00 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 11,559 acre-ft Sept. 8, elevation, 2,633.30 ft; minimum, 3,367 acre-ft Feb. 4, elevation, 2,594.40 ft.

11367740 LAKE MCCLLOUD NEAR MCCLLOUD.--Lat 41°08'06", long 122°04'26", in SE 1/4 SW 1/4 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 downstream from Panther Creek, and 8.8 mi southeast of McCloud. DRAINAGE AREA, 403 mi². 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 between elevations 2,471.30 ft, invert of sluice pipe and 2,680.00 ft, maximum operational water surface. No dead storage. Water is diverted from Lake McCloud through a diversion tunnel to Iron Canyon Reservoir and then 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 Jan. 15, 1974, elevation, 2,681.40 ft; minimum since storage pool first filled, 13,017 acre-ft Oct. 14-22, 1981, elevation, 2,623.50 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 35,079 acre-ft Mar. 8, elevation, 2,679.70 ft; minimum, 16,586 acre-ft Oct. 18, elevation, 2,635.50 ft.

MONTHEND ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 MCCLLOUD		
Sept. 30.....	2753.00	35738	--	2613.90	6564	--	2636.40	16880	--
Oct. 31.....	2750.15	32492	-3246	2616.30	7084	+520	2642.30	18886	+2006
Nov. 30.....	2751.90	34462	+1970	2618.00	7471	+387	2644.10	19527	+641
Dec. 31.....	2751.80	34347	-115	2595.20	3467	-4004	2657.50	24733	+5206
CAL YR 1982..	--	--	-3910	--	--	-76	--	--	-7765
Jan. 31.....	2754.45	37466	+3119	2595.60	3517	+50	2679.10	34768	+10035
Feb. 28.....	2755.80	39120	+1654	2598.40	3889	+372	2679.60	35027	+259
Mar. 31.....	2756.35	39806	+686	2597.80	3807	-82	2679.40	34923	-104
Apr. 30.....	2754.60	37648	-2158	2595.70	3530	-277	2679.40	34923	0
May 31.....	2754.35	37345	-303	2597.70	3794	+264	2679.30	34871	-52
June 30.....	2750.45	32825	-4520	2595.00	3441	-353	2679.50	34975	+104
July 31.....	2754.70	37769	+4944	2618.81	7659	+4218	2675.70	33044	-1931
Aug. 31.....	2755.10	38257	+488	2631.60	11051	+3392	2670.80	30660	-2384
Sept. 30.....	2753.65	36507	-1750	2608.60	5522	-5529	2654.90	23662	-6998
WTR YR 1983..	--	--	+769	--	--	-1042	--	--	+6782

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 downstream from Ruling Creek, 1.3 mi downstream from Pit No. 4 Dam, and 2.7 mi downstream from Pit No. 3 powerhouse.

DRAINAGE AREA.--4,648 mi², 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, from river-profile map. Prior to November 1922, water-stage recorder at site at Pecks Bridge 7.4 mi upstream at different datum. November 1922 to June 20, 1927, at site at Lindsay Flat 1.8 mi upstream at different datum.

REMARKS.--Flow regulated by small reservoirs and powerplants, total usable reservoir capacity, 253,000 acre-ft. 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.--61 years (water years 1923-83), 2,761 ft³/s, 2,000,000 acre-ft/yr, adjusted for diversion to Pit No. 4 powerplant.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,300 ft³/s Mar. 13, gage height, 13.08 ft; minimum daily discharge, 45 ft³/s Dec. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	76	50	50	421	4030	4700	1430	976	148	146	148
2	100	76	45	51	63	5440	4730	1710	906	147	145	146
3	99	76	49	50	51	5800	4530	1840	961	146	147	148
4	100	76	50	50	49	5330	4140	2040	1130	149	144	152
5	99	76	50	50	50	4770	3620	2200	973	150	145	146
6	100	76	51	51	51	4100	2670	2300	1020	150	144	147
7	99	76	51	50	51	3760	2410	2370	890	148	146	145
8	100	76	83	51	50	3540	2000	2280	876	146	144	147
9	99	76	55	50	422	3100	1770	2150	783	150	147	149
10	99	75	49	51	2290	2830	1580	2070	703	146	139	144
11	99	76	50	49	3300	2770	1420	1880	753	153	144	155
12	99	76	51	50	3470	3390	1410	1630	622	150	149	150
13	99	75	48	50	5090	7300	1360	1370	509	145	147	97
14	99	79	51	49	5510	9620	1200	1210	329	143	146	79
15	100	79	51	50	5410	10200	1150	1050	268	148	145	80
16	99	76	55	49	4270	9320	1070	1040	204	148	145	93
17	100	76	49	57	3320	7710	978	904	174	151	145	151
18	99	78	49	49	2220	6100	902	768	164	147	145	149
19	99	78	51	47	4050	5330	886	731	168	150	146	145
20	100	75	51	232	3660	4090	861	703	162	146	150	138
21	100	76	436	326	3150	3410	940	741	166	148	144	154
22	99	75	2370	158	2310	2910	1090	753	149	147	148	154
23	98	76	2410	49	1870	2850	1220	887	149	146	143	146
24	99	74	1460	90	1630	2820	1460	888	146	148	142	161
25	99	127	558	1840	1410	2440	1630	545	157	146	146	144
26	99	85	110	2090	1460	2740	1650	734	149	145	146	152
27	98	75	50	3390	1860	2360	1650	1040	143	141	149	146
28	99	76	51	3650	2610	2540	1550	1010	144	145	149	151
29	99	76	49	2700	---	2570	1510	978	144	147	148	153
30	100	75	54	2010	---	2860	1410	995	144	143	147	173
31	99	---	50	1170	---	3420	---	1030	---	147	147	---
TOTAL	3078	2342	8637	18659	60098	139450	57497	41277	14062	4564	4518	4243
MEAN	99.3	78.1	279	602	2146	4498	1917	1332	469	147	146	141
MAX	101	127	2410	3650	5510	10200	4730	2370	1130	153	150	173
MIN	98	74	45	47	49	2360	861	545	143	141	139	79
AC-FT	6110	4650	17130	37010	119200	276600	114000	81870	27890	8050	8960	8420
MEAN a	2640	2880	3705	4064	6163	8610	6238	5635	4331	2731	2634	2741
AC-FT a	162300	171400	227800	249900	342300	529400	371200	346500	257700	168000	162000	163100

CAL YR 1982 TOTAL 281777 MEAN 772 MAX 14300 MIN 45 AC-FT 558900 MEAN a 3901 AC-FT a 2825000
WTR YR 1983 TOTAL 350425 MEAN 982 MAX 10200 MIN 45 AC-FT 710900 MEAN a 4353 AC-FT a 3151000

a Adjusted for diversion to Pit No. 4 powerplant.

11363000 PIT RIVER AT BIG BEND, CA

LOCATION.--Lat 41°01'10", long 121°54'36", in NW 1/4 SW 1/4 sec.31, T.37 N., R.1 E., Shasta County, Hydrologic Unit 18020003, on left bank at Big Bend, 0.4 mi downstream from Nelson Creek, and 1.5 mi upstream from Kosk Creek.

DRAINAGE AREA.--4,711 mi², 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 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 higher.

REMARKS.--Flow regulated by many reservoirs and powerplants, total usable reservoir capacity, about 253,000 acre-ft. 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, 2,122,000 acre-ft/yr; 40 years (water years 1944-83), 584 ft³/s, 423,100 acre-ft/yr, unadjusted.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,500 ft³/s Mar. 13, gage height, 13.32 ft; minimum daily, discharge 87 ft³/s Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	125	439	128	1090	5240	5500	2030	1410	173	142	139
2	111	97	406	127	910	6370	5490	2240	1340	167	140	134
3	109	94	429	124	590	6630	5180	2340	1370	160	139	133
4	113	97	400	121	507	6090	4780	2540	1530	160	138	131
5	121	102	350	119	269	5800	4290	2730	1390	158	136	131
6	118	89	345	116	339	5330	3380	2800	1230	157	137	131
7	109	96	330	117	462	5130	3130	2840	1250	160	139	130
8	107	109	395	111	1060	4980	2690	2770	1400	159	140	130
9	117	106	449	111	1690	4340	2460	2610	1190	162	136	133
10	117	103	315	110	4050	3990	2240	2550	1120	158	138	126
11	120	104	239	108	4610	3970	2090	2370	1150	153	136	129
12	121	97	276	109	4960	4860	2040	2130	1030	152	139	130
13	119	95	409	106	6280	9090	1970	1920	915	150	137	126
14	115	92	463	104	6420	10500	1800	1760	757	148	136	123
15	114	87	191	103	6250	10700	1710	1580	668	145	136	128
16	111	97	375	114	5150	9750	1630	1520	610	145	133	129
17	116	109	940	116	4290	8300	1560	1440	552	148	134	124
18	116	200	843	191	3430	6750	1460	1290	290	148	131	126
19	118	259	1360	208	4950	5960	1460	1240	188	147	132	128
20	121	229	1570	366	4520	4840	1430	1240	228	149	131	126
21	124	149	2060	868	4010	4200	1500	1250	183	151	134	128
22	127	116	4010	698	3170	3750	1660	1270	177	147	138	132
23	124	152	3400	564	2700	3640	1860	1380	177	146	135	132
24	120	110	2100	810	2430	3630	2100	1410	175	145	131	133
25	141	99	1230	2340	2220	3180	2230	1110	170	141	130	132
26	135	104	613	3220	2250	3500	2200	1230	172	138	126	132
27	117	118	174	4530	2690	3170	2190	1500	171	131	128	129
28	325	222	155	4520	3540	3270	2110	1510	167	133	132	131
29	283	613	146	3000	---	3390	2060	1450	166	141	130	130
30	175	555	138	2000	---	4210	1950	1450	166	140	131	135
31	135	---	133	1530	---	4570	---	1480	---	142	136	---
TOTAL	4118	4625	24683	26788	84837	169130	76140	56980	21342	4654	4181	3901
MEAN	133	154	796	864	3030	5456	2538	1838	711	150	135	130
HAX	325	613	4010	4530	6420	10700	5500	2840	1530	173	142	139
MIN	107	87	133	103	269	3170	1430	1110	166	131	126	123
AC-FT	8170	9170	48960	53130	168300	335500	151000	113000	42330	9230	8290	7740
CAL YR 1982	TOTAL	378930	MEAN	1038	HAX	14300	MIN	67	AC-FT	751600		
WTR YR 1983	TOTAL	481379	MEAN	1319	HAX	10700	MIN	87	AC-FT	954800		

SACRAMENTO RIVER BASIN

11363910 JAMES B. BLACK POWERPLANT NEAR BIG BEND, CA

LOCATION.--Lat 40°59'12", long 121°58'35", in SW 1/4 SE 1/4 sec.9, T.36 N., R.1 W., Shasta County, Hydrologic Unit 18020003, at powerplant on right bank of Pit River, 5.8 mi downstream from Big Bend.

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

GAGE.--Recorded output from powerplant turbines.

REMARKS.--Water is diverted from Lake McCloud (station 11367740) at SE 1/4 SW 1/4 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.--17 years (water years 1967-83), 981 ft³/s, 710,700 acre-ft/yr.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	781	806	977	1200	1480	1680	1650	1300	1450	1340	1500	767
2	758	920	984	1220	1450	1790	1520	1470	1390	1390	1180	986
3	822	956	1150	756	1380	1710	1510	1450	1340	1350	1180	1050
4	780	943	1180	986	1510	1560	1460	1400	1300	1330	1150	1060
5	785	988	970	986	1370	1620	1450	1430	1370	1330	1140	1100
6	757	995	616	845	1470	1490	1430	1430	1320	1350	1240	1060
7	781	950	990	1210	1430	1510	1440	1400	1380	1330	1170	1040
8	755	945	685	1350	1530	1590	1450	1410	1360	1380	1160	940
9	732	888	861	867	1740	1580	1450	1420	1340	1290	1120	1040
10	805	620	1050	868	1800	1570	1450	1390	1370	1380	1240	1560
11	777	785	1080	1110	1550	1510	1430	1390	1340	1340	1110	1410
12	728	787	746	908	1650	1500	1400	1220	1330	1010	1160	1490
13	757	761	764	551	1830	1800	1440	1560	1430	1390	1190	1690
14	804	722	548	1050	1700	1640	1410	1390	1390	1310	963	1650
15	743	781	1340	1060	1570	1570	1420	1290	1320	1290	1090	1690
16	763	786	667	1090	1520	1520	1430	1460	1380	1130	1310	1420
17	726	740	1490	676	1480	1420	1400	1400	1380	1150	1450	1540
18	808	450	1170	944	1500	1440	1380	1390	1390	1230	1240	1330
19	643	669	1090	533	1470	1440	1420	1380	1310	1060	1260	1270
20	701	956	1310	35	1630	1560	1420	1370	1360	1490	1090	1340
21	732	746	1540	296	1440	1330	1420	1300	1290	1260	1070	1160
22	717	843	1070	1860	1480	1540	1280	1440	1400	1230	765	1240
23	742	789	1140	1750	1460	1490	1520	1350	1340	946	989	1190
24	804	795	1180	1400	1480	1460	1380	1330	1380	817	972	1500
25	768	743	1390	1390	1440	1450	1430	1440	1380	1540	973	1090
26	962	917	1700	1660	1390	1490	1450	1330	1360	625	1240	1230
27	924	801	1390	1830	1500	1450	1400	1370	1370	1010	1150	1170
28	909	605	1170	1640	1510	1480	1420	1400	1320	853	772	1060
29	873	702	1320	1590	---	1580	1420	1290	1380	508	764	822
30	654	838	1240	1500	---	1610	1450	1520	1400	1450	795	869
31	868	---	1240	1500	---	1670	---	1270	---	1500	699	---
TOTAL	24159	24227	34048	34661	42760	48050	43130	42990	40870	37609	34132	36764
MEAN	779	808	1098	1118	1527	1550	1438	1387	1362	1213	1101	1225
MAX	962	995	1700	1860	1830	1800	1650	1560	1450	1540	1500	1690
MIN	643	450	548	35	1370	1330	1280	1220	1290	508	699	767
AC-FT	47920	48050	67530	68750	84810	95310	85550	85270	81070	74600	67700	72920

CAL YR 1982 TOTAL 407622.00 MEAN 1117 MAX 1850 MIN .00 AC-FT 808500
WTR YR 1983 TOTAL 443400.00 MEAN 1215 MAX 1860 MIN 35 AC-FT 879500

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

LOCATION.--Lat 41°02'27", long 121°59'02", in NW 1/4 NW 1/4 sec.28, T.37 N., R.1 W., Shasta County, Hydrologic Unit 18020003, on left bank 0.2 mi downstream from Iron Canyon Dam, and 4.2 mi west of Big Bend.

DRAINAGE AREA.--11.6 mi².

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 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.--17 years, 6.30 ft³/s, 4,560 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11 ft³/s Mar. 13, gage height, 1.63 ft; minimum daily discharge, 1.9 ft³/s Dec. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.1	3.0	3.1	3.1	4.6	3.0	3.1	3.1	3.0	3.1	3.1
2	3.1	3.1	3.1	3.0	3.1	4.1	3.0	3.1	3.1	3.0	3.1	3.1
3	3.0	3.0	3.0	3.0	3.1	3.7	3.0	3.1	3.1	2.9	3.1	3.1
4	3.1	3.1	3.0	3.0	3.1	3.1	3.1	2.7	3.1	3.0	3.1	3.1
5	3.1	3.1	3.1	3.0	3.1	3.3	3.1	3.0	3.1	3.0	3.1	3.1
6	3.1	3.1	2.7	3.1	3.1	3.1	2.7	2.9	3.1	3.0	3.1	3.1
7	3.0	3.1	3.1	3.0	3.1	3.2	3.0	3.0	3.1	2.9	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.1	3.0	3.1	3.1
9	3.1	3.1	3.1	3.0	4.0	3.0	3.1	3.0	3.1	3.1	3.1	3.1
10	3.0	3.1	3.1	3.0	4.3	3.0	3.1	3.1	3.1	3.1	3.1	3.1
11	3.0	3.1	3.1	3.0	3.4	3.0	3.1	3.0	3.1	3.1	3.2	3.1
12	3.0	3.0	3.1	3.0	5.6	3.7	3.1	3.1	3.0	3.1	3.1	3.1
13	3.0	3.1	3.1	3.1	5.0	5.7	3.0	3.0	3.1	3.1	3.1	3.1
14	3.1	3.1	3.1	3.0	4.0	3.8	3.1	3.1	2.6	3.1	3.1	3.1
15	3.1	3.1	3.1	3.1	3.3	3.1	3.0	3.1	3.0	3.1	3.1	3.1
16	3.1	3.1	3.8	3.1	3.1	2.9	3.1	3.0	3.1	3.1	3.1	3.1
17	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.1	3.1	3.1
18	3.1	3.0	3.1	3.0	3.4	3.1	3.1	3.1	3.0	3.1	3.1	3.1
19	3.1	3.1	3.1	2.7	2.8	3.1	3.1	3.1	3.1	3.0	3.1	3.1
20	3.1	3.1	3.1	3.1	2.5	3.1	3.1	3.1	3.0	3.1	3.1	3.1
21	3.0	3.1	3.0	3.1	2.3	3.1	3.1	3.0	3.0	3.1	3.1	3.1
22	3.1	3.1	1.9	3.1	2.1	3.1	3.1	3.1	3.0	3.1	3.1	3.1
23	3.1	3.1	1.9	3.2	2.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1
24	3.1	3.1	3.0	3.0	2.4	3.1	3.1	3.1	3.0	3.1	3.0	3.1
25	3.2	3.1	3.0	3.1	3.1	3.1	3.1	3.0	3.0	3.1	3.1	3.1
26	2.8	3.1	3.1	3.9	3.1	3.0	3.1	3.1	3.0	3.1	3.1	3.1
27	3.1	3.1	3.1	3.7	3.1	3.1	3.1	3.1	3.0	3.1	3.1	3.1
28	3.1	3.2	3.0	3.0	3.3	3.1	3.1	3.1	3.0	3.1	3.1	3.1
29	3.1	3.0	3.1	3.0	---	3.1	3.1	3.1	3.0	3.1	3.0	3.1
30	3.1	3.1	3.1	2.8	---	3.8	3.1	3.1	3.0	3.1	2.9	3.1
31	3.1	---	3.0	3.1	---	3.2	---	3.1	---	3.1	3.1	---
TOTAL	95.1	92.7	93.2	95.5	90.7	103.6	92.0	94.6	91.1	95.0	95.8	93.0
MEAN	3.07	3.09	3.01	3.08	3.24	3.34	3.07	3.05	3.04	3.06	3.09	3.10
MAX	3.2	3.2	3.8	3.9	5.6	5.7	3.1	3.1	3.1	3.1	3.2	3.1
MIN	2.8	3.0	1.9	2.7	2.0	2.9	2.7	2.7	2.6	2.9	2.9	3.1
AC-FT	189	184	185	189	180	205	182	188	181	188	190	184
CAL YR 1982	TOTAL	1144.8	MEAN 3.14	MAX 6.2	MIN 1.9	AC-FT 2270						
WTR YR 1983	TOTAL	1132.3	MEAN 3.10	MAX 5.7	MIN 1.9	AC-FT 2250						

11365000 PIT RIVER NEAR MONTGOMERY CREEK, CA

LOCATION.--Lat 40°50'36", long 122°00'58", in NE 1/4 SW 1/4 sec. 32, T.35 N., R.1 W., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, on left bank 0.9 mi downstream from Pit No. 7 Dam and powerhouse, 1.5 mi upstream from Potem Creek, and 4.1 mi west of town of Montgomery Creek. Prior to June 20, 1981, at site 1.0 mi downstream on right bank.

DRAINAGE AREA.--4,952 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--October 1944 to current year (monthly discharge only December 1964 to May 1965). 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 National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.). October 1944 to Feb. 17, 1963, at site 0.9 mi upstream at different datum. Feb. 17, 1963, to May 21, 1965, at site 1.7 mi upstream at different datum. May 21, 1965, to June 20, 1981, at site 1.0 mi downstream at datum 1,036 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs and powerplants, total usable reservoir capacity, 337,000 acre-ft. 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.

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 from McCloud River).--21 years (water years 1945-65), 3,759 ft³/s, 2,721,000 acre-ft/yr; 18 years (water years 1966-83), 5,218 ft³/s, 3,780,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s Jan. 24, 1970, gage height, 32.36 ft site and datum then in use; minimum daily discharge, 30 ft³/s July 12, 27, 1975, result of construction work below Pit No. 7 powerplant.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,000 ft³/s Mar. 13, gage height, 70.69 ft; minimum daily discharge, 2,100 ft³/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3640	3880	3940	5490	8860	19600	16000	9290	7870	5270	4440	4220
2	2870	3860	3890	4900	8570	18700	15200	10000	7260	4430	4400	2310
3	2100	3800	3870	4510	8430	18100	14000	9210	7030	3510	4330	2930
4	3110	3880	3950	5380	7000	15900	13100	9840	6790	4240	4280	3740
5	3120	3880	4610	5240	7450	16600	12400	9180	7840	4860	4360	3780
6	4030	3870	4100	5720	7560	16200	11100	10000	6170	5080	4240	3540
7	3970	3290	4520	5430	9300	16400	10700	10100	6740	5350	4340	3380
8	2620	3070	3960	6490	10900	16400	10100	9600	6980	5310	4330	3890
9	4430	3860	4350	5930	14300	14400	9860	9400	6760	5080	4300	4410
10	3000	3280	4990	3850	19200	13600	9520	10100	6740	5460	4300	4940
11	3390	3890	4120	3920	15400	13400	9360	8390	6490	4450	4310	4030
12	3270	3850	3920	3970	17400	17200	9170	8620	6490	3720	3790	3690
13	3860	3770	3910	3910	19600	31100	8900	8740	7040	4540	4300	4930
14	3650	2440	3960	3960	17100	23100	8760	7940	6240	4290	3990	4790
15	3470	2280	5920	5920	15900	22000	8430	7950	6060	3330	4180	4510
16	2290	4180	6150	4950	14000	20100	8440	7930	6080	4310	4190	4380
17	2400	3920	11500	8040	12700	18300	8510	7870	5680	4140	4220	4600
18	2980	4250	4950	7460	13500	15900	8420	7830	5800	4200	4290	3810
19	2950	4230	8040	7240	13900	14700	8410	6560	5280	3380	4290	4120
20	3420	4230	3690	6430	13100	13300	8420	7210	5600	3890	4320	3640
21	3510	4230	10500	7790	12000	12200	8420	7740	5060	3910	4330	4190
22	3610	4230	11800	6610	10800	12300	8420	7770	5240	3890	4250	3480
23	3860	4220	10300	7830	10400	11900	8890	7830	6220	3900	3070	4290
24	3860	4210	9860	8160	10100	12200	9490	7820	5040	3620	3400	4160
25	2800	2790	8570	10100	9960	11400	9870	7870	4680	3860	3930	3270
26	3920	4180	7900	18700	10100	11800	9780	7570	5440	3960	4320	3760
27	3840	3840	6190	17700	11500	11800	9530	7680	5380	3840	4290	3490
28	3870	3920	5150	15100	13600	11400	9720	7880	4220	4450	4270	3510
29	3850	3960	6130	13200	---	12300	9460	7820	4730	2930	4250	4000
30	3880	3930	4680	11100	---	17800	9640	7020	5290	4480	4250	3690
31	4020	---	5290	10300	---	16800	---	7270	---	4470	4240	---
TOTAL	105590	113220	184710	235330	342630	496900	302020	260030	182240	132150	129800	117480
MEAN	3406	3774	5958	7591	12240	16030	10070	8388	6075	4263	4187	3916
MAX	4430	4250	11800	18700	19600	31100	16000	10100	7870	5460	4440	4940
MIN	2100	2280	3690	3850	7000	11400	8410	6560	4220	2930	3070	2310
AC-FT	209400	224600	366400	466800	679600	985600	599100	515800	361500	262100	257500	233000
CAL YR 1982	TOTAL	2271091	MEAN	6222	MAX	27100	MIN	811	AC-FT	4505000		
WTR YR 1983	TOTAL	2602100	MEAN	7129	MAX	31100	MIN	2100	AC-FT	5161000		

11367500 McCLOUD RIVER NEAR McCLOUD, CA

LOCATION.--Lat 41°11'18", long 122°03'52", in NW 1/4 NE 1/4 sec.34, T.39 N., R.2 W., Siskiyou County, Hydrologic Unit 18020004, on right bank 0.4 mi downstream from Angel Creek, and 6 mi southeast of McCloud.

DRAINAGE AREA.--358 mi².

PERIOD OF RECORD.--April 1931 to current year.

REVISED RECORDS.--WSP 843: 1936(M). WSP 1445: 1940(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,711.2 ft National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Two small diversions above station for irrigation, and one 22-in pipeline for town of McCloud. 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.--52 years, 932 ft³/s, 675,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s Dec. 21, 1955, gage heights, 9.42 ft in gage well, 10.7 ft from floodmarks, from rating curve extended above 8,800 ft³/s on basis of slope-area measurement of maximum flow; minimum, 524 ft³/s Nov. 23, 24, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	0630	2,110	3.05	Mar. 13	1300	4,860	5.42
Jan. 27	0315	*5,080	5.57	Mar. 31	0200	2,730	3.72
Feb. 13	0230	3,300	4.22	May 30	0245	2,140	3.16

Minimum daily discharge, 804 ft³/s Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	935	937	897	874	1300	2640	2110	1740	1910	1330	1130	1080
2	934	930	868	867	1250	2620	2050	1730	1800	1390	1130	1080
3	928	925	848	863	1190	2470	1950	1730	1740	1340	1130	1080
4	928	922	842	860	1150	2170	1860	1760	1730	1310	1120	1070
5	928	919	850	854	1120	2300	1790	1810	1710	1300	1120	1070
6	929	916	851	854	1110	2270	1740	1820	1700	1300	1120	1070
7	928	916	846	851	1100	2180	1710	1750	1720	1280	1110	1070
8	927	926	837	847	1180	2260	1700	1730	1730	1270	1110	1070
9	922	918	832	847	1460	2200	1720	1690	1760	1260	1110	1070
10	922	916	827	844	1460	2430	1700	1650	1750	1240	1110	1070
11	922	916	821	841	1490	2440	1670	1620	1730	1230	1110	1060
12	922	910	820	841	2190	2520	1630	1630	1620	1220	1110	1060
13	922	910	818	838	2940	4180	1590	1630	1550	1220	1100	1060
14	922	910	816	835	2100	3210	1560	1630	1500	1220	1100	1060
15	916	910	831	835	1830	2590	1550	1640	1500	1210	1100	1050
16	916	910	1070	839	1680	2330	1550	1640	1480	1210	1100	1050
17	916	912	1900	849	1600	2190	1570	1640	1470	1200	1090	1050
18	916	921	1320	905	2380	2050	1580	1660	1480	1200	1090	1050
19	916	915	1110	954	2130	1930	1640	1720	1440	1190	1090	1050
20	916	911	1040	921	1840	1860	1700	1760	1410	1180	1090	1050
21	922	910	1170	904	1690	1830	1740	1820	1390	1180	1090	1050
22	940	910	1210	899	1610	1830	1870	1890	1370	1170	1090	1050
23	959	910	1080	918	1600	1770	2010	1960	1380	1160	1090	1060
24	969	910	1010	1400	1570	1750	2020	1990	1380	1160	1090	1050
25	991	909	972	1320	1590	1690	1900	2000	1360	1160	1090	1050
26	964	904	949	2240	1540	1640	1830	2020	1350	1150	1090	1050
27	986	916	932	4080	1570	1630	1770	2020	1350	1150	1090	1050
28	953	960	914	2300	1780	1600	1790	2030	1340	1140	1090	1040
29	951	946	902	1800	---	1610	1800	2100	1320	1140	1080	1050
30	956	961	891	1500	---	2130	1770	2080	1320	1140	1080	1050
31	947	---	883	1370	---	2490	---	2010	---	1140	1080	---
TOTAL	26003	24786	29957	35950	45450	60810	52870	55900	46290	37790	34130	31770
MEAN	839	926	966	1160	1623	2220	1762	1803	1543	1219	1101	1059
MAX	964	961	1900	4080	2940	4180	2110	2100	1910	1390	1130	1080
MIN	816	804	816	835	1100	1600	1550	1620	1320	1140	1080	1040
AC-FT	51580	49160	59420	71310	90150	136500	104900	110900	91820	74960	67700	63020
CAL YR 1982	TOTAL	389134	MEAN	1066	MAX	2910	MIN	793	AC-FT	771800		
WTR YR 1983	TOTAL	489706	MEAN	1342	MAX	4180	MIN	804	AC-FT	971300		

SACRAMENTO RIVER BASIN

11367720 McCLOUD-IRON CANYON DIVERSION TUNNEL NEAR McCLOUD, CA

LOCATION.--Lat 41°08'06", long 122°04'26", in SE 1/4 SW 1/4 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 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 then 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.--17 years, 963 ft³/s, 697,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,890 ft³/s several days during May and June 1967; no flow several days in 1965-68, 1971, 1978.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	729	753	789	1200	1400	1370	1410	1390	1410	1420	1200	934
2	726	787	806	1190	1410	1390	1420	1400	1400	1410	1170	937
3	732	800	867	1100	1400	1400	1410	1410	1410	1410	1190	942
4	729	807	908	1060	1420	1400	1410	1250	1400	1420	1170	949
5	732	822	896	1030	1400	1410	1410	1420	1410	1400	1170	963
6	728	832	845	986	1410	1390	1410	1420	1410	1410	1190	962
7	731	833	857	1010	1390	1390	1410	1420	1420	1410	1180	962
8	729	836	828	1050	1390	1400	1420	1410	1420	1410	1180	957
9	724	829	828	1010	1390	1400	1420	1410	1410	1400	1160	968
10	728	792	871	977	1400	1400	1410	1410	1420	1410	1180	1040
11	729	777	896	976	1400	1410	1410	1400	1400	1380	1180	1070
12	724	770	849	962	1370	1400	1410	1390	1390	1350	1180	1100
13	723	758	830	885	1380	1390	1420	1420	1410	1360	1180	1150
14	728	748	781	920	1400	1400	1410	1410	1410	1350	1140	1210
15	728	745	870	935	1410	1400	1410	1400	1400	1350	1140	1270
16	723	747	855	960	1410	1400	1410	1410	1400	1320	1160	1280
17	715	740	1030	900	1420	1400	1400	1410	1410	1300	1190	1320
18	708	654	1050	921	1400	1390	1410	1410	1410	1300	1200	1300
19	703	665	1090	867	1390	1400	1410	1410	1400	1270	1210	1280
20	700	728	1110	741	1410	1410	1410	1410	1410	1290	1200	1280
21	705	729	1170	716	1390	1390	1410	1410	1400	1290	1190	1240
22	717	739	1150	875	1400	1400	1390	1410	1410	1280	1110	1230
23	701	741	1140	1010	1410	1400	1410	1410	1410	1240	1090	1210
24	714	744	1150	1090	1410	1390	1400	1390	1410	1200	1070	1240
25	736	737	1160	1150	1420	1390	1410	1410	1410	1240	1050	1220
26	796	756	1250	1290	1400	1390	1400	1400	1420	1150	1070	1200
27	808	759	1260	1380	1410	1380	1400	1390	1420	1140	1060	1190
28	814	709	1240	1390	1390	1390	1400	1400	1410	1110	1030	1140
29	811	736	1230	1400	---	1400	1400	1390	1400	1070	996	1090
30	759	763	1230	1400	---	1380	1410	1420	1420	1110	973	1050
31	761	---	1220	1410	---	1390	---	1390	---	1150	947	---
TOTAL	22791	22836	31056	32791	39230	43250	42260	43430	42260	40350	35156	33684
MEAN	735	761	1002	1058	1401	1395	1409	1401	1409	1302	1134	1123
MAX	814	836	1260	1410	1420	1410	1420	1420	1420	1420	1210	1320
MIN	700	654	781	716	1370	1370	1390	1250	1390	1070	947	934
AC-FT	45210	45300	61600	65040	77810	85790	83820	86140	83820	80030	69730	66810
CAL YR 1982	TOTAL	381724	MEAN	1046	MAX	1420	MIN	654	AC-FT	757100		
WTR YR 1983	TOTAL	429094	MEAN	1176	MAX	1420	MIN	654	AC-FT	851100		

11367760 MC CLOUD RIVER BELOW MC CLOUD DAM, NEAR MC CLOUD, CA

LOCATION.--Lat 41°07'44", long 122°04'08", in SW 1/4 NE 1/4 sec.27, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on left bank 0.1 mi downstream from Lizard Creek, 0.6 mi downstream from McCloud Dam, and 9 mi southeast of McCloud.

DRAINAGE AREA.--404 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 2,398.76 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.) Prior to April 7, 1972, at datum 3.00 ft higher.

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. During water years 1975-81, because of channel changes, flow was computed only up to 200 ft³/s. Currently, because of maximum required release, flow is computed only to 210 ft³/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 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	186	---	82	---				---	---	177	185
2	194	188	108	83	---				---	---	177	184
3	194	191	125	87	110				---	193	177	179
4	195	192	137	92	102				---	187	178	179
5	194	193	143	94	67				---	174	178	179
6	195	194	143	96	42				---	157	178	179
7	195	195	142	96	75				---	163	178	180
8	196	188	148	94	108				---	162	178	180
9	197	191	152	93	---				---	163	179	181
10	199	194	157	93	---				---	165	179	183
11	198	193	162	94	---				---	164	179	183
12	198	194	162	95	---				---	166	179	183
13	199	195	163	96	---				---	183	179	183
14	199	195	166	98	---				---	174	179	183
15	199	195	149	98	---				---	177	180	183
16	199	195	67	93	---				---	179	180	185
17	200	192	70	88	---				---	179	180	184
18	200	176	54	60	---				---	179	181	185
19	200	162	51	47	---				---	180	181	185
20	200	167	51	46	---				---	178	178	189
21	192	171	62	46	---				---	173	179	186
22	179	177	60	46	---				---	172	181	184
23	154	180	55	48	---				---	173	178	189
24	175	182	52	67	---				---	173	178	192
25	154	185	51	57	---				---	174	180	193
26	118	186	50	107	---				---	176	180	193
27	170	176	49	---	---				---	177	180	196
28	184	103	56	---	---				---	177	181	195
29	182	58	67	---	---				---	177	180	194
30	175	57	75	---	---				194	176	181	193
31	180	---	83	---	---				---	176	181	---
TOTAL	5807	5251	---	---	---				---	---	5554	5567
MEAN	187	175	---	---	---				---	---	179	186
MAX	200	195	---	---	---				---	---	181	196
MIN	118	57	---	---	---				---	---	177	179
AC-FT	11520	10420	---	---	---				---	---	11020	11040

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

LOCATION.--Lat 41°06'39", long 122°05'42", in NE 1/4 SW 1/4 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 downstream from Squirrel Creek, 3.9 mi downstream from McCloud Dam, and 9.6 mi south of McCloud.

DRAINAGE AREA.--427 mi².

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

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

REMARKS.--Flow regulated by Lake McCloud 3.9 mi upstream (station 11367740) since November 1965. Diversion to Iron Canyon Reservoir (station 11363920) through McCloud-Iron Canyon 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).--19 years, 1,262 ft³/s, 914,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to construction of McCloud Dam, 9,660 ft³/s Dec. 22, 1964, gage height, 9.43 ft, from rating curve extended above 2,500 ft³/s; minimum daily discharge, 86 ft³/s Oct. 1-26, 1964. Maximum discharge since construction of McCloud Dam in 1965, 26,400 ft³/s Jan. 16, 1974, gage height, 13.68 ft in gage well, 15.38 ft from floodmarks, from rating curve extended above 8,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily discharge, 41 ft³/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, discharge, 17,800 ft³/s, from rating curve extended above 2,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,850 ft³/s Mar. 13, gage height, 8.04 ft; minimum daily discharge, 158 ft³/s Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	207	225	163	625	4010	1840	880	1010	268	202	208
2	207	206	203	159	462	3490	1570	869	871	343	201	210
3	207	207	200	158	324	3100	1380	872	697	232	201	212
4	207	207	207	160	296	2210	1140	868	730	225	203	211
5	207	207	209	160	248	2500	1020	1030	725	213	202	211
6	209	207	210	160	242	2410	912	974	755	197	201	211
7	207	206	206	161	315	2060	877	907	745	203	201	210
8	207	208	207	161	501	2430	832	854	817	202	201	210
9	208	205	207	160	1360	2090	829	791	871	201	201	210
10	207	207	206	160	1480	2390	795	688	844	202	201	212
11	207	207	207	159	1100	2310	750	676	801	201	201	212
12	207	207	208	159	3160	2780	679	670	544	201	201	211
13	207	207	206	159	4150	5920	611	668	568	208	201	210
14	207	207	207	160	2030	3710	565	640	516	207	201	211
15	207	207	210	160	1460	2560	569	721	509	211	201	210
16	207	206	596	162	1080	1980	528	676	465	212	201	211
17	207	209	918	162	979	1670	589	640	517	212	200	209
18	207	214	409	214	2500	1440	609	721	466	211	202	210
19	207	206	281	264	2020	1240	708	767	436	212	204	210
20	207	206	247	217	1390	1120	768	918	380	208	201	213
21	212	205	680	189	973	1040	839	905	350	204	200	211
22	206	205	575	175	804	1110	1030	1130	366	201	205	211
23	222	206	364	200	747	1030	1460	1090	359	202	201	215
24	203	207	273	622	756	1140	1420	1200	315	201	200	211
25	231	207	225	470	797	918	1150	1170	243	202	201	211
26	196	207	198	1270	809	838	995	1270	287	204	201	210
27	205	211	175	4180	990	895	915	1250	282	204	201	214
28	208	250	167	3070	1890	796	1030	1240	277	204	201	212
29	208	327	169	1550	---	932	1030	1370	267	204	200	211
30	206	243	169	905	---	2510	982	1350	234	202	201	213
31	205	---	170	711	---	2700	---	1170	---	201	203	---
TOTAL	6445	6411	8733	16760	33488	65329	28422	28975	16247	6598	6241	6331
MEAN	208	214	282	541	1196	2107	947	935	542	213	201	211
MAX	231	327	918	4180	4150	5920	1840	1370	1010	343	205	215
MIN	196	205	167	158	242	796	528	640	234	197	200	208
AC-FT	12780	12720	17320	33240	66420	129600	56380	57470	32230	13090	12380	12560
MEAN a	976	986	1368	1762	2602	3501	2356	2335	1952	1483	1297	1216
AC-FT a	60000	58660	84130	108300	144500	215300	140200	143600	116200	91190	79730	73370

CAL YR 1982 TOTAL 110948 MEAN 304 MAX 3910 MIN 159 AC-FT 220100 MEAN a 1339 AC-FT a 969500
WTR YR 1983 TOTAL 229980 MEAN 630 MAX 5920 MIN 158 AC-FT 456200 MEAN a 1815 AC-FT a 1314000

a 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 downstream from Big Bollobokka Creek, and 11.3 mi east of Lamoine.

DRAINAGE AREA.--604 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

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, 1,230,000 acre-ft/yr; 18 years (water years 1966-83), 842 ft³/s, 610,000 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,400 ft³/s Jan. 27, gage height, 22.41 ft; minimum daily discharge, 282 ft³/s Oct. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	371	951	673	2510	14100	5240	2380	1700	543	395	368
2	297	350	735	638	1970	11500	4090	2110	1490	655	392	359
3	296	338	616	612	1510	10900	3490	2020	1270	532	389	356
4	291	331	584	594	1300	6970	2960	1920	1280	494	389	351
5	286	325	554	577	1160	6710	2610	2540	1310	478	386	348
6	293	321	533	567	1550	6210	2320	2910	1270	460	382	345
7	297	316	506	556	2250	5560	2100	2550	1250	461	381	343
8	289	348	480	553	2940	5730	2000	2290	1300	460	383	342
9	288	337	462	544	5820	5100	1930	2080	1370	444	381	338
10	287	328	446	534	5850	5160	1830	1810	1330	437	379	338
11	285	322	428	522	4100	5060	1720	1690	1280	432	377	339
12	283	319	435	517	8150	6380	1550	1620	981	427	374	337
13	284	317	438	508	11100	14000	1420	1560	988	438	371	334
14	284	314	419	502	6080	8760	1340	1490	894	437	371	334
15	285	312	514	496	4330	5810	1240	1510	876	442	367	332
16	284	310	4050	519	3480	4490	1220	1490	832	443	365	331
17	283	344	6750	520	3030	3900	1200	1390	857	440	363	330
18	282	539	2680	933	5950	3410	1260	1450	829	437	361	328
19	282	545	1670	1440	5290	3020	1420	1520	799	429	360	325
20	284	499	1470	1140	3820	2730	1490	1690	709	425	374	326
21	341	450	4690	964	2940	2580	1550	1700	694	410	373	326
22	406	417	4250	907	2510	2950	1870	1940	643	406	367	337
23	548	403	2540	1030	2190	3130	2720	1900	675	405	381	369
24	392	391	1740	4600	2090	4160	3120	2010	666	404	373	347
25	612	375	1360	3260	2280	3670	2730	1980	478	402	363	339
26	739	365	1140	8260	2430	2880	2380	2060	608	401	358	334
27	415	416	986	15700	4150	3160	2220	2050	554	398	353	335
28	369	889	875	8210	7440	2940	2790	2000	558	395	347	337
29	391	1900	804	5000	---	3220	2850	2110	554	396	348	331
30	485	1350	754	3960	---	8260	2660	2150	516	396	346	343
31	406	---	714	3060	---	8140	---	1920	---	396	370	---
TOTAL	10861	14142	44574	67896	108220	180590	67320	59840	28561	13723	11519	10202
MEAN	350	471	1438	2190	3865	5825	2244	1930	952	443	372	340
MAX	739	1900	6750	15700	11100	14100	5240	2910	1700	655	395	369
MIN	282	310	419	496	1160	2580	1200	1390	478	395	346	325
AC-FT	21540	28050	88410	134700	214700	358200	133500	118700	56650	27220	22850	20240
CAL YR 1982	TOTAL	348648	MEAN	955	MAX	10300	MIN	279	AC-FT	691500		
WTR YR 1983	TOTAL	617448	MEAN	1692	MAX	15700	MIN	282	AC-FT	1225000		

SACRAMENTO RIVER BASIN

11370000 SHASTA LAKE NEAR REDDING, CA

LOCATION.--Lat 40°43'08", long 122°25'12", in SE 1/4 NW 1/4 sec.15, T.33 N., R.5 W., Shasta County, Hydrologic Unit 18020005, in Shasta Dam on Sacramento River near right bank, 2 mi downstream from Squaw Creek, and 9.5 mi north of Redding.

DRAINAGE AREA.--6,421 mi², excluding Goose Lake basin.

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 Bureau of Reclamation). 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 between elevations 737.75 ft, bottom of lowest set of river outlets and 1,067.0 ft, top of flashboard gates on drum-type spillway gates. Dead storage, 115,700 acre-ft. Installation of flashboard gates on top of drum gates completed Nov. 12, 1964. Gates increased elevation to 1,067.0 ft, total capacity, 4,552,100 acre-ft. 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 Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,550,300 acre-ft May 19, 1967, elevation, 1,066.94 ft; minimum since reservoir first filled, 562,600 acre-ft Sept. 13, 1977, elevation, 836.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,538,400 acre-ft June 10, elevation, 1,066.54 ft; minimum, 3,223,400 acre-ft Dec. 14, 15 elevation, 1,017.35 ft.

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	1,051,700	970	2,226,100	1,067	4,552,100
900	1,167,900	980	2,416,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3482900	3435600	3294900	3259500	3674400	3746300	3710100	4305700	4530400	4466500	4157200	3763200
2	3477900	3436100	3287200	3262600	3610900	3872100	3683300	4318300	4531000	4459700	4144300	3747400
3	3471200	3434400	3276300	3263800	3566500	3975100	3648000	4328200	4532500	4449800	4131700	3732400
4	3465900	3431900	3267400	3267000	3535000	3959600	3617800	4339500	4532800	4441900	4119300	3717200
5	3460700	3430200	3256400	3271800	3529200	3944900	3609400	4364700	4535100	4434200	4106500	3704400
6	3458200	3427700	3242000	3278500	3545600	3926800	3615800	4403300	4534800	4429300	4093900	3695200
7	3455000	3423500	3231300	3283600	3569800	3906800	3632000	4399800	4535400	4423400	4082800	3690300
8	3449500	3419800	3227000	3291500	3611700	3881500	3646700	4394000	4536600	4417000	4071700	3690000
9	3447300	3417300	3224900	3296800	3665100	3839300	3662500	4385800	4537800	4409400	4059800	3690300
10	3441800	3414600	3226100	3298500	3707000	3801600	3678100	4377400	4538400	4401200	4047400	3691900
11	3437600	3413100	3226500	3299500	3719500	3761900	3698400	4365500	4537800	4390500	4034900	3692400
12	3434100	3411400	3225800	3300900	3778300	3787300	3721900	4351600	4535700	4379400	4022000	3689200
13	3431600	3408900	3224400	3303100	3808500	3937300	3746600	4343200	4535400	4368100	4009300	3689800
14	3428400	3403700	3223400	3308400	3796600	3742200	3770600	4342700	4533400	4358000	3996200	3690800
15	3426200	3397600	3233400	3321200	3771900	3918700	3793100	4358900	4531900	4347000	3983900	3691300
16	3420300	3395600	3301100	3334800	3738200	3886400	3815100	4382600	4531000	4337500	3971300	3691900
17	3415100	3395600	3353500	3339600	3698900	3847500	3837400	4407400	4531900	4327300	3958500	3693400
18	3410100	3391700	3357900	3360300	3684300	3811600	3860100	4421100	4530400	4315700	3945800	3693400
19	3406700	3380900	3353500	3378700	3659900	3789700	3883700	4428700	4527400	4304200	3934100	3690000
20	3404500	3368400	3352500	3392400	3624800	3752100	3910300	4439200	4525000	4294100	3921900	3686400
21	3404500	3355000	3395100	3408700	3581200	3716100	3937600	4450400	4519700	4283800	3910600	3685300
22	3406700	3339100	3395600	3430900	3540600	3714800	3965900	4463300	4514400	4274300	3897100	3685300
23	3410400	3323900	3376200	3462500	3515600	3715100	4008200	4476800	4510800	4264300	3882900	3682000
24	3410600	3309100	3341600	3527200	3489700	3732700	4050100	4485100	4505800	4253700	3867300	3677300
25	3417600	3291000	3299200	3557000	3475400	3730600	4091700	4488600	4499600	4244200	3854200	3669000
26	3421000	3275600	3264300	3703600	3472400	3723500	4128000	4493300	4495400	4231400	3841100	3660100
27	3424500	3264100	3249500	3845900	3507000	3725300	4166200	4500100	4490400	4220000	3827800	3649300
28	3428400	3272000	3244900	3869500	3579400	3709900	4208900	4508700	4483000	4208400	3814800	3637100
29	3432600	3290800	3248500	3844900	---	3684000	4252500	4517000	4476500	4193600	3801300	3626600
30	3433900	3297100	3251100	3795800	---	3714600	4286100	4522300	4471200	4182300	3787800	3616800
31	3433400	---	3255000	3740300	---	3725100	---	4526800	---	4169900	3776200	---
MAX	3482900	3436100	3395600	3869500	3808500	3975100	4286100	4526800	4538400	4466500	4157200	3763200
MIN	3404500	3264100	3223400	3259500	3472400	3684000	3609400	4305700	4471200	4169900	3776200	3616800
a	1026.00	1020.42	1018.67	1038.02	1031.81	1037.44	1057.90	1066.15	1065.27	1053.82	1039.38	1033.27
b	-53000	-136300	-42100	+485300	-160900	+145700	+561000	+240700	-55600	-301300	-393700	-159400
c	5820	2550	2860	1620	2030	2060	5550	9780	14990	16000	14210	10240

CAL YR 1982 b -237000
WTR YR 1983 b +130400

- a Elevation, in feet NGVD, at end of month.
- b Change in contents, in acre-feet.
- c Evaporation, in acre-feet.

11370500 SACRAMENTO RIVER AT KESWICK, CA
(National stream-quality accounting network station)

LOCATION.--Lat 40°36'04", long 122°26'36", in SW 1/4 NW 1/4 sec.28, T.32 N., R.5 W., Shasta County, Hydrologic Unit 18020101, on right bank 0.4 mi upstream from Middle Creek, 0.8 mi downstream from Keswick Dam, 1.6 mi downstream from Keswick, and 10 mi downstream from Shasta Dam.

DRAINAGE AREA.--6,468 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1939, at site 1.5 mi upstream at datum 20.2 ft higher and Oct. 1, 1939, to Apr. 30, 1942, at site 1.5 mi upstream at datum 15.2 ft higher. Aug. 20, 1960, to July 3, 1973, auxiliary water-stage recorder at city of Redding pumping plant 2.1 mi downstream.

REMARKS.--Records excellent. Flow regulated by Shasta Dam beginning Dec. 30, 1943 (station 11370000) and Keswick Reservoir, capacity, 4,170 acre-ft. 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).--45 years, 8,740 ft³/s, 6,332,000 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,200 ft³/s Jan. 31, gage height, 30.05 ft; minimum daily, 5,240 ft³/s Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7590	5900	14500	8260	59600	17000	49600	14900	17100	14500	14000	14400
2	7620	6440	14500	8320	55100	23900	49500	17300	17000	14600	13900	14100
3	7600	8290	14600	8290	44400	25700	49500	16600	16200	14600	14000	14400
4	7580	8300	14600	8270	34600	60600	44800	16500	15500	14400	13900	14500
5	7610	8300	14600	6980	22500	60500	30200	15500	15700	14400	13900	14400
6	7590	8300	14600	6720	20500	60300	20700	8140	15800	14500	13900	11800
7	7670	8180	12400	6760	20200	60900	14800	26900	16200	14500	13900	9940
8	7600	8280	9380	6830	20200	60100	14100	25800	16200	14500	14000	8200
9	7600	8320	8250	6820	27800	60100	14100	25800	15900	14700	14000	8130
10	7640	8330	8310	6730	36800	60100	12500	25600	15000	14600	14000	8110
11	7620	8330	8420	6620	36800	60000	9210	25600	14200	14700	14000	8130
12	7620	8340	8420	6630	30100	50300	6920	25700	14300	15000	14000	8140
13	7660	8310	8190	5810	44400	23200	6200	24200	14300	14700	13900	8170
14	7680	8300	8160	5630	50400	57900	6200	18000	14400	14100	14100	8430
15	7640	8320	8320	5270	50200	59800	6170	10900	14400	14000	14000	8060
16	7660	8290	11300	5280	50100	59800	6360	6130	14600	13900	14000	8060
17	7680	8430	18800	5240	50000	59700	6420	6850	14800	14200	14100	8130
18	7690	13500	21100	5290	50000	54900	6420	13200	14400	14100	14000	8110
19	7700	14500	20500	5310	50000	42400	6390	13400	13800	14200	14100	8120
20	7720	14500	18600	5310	50000	49600	6400	13800	14900	13800	14100	8170
21	7740	14500	24700	5290	49900	46800	6420	14100	14100	13800	14100	8040
22	7720	14500	39100	5280	46100	37200	6430	13800	15200	13800	14000	6880
23	7680	14600	38800	5410	36700	36500	6480	14400	14600	13900	14200	9100
24	7760	14600	38600	8170	36300	36700	6580	15900	14200	13900	14200	10400
25	7790	14600	38900	17800	34100	36400	6630	16700	14200	13900	14200	10400
26	7280	14600	34000	14200	28100	36300	6620	16800	14300	13900	14300	10900
27	6160	13400	20400	17100	28400	36500	6490	16900	14300	13900	14100	12300
28	6250	11400	14000	39600	27900	39300	6560	17100	14300	13900	14300	12300
29	7940	10600	9950	56600	---	50000	6500	16900	14500	14000	14100	12300
30	7970	14200	8240	64300	---	50100	10600	17000	14400	14000	14100	12500
31	7360	---	8310	60000	---	49800	---	17100	---	14000	14100	---
TOTAL	234420	316460	532550	424120	1091200	1462400	435800	527520	448800	441000	435500	304620
MEAN	7562	10550	17180	13680	38970	47170	14530	17020	14960	14230	14050	10150
MAX	7970	14600	39100	64300	59600	60900	49600	26900	17100	15000	14300	14500
MIN	6160	5900	8160	5240	20200	17000	6170	6130	13800	13800	13900	6880
AC-FT	465000	627700	1056000	841200	2164000	2901000	864400	1046000	890200	874700	863800	604200
MEAN a	4996	6367	14040	19170	31710	45220	19650	16820	11010	6310	5088	5195
AC-FT a	307200	378800	863300	1179000	1761000	2780000	1169000	1034000	654900	388000	312900	309200

CAL YR 1982 TOTAL 4995200 MEAN 13690 MAX 59900 MIN 4210 AC-FT 9908000 MEAN a 11720 AC-FT a 8488000
WTR YR 1983 TOTAL 6654390 MEAN 18230 MAX 64300 MIN 5240 AC-FT 13200000 MEAN a 15380 AC-FT a 11140000

a Adjusted for change in contents and evaporation from Shasta Lake and transbasin diversion to Keswick Reservoir.

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected 2.1 mi downstream from gaging station.

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.

SPECIFIC CONDUCTANCE: Water years 1981 to September 1983 (discontinued).

WATER TEMPERATURES: Water years 1981 to September 1983 (discontinued).

SEDIMENT RECORDS: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1983 (discontinued).

WATER TEMPERATURES: October 1980 to September 1983 (discontinued).

INSTRUMENTATION.--Conductivity and temperature recorder since October 1980.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 149 micromhos Sept. 30, 1981; minimum recorded, 75 micromhos Jan. 27, 1983.

WATER TEMPERATURES: Maximum recorded, 14.5°C Sept. 19, 1981; minimum recorded, 7.0°C Feb. 5, 6, 11, 12, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 125 micromhos Dec. 7, 8; minimum recorded, 75 micromhos Jan. 27.

WATER TEMPERATURES: Maximum recorded, 12.0°C many days during September; minimum recorded, 7.5°C Jan. 20-24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 22...	1130	14500	121	7.6	11.5	765	2.1	8.6	79	K2	K5
JAN 18...	1015	5300	104	7.4	8.0	760	6.0	10.5	89	65	160
MAR 10...	1330	60000	95	7.5	9.0	745	20	12.2	108	K2	K10
MAY 09...	1030	25700	90	7.3	9.0	755	6.9	12.6	110	K1	K4
JUL 20...	0900	14500	--	7.5	11.5	745	3.0	10.7	100	K7	K6
SEP 29...	0915	12400	87	7.4	12.0	740	2.2	9.9	95	K5	27

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 22...	49	1	--	4.6	6.4	22	.4	1.4	48	5.0	--
JAN 18...	41	0	8.5	4.8	4.7	19	.3	1.0	43	6.0	1.9
MAR 10...	37	0	8.8	3.6	4.5	20	.3	1.0	44	7.0	1.5
MAY 09...	35	0	8.5	3.4	4.0	19	.3	1.1	37	5.6	1.5
JUL 20...	39	0	8.6	4.2	3.9	18	.3	.80	42	4.4	1.2
SEP 29...	37	0	8.1	4.0	3.8	18	.3	.70	43	3.7	1.2

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
NOV 22...	<.10	24	87	--	.12	.12	<.06	.70	.02	.02	.02
JAN 18...	<.10	19	67	72	.09	<.10	<.06	.50	.02	.01	.02
MAR 10...	<.10	19	71	72	.10	<.10	<.06	.30	.02	.02	<.01
MAY 09...	<.10	18	--	65	.09	.16	<.06	.50	.02	.02	.03
JUL 20...	<.10	18	66	66	.09	<.10	<.01	.60	.03	.02	.02
SEP 29...	<.10	18	62	65	.08	.11	<.10	.50	.02	.02	.02

See footnotes at end of table.

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 22...	1130	50	2	28	.5	<1	<1	<3	5	45	<1
JAN 18...	1015	30	1	23	<.5	<1	<1	<3	6	17	1
MAY 09...	1030	40	<1	26	<.5	<1	<1	<3	5	--	<1
SEP 29...	0915	30	<1	21	<.5	<1	<1	<3	2	23	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 22...	9	7	.1	<10	2	<1	<1	57	<6	69
JAN 18...	--	4	.1	<10	3	<1	<1	40	<6	44
MAY 09...	9	5	.1	<10	2	<1	<1	38	<6	50
SEP 29...	8	3	<.1	<10	--	<1	<1	38	<6	17

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.

SPECIFIC CONDUCTANCE (MICRONHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	98	113	114	114	86	91	90	85	88	93	91
2	96	100	115	115	112	92	91	91	86	89	93	91
3	96	102	116	114	112	89	91	90	87	89	93	91
4	96	101	118	114	112	99	90	89	86	89	92	91
5	96	101	118	113	109	99	89	88	86	89	93	91
6	96	102	121	111	103	97	89	84	86	89	92	91
7	96	102	123	112	105	94	88	90	87	89	92	91
8	97	103	122	113	103	94	88	89	87	89	92	89
9	98	103	119	113	107	93	89	90	87	91	92	89
10	97	102	118	111	107	92	90	90	87	91	93	90
11	97	106	116	114	106	95	87	89	88	90	93	90
12	97	106	115	115	103	90	83	90	88	91	93	90
13	97	104	115	112	105	80	80	90	88	91	93	90
14	97	104	117	111	108	94	79	88	89	91	93	89
15	97	105	112	111	107	95	81	85	88	90	93	89
16	97	106	109	109	106	93	82	82	86	91	93	89
17	97	107	107	109	107	92	82	79	86	91	93	89
18	97	112	114	107	107	92	84	84	86	92	93	89
19	96	115	114	107	106	92	84	87	86	91	92	89
20	96	116	117	106	106	92	83	87	86	91	92	90
21	96	117	110	103	104	91	83	87	85	91	92	90
22	98	118	117	101	102	90	82	87	85	91	92	90
23	98	117	117	99	102	91	83	87	86	91	92	90
24	98	118	119	94	101	92	83	89	87	91	93	91
25	97	117	119	107	100	91	83	88	87	91	91	91
26	98	118	118	95	101	92	83	88	87	92	92	91
27	95	118	116	91	98	90	82	86	87	92	92	90
28	95	114	114	113	97	90	82	85	87	93	91	90
29	97	114	114	114	---	92	82	85	87	93	91	90
30	100	114	112	114	---	91	84	85	88	93	91	90
31	101	---	112	114	---	92	---	85	---	92	92	---
MONTH	97	109	116	109	105	92	85	87	87	91	92	90

SACRAMENTO RIVER BASIN

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 22...	1130	14500	11.5	3	117
JAN 18...	1015	5300	8.0	6	86
MAR 10...	1330	60000	9.0	23	3730
MAY 09...	1030	25700	9.0	4	278
JUL 20...	0900	14500	11.5	1	39
SEP 29...	0915	12400	12.0	1	33

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 downstream from French Gulch, 0.3 mi south of town of French Gulch, and 15 mi northwest of Redding.

DRAINAGE AREA.--115 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Dec. 28, 1959, water-stage recorder at datum 3.00 ft higher.

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

AVERAGE DISCHARGE.--33 years, 227 ft³/s, 164,500 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	0045	3,600	9.19	Mar. 2	2300	9,680	13.66
Dec. 21	1715	2,210	7.58	Mar. 13	0700	3,750	9.05
Jan. 26	2000	*10,500	14.09	Mar. 24	0930	2,090	6.93
Feb. 10	0800	1,880	6.80	Mar. 30	2030	2,760	7.69

Minimum daily, 18.0 ft³/s Oct. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	73	344	217	1110	7910	1830	1220	293	102	41	49
2	20	57	251	203	918	8400	1480	1030	278	110	41	42
3	20	49	207	193	770	7190	1240	911	264	97	41	37
4	19	44	190	183	655	3980	1070	853	250	90	41	35
5	19	41	179	177	638	2790	951	957	234	85	41	32
6	21	39	171	174	849	2260	857	1030	224	82	40	29
7	25	37	159	173	1100	2060	787	923	217	82	40	29
8	24	39	144	176	1160	1790	740	827	209	83	40	28
9	23	46	133	175	1450	1560	714	742	199	82	39	27
10	22	41	123	170	1850	1690	675	674	196	75	38	27
11	21	38	113	163	1720	1500	635	620	192	71	37	26
12	19	37	108	158	1820	1790	589	584	182	68	36	25
13	19	36	103	154	1660	3270	546	554	172	66	35	23
14	18	35	96	150	1370	2230	514	530	166	63	35	23
15	18	34	181	153	1190	1660	486	513	160	61	34	23
16	19	35	1320	173	1060	1390	465	492	152	61	33	22
17	19	93	2190	182	978	1240	460	471	146	61	32	21
18	20	365	928	354	1450	1140	464	460	142	62	32	22
19	19	200	597	544	1390	1040	526	458	139	61	32	20
20	20	95	520	416	1180	1010	522	449	135	62	34	20
21	26	86	1360	349	1020	1190	504	447	131	59	38	19
22	48	92	1440	330	905	1520	589	447	126	56	43	29
23	52	118	947	398	852	1720	1230	440	122	54	53	49
24	40	113	671	1780	819	2020	1400	425	118	51	43	39
25	90	102	530	1310	855	1650	1140	412	113	51	39	34
26	119	89	440	5620	921	1340	971	399	109	52	37	30
27	59	101	373	5000	2930	1650	936	381	104	50	36	29
28	44	306	320	2340	4150	1410	1100	362	103	48	34	26
29	85	733	282	2090	---	1520	1720	346	103	47	33	31
30	202	497	254	1700	---	2500	1490	327	98	45	37	38
31	108	---	234	1350	---	2410	---	309	---	43	45	---
TOTAL	1279	3671	14908	26555	36770	74830	26631	18593	5077	2080	1180	884
MEAN	41.3	122	481	857	1313	2414	888	600	169	67.1	38.1	29.5
MAX	202	733	2190	5620	4150	8400	1830	1220	293	110	53	49
MIN	18	34	96	150	638	1010	460	309	98	43	32	19
AC-FT	2540	7280	29570	52670	72930	148400	52820	36880	10070	4130	2340	1750
CAL YR 1982	TOTAL	95157	MEAN	261	MAX	2190	MIN	13	AC-FT	188700		
WTR YR 1983	TOTAL	212458	MEAN	582	MAX	8400	MIN	18	AC-FT	421400		

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

LOCATION.--Lat 40°38'49", long 122°37'34", Shasta County, Hydrologic Unit 18010212, at powerplant 1.6 mi downstream from Mill Creek, and 3.8 mi south of French Gulch.

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

GAGE.--Recorded powerplant output.

REMARKS.--Water is diverted from Trinity River at NW 1/4 SE 1/4 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 Bureau of Reclamation, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--20 years, 1,580 ft³/s, 1,145,000 acre-ft/yr.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	1520	1630	1630	3260	0	3150	1190	3350	3260	2380	2720
2	1500	1020	1630	1630	3260	0	3150	2110	3350	3260	2380	2720
3	1500	1540	1630	1610	3260	0	3180	3170	2850	3260	2350	2720
4	1500	1540	1610	1630	3120	0	3180	2990	2780	3260	2770	2720
5	1500	1580	1630	1630	3120	0	3180	2630	2780	3260	2770	2770
6	1460	1600	1630	1630	3250	0	3180	2560	2780	3260	2770	2770
7	1500	1540	951	1630	3190	473	3180	1010	2770	3260	2770	2720
8	1480	1580	1710	1630	3350	691	3170	2540	2780	3220	2760	2770
9	1500	1580	1730	1630	3260	959	3170	3170	2790	3220	2760	2770
10	1500	1580	1630	1630	2320	2490	3210	3170	2790	3180	2890	2770
11	1500	1580	1630	1330	2830	2450	3170	3250	1540	3220	2760	2770
12	1500	1550	1630	1590	888	1880	3170	3250	1540	3310	2760	2770
13	1500	1550	1630	1630	2830	1400	3170	3250	1530	3110	2760	2770
14	1500	1550	1630	1630	3260	2670	3170	3250	2170	3170	2760	2770
15	1500	1570	1630	1630	3260	2730	3170	3250	2320	3220	2770	2800
16	1480	1570	1480	1610	3190	3180	3170	3250	3260	3260	2720	2770
17	1500	1450	1020	1610	3260	2540	3170	3250	3260	3180	2770	2760
18	1480	1550	1630	1610	3260	3180	3170	3250	2400	3260	2770	2760
19	1490	1570	1630	1610	3260	3180	3170	3250	2830	3260	2750	1640
20	1490	1610	1630	1610	3260	3180	3170	3250	3170	2850	2750	1640
21	1490	1590	1640	1610	3260	3180	2980	3250	3110	3260	2530	1640
22	1490	1610	1480	1610	3260	3180	2620	3230	3250	3260	2760	1660
23	1510	1630	1630	1610	3260	3190	2710	3230	3250	3350	2760	1680
24	1510	1630	1630	1620	3250	2870	2760	3250	3250	3350	1820	1680
25	1510	1630	1630	1620	3250	3190	2760	3250	3250	3350	2710	1700
26	1570	1610	1630	1640	3250	3190	2710	3260	3260	2720	2660	1700
27	1630	1630	1590	106	2850	3180	2710	3260	3260	2350	2760	1680
28	1560	1630	1610	0	478	3180	2710	3260	3260	2350	2760	1680
29	1560	1640	1630	0	---	3180	2200	3260	3260	2400	2770	1700
30	1520	1640	1630	1600	---	3190	1230	3220	3260	2460	2560	1700
31	1500	---	1630	2440	---	2850	---	3350	---	2440	2720	---
TOTAL	46730	46870	49051	45996	83546	65383	88840	92860	85450	95570	82980	69720
MEAN	1507	1562	1582	1484	2984	2109	2961	2995	2848	3083	2677	2324
MAX	1630	1640	1730	2440	3350	3190	3210	3350	3350	3350	2890	2800
MIN	1460	1020	951	0	478	0	1230	1010	1530	2350	1820	1640
AC-FT	92690	92970	97290	91230	165700	129700	176200	184200	169500	189600	164600	138300
CAL YR 1982	TOTAL	643595.00	MEAN	1763	MAX	3420	MIN	0	AC-FT	1277000		
WTR YR 1983	TOTAL	852996.00	MEAN	2337	MAX	3350	MIN	0	AC-FT	1692000		

SACRAMENTO RIVER BASIN

11371600 SPRING CREEK POWERPLANT AT KESWICK, CA

LOCATION.--Lat 40°37'41", long 122°27'59", in NE 1/4 SE 1/4 sec.18, T.32 N., R.5 W., Shasta County, Hydrologic Unit 18020112, at powerplant on Spring Creek, 0.4 mi northwest of Keswick, and 4.9 mi 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 Bureau of Reclamation, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--19 years, 1,988 ft³/s, 1,440,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,800 ft³/s May 2, 1983; no flow for many days in 1974-82.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1440	1620	3550	2030	4370	3960	4420	3920	4140	3480	2630	2770
2	1400	1440	2530	2010	4290	4450	4450	4800	3450	3480	2600	2730
3	1400	1990	2250	2050	4480	4390	4480	4450	3580	3690	2320	2750
4	1390	1860	2130	2030	4400	4300	4450	4450	3460	3690	2800	2770
5	1410	1850	1940	2040	4400	4410	4440	4480	3480	3640	2790	2880
6	1420	1740	1270	2020	4360	4410	4480	4440	3430	3650	2880	2730
7	1410	1790	583	1870	4360	4520	4400	4480	3110	3630	3070	2870
8	1390	1870	1490	1770	4330	4450	4330	4440	3290	3550	3070	3030
9	1480	1850	1460	1660	4650	4130	4260	4480	3110	3410	3090	3030
10	1460	2070	1800	1880	4330	4440	4400	4480	3140	3390	2800	2810
11	1440	2170	2070	1350	4520	4260	4440	4480	1770	3390	2720	2730
12	1580	2100	1950	1820	4230	4410	4430	4440	1970	3370	2750	2980
13	1550	2180	1950	1770	4520	4340	4320	4480	1980	3350	2830	2840
14	1500	2180	1850	1780	4450	4370	4280	4520	2470	3250	2800	3000
15	1520	2170	1760	1830	4560	4370	4320	4590	2960	3300	2840	2960
16	1520	2150	2970	1910	4440	4340	4040	4550	3690	3000	2710	3170
17	1530	2170	4530	1840	4480	4480	4080	4440	4120	3040	2920	3000
18	1510	1750	4530	2050	4480	4370	4020	4480	3460	3380	2640	3230
19	2680	1980	4150	1830	4480	4400	4620	4520	3510	3410	2960	1930
20	2840	2280	2220	2460	4450	4370	4470	4440	3670	3340	2930	2050
21	1980	2000	3620	2510	4560	4370	4520	4470	3440	3480	2990	1930
22	1980	1720	4010	2620	4560	4370	4550	4470	3430	3420	2880	1930
23	2120	1740	4320	3160	4400	4370	4620	4300	3440	3430	2830	1660
24	2150	1670	2470	2780	4400	4420	4550	2930	3440	3740	2050	1470
25	2260	1750	2290	3810	4560	4480	4470	2960	3450	3410	2880	1420
26	2330	1770	2230	2660	4400	4300	4470	3200	3440	2440	2840	1660
27	2580	1720	2630	3020	4300	4310	4470	3780	3440	2890	2690	1690
28	2570	1860	2550	4160	3310	4330	4440	4150	3440	2650	2770	1690
29	1920	1820	2210	4160	---	4370	4400	4190	3400	2530	2660	1910
30	2010	2760	2030	4160	---	4370	4520	4190	3430	2490	2930	1970
31	1920	---	2020	4230	---	4420	---	4220	---	2640	2770	---
TOTAL	55690	58020	77363	75270	123070	135280	132140	132220	98140	101560	86440	73590
MEAN	1796	1934	2496	2428	4395	4364	4405	4265	3271	3276	2788	2453
MAX	2840	2760	4530	4230	4650	4520	4620	4800	4140	3740	3090	3230
MIN	1390	1440	583	1350	3310	3960	4020	2930	1770	2440	2050	1420
AC-FT	110500	115100	153400	149300	244100	268300	262100	262300	194700	201400	171500	146000
CAL YR 1982	TOTAL	803478.00	MEAN	2201	MAX	4530	MIN	0	AC-FT	1594000		
WTR YR 1983	TOTAL	1148783.00	MEAN	3147	MAX	4800	MIN	583	AC-FT	2279000		

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 downstream from Whiskey Creek, and 7.8 mi northeast of Igo.

DRAINAGE AREA.--200 mi².

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 Bureau of Reclamation).

REMARKS.--Reservoir is formed by earth- and rockfill dam. Storage began in May 1963. Capacity, 241,100 acre-ft between elevations 1,100.00 ft, minimum operating level and 1,210.00 ft, 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 Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 258,600 acre-ft Mar. 2, 1983, elevation, 1,215.34 ft; minimum since reservoir was first filled, 159,000 acre-ft Oct. 25, 1970, elevation, 1,181.48 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 258,600 acre-ft Mar. 2, elevation, 1,215.34 ft; minimum, 201,700 acre-ft Dec. 5, elevation, 1,197.14 ft.

CORRECTIONS.--The minimum elevation for water year 1982 is 1,195.90 ft; the previously published figure was not the minimum.

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	46,700
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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231500	217500	204700	204600	240500	255300	244600	238400	238000	239100	238300	238800
2	231600	216700	203600	204600	240100	258600	243600	237300	239100	239200	237900	239000
3	231800	215900	203000	204500	238900	254200	242700	238200	238900	239000	238200	239200
4	231900	215200	202500	204400	236800	248600	241700	238700	238600	238800	238200	239300
5	232000	214700	201700	204300	235400	244900	240800	239300	238200	238500	238400	239300
6	232100	214400	203400	204200	236300	241500	239500	239400	238000	238300	238500	239600
7	232300	213800	204200	204300	236900	239900	238200	236100	237900	238100	238100	239400
8	232400	213300	205200	204900	238200	237700	236600	235300	238100	237900	237600	239100
9	232300	212800	206000	205400	240100	235300	235700	235500	238400	237900	237300	238800
10	232400	211700	205900	205500	240700	236200	235400	235700	238500	238000	237700	239000
11	232400	210800	205500	205900	241200	237200	235500	235700	238900	238000	237800	239000
12	232300	209800	205200	206000	240800	239200	235500	235600	238800	237900	237900	238800
13	232200	208700	204900	206200	241400	244200	235400	235400	238700	237700	237900	238800
14	232200	207600	204800	206200	242000	244900	235200	235100	239300	237500	238000	238500
15	232200	206600	206200	206200	242000	244100	234900	234600	238900	237900	238000	238400
16	232200	205600	210200	206200	241500	243800	234900	234100	239000	238800	238200	238100
17	232200	204700	209900	206400	240800	242300	235000	233700	238100	239600	238000	237700
18	232200	205700	206900	207600	242000	242200	235200	233000	237100	239700	238400	237100
19	230000	205000	203900	208600	242200	241700	235300	232600	237000	240000	238100	236300
20	227400	204700	204900	208300	241800	241600	234900	232200	236700	239400	237700	235600
21	226900	204200	207700	207300	241000	242400	233900	231800	236700	239400	237000	235100
22	226500	204400	207800	206500	240000	244200	232400	231300	237100	239600	237200	235000
23	225700	204700	205700	206700	239000	245400	234300	231200	237100	239900	237300	235300
24	224400	204800	205900	210400	237800	245700	235900	233800	237400	239500	237200	235900
25	223700	204900	206200	211500	237400	244900	236700	236400	237800	239700	237100	236500
26	222400	204900	206400	237200	237500	244500	236700	238000	238000	240300	237200	236600
27	220500	205200	205600	246500	245600	245100	236800	238900	238200	239400	237500	236700
28	218400	206300	204700	243100	253200	244300	238400	238800	238500	239000	237700	236700
29	218200	208200	204500	241000	---	244600	240800	238800	238800	238900	238100	236500
30	218000	207400	204600	240300	---	245900	239900	238500	239000	238800	238100	236100
31	217500	---	204600	240400	---	245500	---	238300	---	238600	238500	---
MAX	232400	217500	210200	246500	253200	258600	244600	239400	239300	240300	238500	239600
MIN	217500	204200	201700	204200	235400	235300	232400	231200	236700	237500	237000	235000
a	1202.44	1198.08	1198.13	1209.77	1213.72	1211.36	1209.64	1209.12	1209.33	1209.23	1209.19	1208.45
b	-13900	-10100	-2800	+35800	+12800	-7700	-5600	-1600	+700	-400	-100	-2400
c	530	140	110	120	90	180	600	1300	830	--	1280	970

CAL YR 1982 b +4400
WTR YR 1983 b +4700

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

NOTE: No report of evaporation June 18 to August 2.

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 northeast of Igo, 8.3 mi southwest of Redding, and 10.4 mi upstream from mouth.

DRAINAGE AREA.--228 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. 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).--43 years, 487 ft³/s, 352,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s Dec. 21, 1955, gage height, 13.75 ft; minimum, 8.6 ft³/s Sept. 4, 6, 7, 1950. Maximum discharge since construction of Whiskeytown Dam in 1963, 19,200 ft³/s Mar. 3, 1983, gage height, 12.73 ft; minimum daily, 30 ft³/s Oct. 10, 11, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,200 ft³/s Mar. 3, gage height, 12.73 ft; minimum daily, 48 ft³/s several days during September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	72	137	112	1120	11300	2710	350	87	65	53	53
2	53	105	125	87	1110	13600	2190	280	88	65	53	52
3	54	105	118	84	1090	15000	1780	237	86	65	53	51
4	53	105	113	82	1080	6230	1470	220	84	64	52	51
5	53	105	108	80	1130	3230	1280	380	82	62	53	49
6	54	104	105	80	1890	2100	1220	375	80	63	53	49
7	53	104	102	80	1650	2190	1200	288	78	63	52	49
8	53	105	100	78	1910	1380	1180	241	77	62	52	51
9	53	106	99	77	1770	1430	834	210	77	59	52	53
10	54	105	99	74	1740	1380	383	187	78	59	52	50
11	53	105	97	73	1440	915	172	171	81	141	53	49
12	53	105	98	73	1950	2570	155	160	79	150	52	49
13	53	105	97	73	1510	2940	146	150	74	239	52	49
14	53	104	97	72	1390	2550	140	141	73	235	51	49
15	53	103	302	72	1390	2170	134	134	79	84	51	48
16	53	104	1140	75	1290	1960	130	127	72	55	51	48
17	53	117	631	73	1180	1720	127	123	71	57	51	48
18	53	180	229	258	1300	1470	130	116	73	57	51	48
19	54	127	177	205	1360	1360	139	111	69	56	52	48
20	55	115	286	143	1280	1300	156	107	69	60	52	48
21	56	111	1170	126	1160	1620	134	105	68	57	53	48
22	59	113	579	155	1100	2350	127	102	68	55	53	50
23	60	127	360	308	1100	2550	256	100	68	55	54	55
24	58	116	242	608	1110	3330	300	97	67	55	52	50
25	68	111	200	343	1360	2840	258	95	66	55	51	49
26	66	109	179	2410	1340	2350	216	93	65	63	51	48
27	56	114	164	2490	2160	2900	243	91	65	60	50	48
28	54	291	153	2150	4330	2500	366	90	65	55	50	48
29	69	246	146	1670	---	2740	505	91	65	54	51	48
30	83	205	141	1300	---	3400	450	89	66	54	51	52
31	58	---	136	1130	---	3180	---	90	---	54	53	---
TOTAL	1753	3724	7730	14641	42240	106555	18531	5151	2220	2378	1610	1488
MEAN	56.5	124	249	472	1509	3437	618	166	74.0	76.7	51.9	49.6
MAX	83	291	1170	2490	4330	15000	2710	380	88	239	54	55
MIN	53	72	97	72	1080	915	127	89	65	54	50	48
AC-FT	3480	7390	15330	29040	83780	211400	36760	10220	4400	4720	3190	2950
MEAN a	132	330	1118	2001	3153	5569	1976	1432	524	264	182	155
AC-FT a	8120	19620	68770	123000	175100	342400	117600	88070	31190	16210	11220	9240

CAL YR 1982 TOTAL 84402 MEAN 231 MAX 1340 MIN 48 AC-FT 167400 MEAN a 688 AC-FT a 498400
WTR YR 1983 TOTAL 208021 MEAN 570 MAX 15000 MIN 48 AC-FT 412600 MEAN a 1396 AC-FT a 1011000

a 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 Bureau of Reclamation.

11374000 COW CREEK NEAR MILLVILLE, CA

LOCATION.--Lat 40°30'19", long 122°13'56", in NE 1/4 NW 1/4 sec.32, T.31 N., R.3 W., Shasta County, Hydrologic Unit 18020101, on right bank 2.9 mi upstream from mouth, 4.2 mi southwest of Millville, and 4.3 mi downstream from Little Cow Creek.

DRAINAGE AREA.--425 mi².

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--34 years, 714 ft³/s, 517,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft³/s Nov. 16, 1981, gage height, 21.22 ft; maximum gage height, 21.55 ft Dec. 27, 1951; minimum daily, 0.02 ft³/s July 29, 1977.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 20	2230	22,700	14.48	Mar. 1	0745	*38,200	18.71
Jan. 26	2330	23,400	14.71	Mar. 13	1030	18,600	13.03
Feb. 10	0530	19,700	10.35				

Minimum daily, 86 ft³/s Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	183	1330	517	1780	19600	2520	2110	964	351	120	213
2	99	162	846	480	1510	11900	2520	1810	1100	441	119	189
3	105	149	993	446	1320	9540	1920	1480	919	355	124	149
4	98	145	705	421	1170	5370	1660	1450	912	331	122	135
5	89	144	586	401	1320	4230	1460	1450	851	318	124	132
6	94	142	500	381	5320	3830	1330	1950	815	295	120	116
7	124	141	427	372	6260	5740	1230	1450	786	281	118	109
8	119	158	366	358	6070	4250	1160	1220	751	278	120	108
9	101	200	336	342	5390	2960	1120	1140	734	264	118	101
10	96	172	317	327	11300	2620	1170	1060	751	244	111	103
11	93	150	297	315	4960	5120	1040	983	835	235	107	100
12	88	145	288	307	6180	9170	995	938	711	219	107	103
13	87	142	354	300	5220	12900	929	925	655	199	103	97
14	88	142	304	293	3740	5270	876	881	602	193	106	92
15	90	141	4300	291	3420	3560	841	881	575	191	100	93
16	88	141	3430	321	3430	3120	815	863	541	187	106	95
17	93	191	3940	375	2820	5310	801	830	517	185	101	90
18	89	4010	2020	2290	5240	4420	794	833	541	187	99	90
19	91	1240	1170	4250	3730	2830	953	869	517	175	96	86
20	98	565	5630	1450	3010	2470	1060	931	485	177	121	86
21	114	373	9910	1020	2630	3460	998	1010	463	171	134	88
22	198	307	6140	2750	2360	5940	944	1010	429	166	131	106
23	246	274	3940	2780	2260	3010	1140	1020	421	161	131	306
24	237	246	1890	10800	2680	3600	2510	1040	414	151	130	223
25	195	226	1430	3040	7210	2670	1860	990	408	151	114	164
26	409	209	1190	12600	5720	2100	1410	1020	392	151	115	153
27	266	223	983	8420	10800	3870	1770	1020	377	154	110	146
28	187	2970	782	3510	8120	2540	3140	1020	361	146	111	145
29	181	3920	667	3550	---	3160	2170	1040	351	140	112	136
30	390	3350	602	3530	---	4680	1840	1030	337	137	113	139
31	256	---	551	2270	---	4300	---	1020	---	131	116	---
TOTAL	4610	20561	56224	68507	124970	163540	42976	35274	18515	6765	3559	3893
MEAN	149	685	1814	2210	4463	5275	1433	1138	617	218	115	130
MAX	409	4010	9910	12600	11300	19600	3140	2110	1100	441	134	306
MIN	87	141	288	291	1170	2100	794	830	337	131	96	86
AC-FT	9140	40780	111500	135900	247900	324400	85240	69970	36720	13420	7060	7720
CAL YR 1982	TOTAL	362113	MEAN	992	MAX	12100	MIN	52	AC-FT	718300		
WTR YR 1983	TOTAL	549394	MEAN	1505	MAX	19600	MIN	86	AC-FT	1090000		

11375810 COTTONWOOD CREEK NEAR OLINDA, CA

LOCATION.--Lat 40°23'06", long 122°28'31", in SE 1/4 NW 1/4 sec.7, T.29 N., R.5 W., Shasta County, Hydrologic Unit 18020102, on left bank 1.0 mi downstream from Dutch Gulch, and 5.5 mi southwest of Olinda.

DRAINAGE AREA.--395 mi².

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--12 years, 535 ft³/s, 387,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,900 ft³/s Jan. 16, 1974, gage height, 21.44 ft from rating curve extended above 14,000 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	2015	3,100	9.23	Mar. 7	1745	8,830	12.70
Dec. 16	2400	10,800	14.12	Mar. 13	0130	18,900	16.44
Dec. 21	1500	11,100	14.31	Mar. 23	2045	8,930	12.75
Jan. 26	1545	20,600	18.19	Mar. 30	1730	6,760	11.66
Feb. 9	2130	8,820	12.95	Apr. 28	2030	9,880	13.18
Feb. 18	1315	5,260	10.73	May 5	0015	5,260	10.89
Feb. 28	2330	*33,000	20.19				

Minimum daily, 23.0 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	108	735	474	2020	16200	4040	2740	711	223	85	107
2	25	83	686	451	1750	20200	3490	2330	687	236	81	89
3	25	72	656	432	1520	13200	2930	2060	640	229	79	76
4	24	64	596	413	1330	7250	2550	2080	628	216	76	68
5	23	68	573	398	2200	5750	2290	3370	588	204	73	63
6	26	63	557	414	4360	4690	2090	2370	560	200	72	58
7	32	62	499	428	3870	6430	1930	2000	545	197	70	41
8	36	62	441	438	4830	4660	1830	1790	553	199	69	49
9	32	83	403	429	4700	3920	1790	1650	538	197	63	46
10	30	78	374	402	6660	3610	1690	1530	508	195	61	45
11	27	70	348	384	4290	3400	1590	1420	494	187	62	45
12	26	69	331	372	5190	7840	1510	1340	421	177	60	46
13	25	66	343	362	4000	11300	1400	1280	396	171	56	43
14	25	64	325	354	3110	5720	1320	1230	374	166	58	43
15	26	63	1870	347	3000	4210	1210	1210	363	161	60	40
16	26	64	2760	385	2830	3630	1100	1070	348	158	55	39
17	26	117	5310	393	2380	3510	1090	1020	335	155	55	40
18	26	1160	1740	998	3960	3730	1100	997	310	155	52	39
19	26	716	1090	964	3200	2900	1220	1020	292	153	51	39
20	26	377	1680	681	2590	3110	1240	1020	278	157	60	38
21	28	265	5330	614	2210	4930	1190	1040	271	152	64	39
22	40	253	4780	1120	2000	5350	1150	1040	265	134	85	66
23	79	551	2520	1550	1910	5050	1790	1020	262	126	91	119
24	70	397	1470	4630	2210	5360	2020	992	253	123	76	76
25	67	284	1070	2470	4940	4060	1620	963	245	116	68	62
26	90	228	880	14700	3400	3470	1480	925	237	114	63	55
27	76	214	767	9180	8880	4690	1960	913	236	116	58	51
28	58	992	635	4490	10700	3610	3180	919	231	114	56	50
29	68	1860	580	4460	---	4630	2840	877	228	110	54	49
30	377	1090	534	3230	---	5350	3690	820	223	99	56	52
31	179	---	504	2470	---	5190	---	759	---	88	72	---
TOTAL	1668	9643	40387	58433	104040	186950	58330	43795	12020	5028	2041	1673
MEAN	53.8	321	1303	1885	3716	6031	1944	1413	401	162	65.8	55.8
MAX	377	1860	5330	14700	10700	20200	4040	3370	711	236	91	119
MIN	23	62	325	347	1330	2900	1090	759	223	88	51	38
AC-FT	3310	19130	80110	115900	206400	370800	115700	86870	23840	9970	4050	3320
CAL YR 1982	TOTAL	233560	MEAN	640	MAX	5450	MIN	16	AC-FT	463300		
WTR YR 1983	TOTAL	524008	MEAN	1436	MAX	20200	MIN	23	AC-FT	1039000		

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1971, 1982 to current year,

WATER TEMPERATURES: Water years 1973-80.

SEDIMENT RECORDS: Water years 1977 to May 1983 (discontinued).

TURBIDITY: Water years 1977-79, 1981.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1973 to September 1980.

SEDIMENT RECORDS: January 1977 to May 1980 (storm season only).

REMARKS.--Sediment Samples for Jan. 26, Mar. 1, 3 are partial depth samples. The May 1982 values for water quality are included to show streamflow which was omitted in the report for 1982.

WATER QUALITY RECORDS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
12...	1020	436	179	8.1	14.5	9.6	98	21	11	5.7	.90
OCT											
06...	0830	25	300	8.4	14.5	9.4	140	28	16	11	1.1
APR , 1983											
19...	1010	1270	192	8.0	12.0	10.2	91	20	10	6.2	1.0

DATE	ALKA- LINITY FIELD (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)	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)
MAY , 1982										
12...	98	6.0	3.0	<.10	20	129	130	<.02	<.10	<.10
OCT										
06...	127	9.0	12	.10	18	167	170	<.02	<.10	<.10
APR , 1983										
19...	10	15	2.7	<.10	19	117	80	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
12...	<.06	.09	.45	.54	<.01	.02	.02	20	<9	.70
OCT										
06...	.08	.11	.59	.70	.02	<.01	<.01	30	6	1.6
APR , 1983										
19...	.06	.09	.21	.30	.07	.02	.02	20	20	1.5

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

11375810 COTTONWOOD CREEK NEAR OLINDA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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
NOV								
01...	0920	112	11.0	2	.60	--	--	--
DEC								
01...	1030	737	6.5	22	44	--	--	--
22...	1530	5900	8.0	1240	19800	--	--	--
JAN								
03...	1110	439	6.0	16	19	--	--	--
26...	1030	13500	9.0	2470	90000	--	25	32
28...	1045	4600	9.0	784	9740	20	28	37
31...	1100	2540	7.5	237	1630	25	31	41
FEB								
10...	1200	6620	8.5	1060	18900	--	25	31
MAR								
01...	1100	15800	9.0	3020	129000	--	30	38
03...	1130	14000	9.5	3290	124000	--	25	31
16...	1015	3590	8.0	672	6510	22	24	29
24...	1015	5820	8.5	897	14100	14	18	22
APR								
04...	1015	2490	7.5	178	1200	--	--	--
29...	1045	2640	11.0	412	2940	--	--	--
MAY								
02...	1100	2260	11.0	161	982	--	--	--

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
NOV								
01...	--	--	--	--	--	--	--	--
DEC								
01...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
JAN								
03...	--	--	--	--	--	--	--	--
26...	44	55	64	77	91	97	99	100
28...	47	56	63	74	89	98	100	--
31...	49	54	58	65	78	94	99	100
FEB								
10...	42	51	59	70	85	96	99	100
MAR								
01...	50	63	75	87	96	99	100	--
03...	42	56	72	87	96	99	100	--
16...	32	36	39	45	65	93	99	100
24...	27	32	35	40	53	75	88	94
APR								
04...	--	--	40	45	57	83	100	--
29...	--	--	--	--	--	--	--	--
MAY								
02...	--	--	34	39	50	82	100	--

11375815 COTTONWOOD CREEK ABOVE SOUTH FORK, NEAR COTTONWOOD, CA

LOCATION.--Lat 40°22'19", long 122°20'17", in NW 1/4 SW 1/4, sec.17, T.29 N., R.4 W., Tehama County, Hydrologic Unit 18020102, on right bank 0.67 mi upstream of confluence with South Fork Cottonwood Creek and 3.3 mi south-west of Cottonwood.

DRAINAGE AREA.--478 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1982 to current year (low flow only).

GAGE.--Water-stage recorder. Datum of gage is 421.90 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow is computed up to 500 ft³/s. Numerous pumping diversions above station. Peak flow of Mar. 1, 1983 was determined to be 40,000 ft³/s, gage height, 19.59 ft from rating curve extended above 13,000 ft³/s and peak flow at gage near Olinda.

REVISIONS.--Revised figures of discharge for the water year 1982, superseding those published in the report for 1982 are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	215	36	27
2									---	169	32	24
3									---	155	29	21
4									---	138	29	21
5									---	129	30	21
6									---	122	32	18
7									---	116	36	18
8									---	109	38	17
9									---	104	35	15
10									---	97	33	13
11									---	94	32	12
12									---	87	32	13
13									---	82	31	13
14									---	76	31	12
15									---	74	31	12
16									---	71	31	12
17									---	69	29	17
18									---	68	27	31
19									---	68	25	47
20									---	65	23	56
21									---	62	22	47
22									---	128	59	38
23									---	131	55	33
24									---	127	55	32
25									---	131	53	35
26									---	131	51	35
27									---	143	50	30
28									---	137	48	27
29									---	225	48	21
30									---	178	45	21
31									---	41	28	---
TOTAL									---	2675	850	739
MEAN									---	86.3	27.4	24.6
MAX									---	215	38	56
MIN									---	41	17	12
AC-FT									---	5310	1690	1470

SACRAMENTO RIVER BASIN

11375815 COTTONWOOD CREEK ABOVE SOUTH FORK, NEAR COTTONWOOD, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	105	---	---					---	212	83	119
2	23	84	---	---					---	235	78	114
3	24	75	---	---					---	224	80	94
4	22	66	---	---					---	202	72	83
5	20	64	474	---					---	185	68	76
6	24	61	441	496					---	177	63	67
7	28	59	393	---					---	166	58	61
8	32	56	323	---					---	168	56	56
9	31	66	274	---					---	158	54	54
10	26	64	237	494					---	150	53	50
11	24	59	207	467					---	134	55	48
12	20	56	182	---					426	125	56	47
13	18	53	193	469					392	119	56	46
14	16	52	171	468					367	112	56	41
15	15	53	---	418					357	110	54	40
16	14	52	---	459					336	108	58	36
17	14	65	---	477					319	105	54	34
18	14	---	---	---					277	102	50	34
19	14	---	---	---					258	101	50	32
20	15	308	---	---					242	119	53	32
21	19	184	---	---					234	123	55	32
22	27	167	---	---					224	108	65	38
23	71	473	---	---					222	100	82	169
24	70	327	---	---					211	93	63	103
25	64	204	---	---					190	86	57	73
26	77	159	---	---					183	83	56	62
27	71	---	---	---					187	83	58	55
28	56	---	---	---					209	83	53	52
29	57	---	---	---					214	83	52	51
30	373	---	---	---					211	85	60	50
31	189	---	---	---					---	83	70	---
TOTAL	1488	---	---	---					---	4022	1878	1849
MEAN	48.0	---	---	---					---	130	60.6	61.6
MAX	373	---	---	---					---	235	83	169
MIN	14	---	---	---					---	83	50	32
AC-FT	2950	---	---	---					---	7980	3730	3670

11375815 COTTONWOOD CREEK ABOVE SOUTH FORK, NEAR COTTONWOOD, CA--Continued

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
13...	1600	429	236	8.3	20.5	9.6	98	21	11	5.8	1.0

DATE	TIME	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAY , 1982												
13...	96		7.0	2.9	.10	20	135	130	.100	.020	.100	.100

DATE	TIME	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982											
13...		.160	.170	.53	.70	.020	.020	.020	20	9	.60

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1982											
07...	1330	31	294	8.3	17.0	11.4	130	27	16	10	1.1
APR , 1983											
20...	1510	1230	222	8.1	14.5	9.7	90	20	9.7	6.4	.90

DATE	TIME	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (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)
OCT 1982												
07...	125		9.0	11	.10	19	168	170	.10	.02	.10	.10
APR , 1983												
20...	81		19	2.7	<.10	19	119	130	--	<.02	<.10	<.10

DATE	TIME	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1982											
07...		.07	.07	.63	.70	.01	.01	.01	30	3	1.3
APR , 1983											
20...		<.06	<.06	--	.60	.13	.04	.04	10	33	2.7

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

SACRAMENTO RIVER BASIN

11375870 SOUTH FORK COTTONWOOD CREEK NEAR OLINDA, CA

LOCATION.--Lat 40°19'34", long 122°26'40", in SE 1/4 NE 1/4 sec.32, T.29 N., R.5 W., Tehama County, Hydrologic Unit 18020102, on left bank 250 ft downstream from Dry Creek and 8.0 mi south of Olinda.

DRAINAGE AREA.--371 mi².

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--6 years, 403 ft³/s, 292,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,800 ft³/s Feb. 28, 1983, gage height, 15.38 ft;
no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 16, 1974 reached a stage of 13.5 ft, from floodmarks
on right bank, discharge, 27,200 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	2400	6,120	7.02	Feb. 18	1400	4,280	5.12
Dec. 22	1745	5,830	6.87	Feb. 28	2330	*35,800	15.38
Jan. 26	1745	29,300	14.03	Mar. 23	2045	4,720	5.50
Feb. 5	1500	4,850	5.48	Mar. 31	0530	2,770	4.14
Feb. 9	2345	4,420	5.19	Apr. 28	2300	2,890	4.24

Minimum daily, 6.8 ft³/s Oct. 17.DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	105	482	352	1190	12400	1890	1230	757	193	64	44
2	8.0	72	385	334	1070	14500	1600	1080	691	193	62	43
3	8.0	56	387	315	950	8400	1360	987	640	193	60	38
4	7.9	47	338	309	841	4720	1210	960	634	182	59	35
5	7.6	44	342	307	2040	3260	1090	1280	598	175	57	33
6	7.6	39	358	324	1620	2370	1010	995	586	175	55	30
7	8.3	35	319	339	1450	2870	940	883	574	171	53	27
8	8.7	33	273	344	1940	2190	889	824	562	164	52	26
9	9.5	36	245	340	1820	1950	876	789	542	154	50	26
10	9.4	35	222	319	3630	1990	840	754	517	148	49	26
11	8.5	33	194	300	2150	2040	809	723	496	138	48	24
12	8.0	31	174	286	2640	2620	771	709	460	132	46	24
13	7.6	29	170	278	2400	6800	718	712	419	132	45	23
14	7.4	28	155	269	1680	3360	677	728	395	135	45	22
15	7.4	26	463	257	1400	2380	645	767	385	135	45	20
16	7.3	26	1340	268	1540	1910	622	787	368	135	44	19
17	6.8	33	4150	276	1190	1680	615	770	361	126	42	19
18	7.1	1070	1310	440	2960	1680	637	783	353	120	41	19
19	7.4	778	714	736	2170	1380	659	864	334	117	40	17
20	7.7	420	952	522	1510	1330	668	896	309	114	40	16
21	8.6	292	4310	459	1190	2250	677	967	290	108	41	17
22	9.8	260	3630	1010	1030	2180	680	1030	277	100	44	32
23	23	546	1800	1520	990	2260	824	1070	273	95	48	29
24	55	369	873	4670	1270	2320	821	1050	265	95	48	28
25	44	272	621	1580	3010	1630	726	1050	252	88	46	23
26	54	223	541	14500	2010	1410	672	1050	243	88	42	23
27	69	207	497	7970	7280	1820	886	1060	235	86	41	30
28	46	541	461	2930	9210	1410	1480	1060	227	78	37	30
29	42	1100	432	3230	---	1360	1510	1020	219	71	36	28
30	320	750	404	1840	---	1500	1510	951	198	69	33	26
31	191	---	378	1430	---	2390	---	862	---	66	36	---
TOTAL	1020.6	7536	26920	48054	62181	100360	28312	28691	12460	3976	1449	797
MEAN	32.9	251	868	1550	2221	3237	944	926	415	128	46.7	26.6
MAX	320	1100	4310	14500	9210	14500	1890	1280	757	193	64	44
MIN	6.8	26	155	257	841	1330	615	709	198	66	33	16
AC-FT	2020	14950	53400	95320	123300	199100	56160	56910	24710	7890	2870	1580

CAL YR 1982 TOTAL 143672.28 MEAN 394 MAX 4310 MIN .64 AC-FT 285000
WTR YR 1983 TOTAL 321756.60 MEAN 882 MAX 14500 MIN 6.8 AC-FT 638200

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

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1982 to current year.

WATER TEMPERATURES: Water years 1977-80.

SEDIMENT RECORDS: Water years 1977 to May 1983 (discontinued).

TURBIDITY: Water years 1977-79, 1981.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1976 to September 1980.

SEDIMENT RECORDS: January 1977 to May 1980 (storm season only).

REMARKS.--The May 1982 values for water quality are included to show streamflow which was omitted in the report for 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
18...	0900	271	324	8.0	14.0	10.0	110	30	9.6	9.8	1.0
OCT											
07...	0830	8.1	360	8.2	11.0	10.3	150	40	13	17	1.4
APR , 1983											
26...	0840	675	260	8.1	9.0	11.1	130	34	11	9.6	.80

DATE	ALKA- LITY FIELD (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)	NITRO- GEN, NITRATE DIS- SOLVED (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)
MAY , 1982											
18...	104	18	7.1	.20	13	163	150	.10	.02	--	.10
OCT											
07...	119	23	36	.10	12	211	210	--	<.02	<.10	<.10
APR , 1983											
26...	110	24	5.6	<.10	12	157	160	--	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
18...	--	.07	.43	.50	.02	--	.02	50	10	--
OCT										
07...	.06	.07	.73	.80	.01	<.01	<.01	110	4	.70
APR , 1983										
26...	.38	.28	.22	.50	.06	.02	.01	40	100	--

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

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

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, 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	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
				SEDI- MENT, SUS- PENDED (MG/L)							
NOV 03...	0905	.57	10.0	2	.00	--	--	--	--	--	--
DEC 09...	0845	247	4.5	11	7.3	--	--	--	--	--	--
	1015	2450	7.0	943	6240	22	30	40	49	58	--
	1015	2450	7.0	943	6240	--	--	--	--	--	--
JAN 05...	0940	309	6.5	20	17	--	--	--	--	--	--
	1230	7030	8.0	4540	86200	--	27	29	43	56	--
FEB 02...	1015	1050	8.0	258	731	24	33	40	47	53	--
	1250	3780	8.0	1780	18200	--	25	34	45	56	66
MAR 03...	1000	9410	9.0	6910	176000	--	44	51	63	73	82
	1040	3450	8.0	1760	16400	14	19	28	37	45	--
	1045	2250	9.0	710	4310	27	33	41	47	52	--
APR 06...	1000	1040	9.0	140	393	--	--	--	--	--	--
MAY 04...	0950	974	13.0	116	305	--	--	--	--	--	--

[illegible]

11375900 SOUTH FORK COTTONWOOD CREEK AT EVERGREEN ROAD, NEAR COTTONWOOD, CA

LOCATION.--Lat 40°21'45", long 122°20'18", in SW 1/4 SE 1/4 sec.17, T.29 N., R.4 W., Tehama County, Hydrologic Unit 18020102, on left bank 30 ft downstream from Evergreen Road, and 3.6 mi southwest of Cottonwood.

DRAINAGE AREA.--397 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 427.08 ft, National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s Mar. 1, 1983, gage height, 17.24 ft; no flow most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 15.4 ft, Dec. 19, 1981, from floodmarks, discharge unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	0300	8,050	10.02	Mar. 7	2000	5,460	7.87
Dec. 21	1715	10,700	11.34	Mar. 13	0415	11,700	10.68
Jan. 26	2400	32,000	16.73	Mar. 23	2200	5,610	7.95
Feb. 5	1700	5,130	7.65	Mar. 27	0730	3,270	6.54
Feb. 18	1445	4,500	7.91	Mar. 31	0745	3,200	6.49
Mar. 1	0030	*38,000	17.24				

Minimum daily discharge, 4.4 ft³/s Oct. 6.

REVISIONS.--Revised figures of discharge for the water year 1982, superseding those published in the report for 1982, are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	102	17	.10
2									---	106	13	.32
3									---	92	11	.31
4									---	81	12	.14
5									---	75	11	.02
6									---	71	10	.17
7									---	68	11	.15
8									---	65	11	.10
9									---	64	7.9	.01
10									---	61	7.5	0
11									---	62	7.1	.03
12									---	58	7.0	0
13									---	53	6.9	0
14									---	50	6.7	0
15									---	48	6.2	.07
16									---	45	6.5	0
17									---	43	6.4	0
18									---	41	5.9	.24
19									---	38	4.9	2.3
20									---	34	4.9	8.3
21									---	32	5.5	7.1
22									---	30	4.3	6.7
23									---	95	28	3.1
24									---	94	27	.52
25									---	96	26	.15
26									---	91	25	.06
27									---	91	24	.01
28									---	97	23	0
29									---	183	23	0
30									---	124	22	0
31									---	20	0	---
TOTAL									---	1537	187.54	69.96
MEAN									---	49.6	6.05	2.33
MAX									---	106	17	8.3
MIN									---	20	0	0
AC-FT									---	3050	372	139

SACRAMENTO RIVER BASIN

11375900 SOUTH FORK COTTONWOOD CREEK AT EVERGREEN ROAD, NEAR COTTONWOOD, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	84	507	323	1300	15000	2170	1160	700	180	56	39
2	5.2	66	356	292	1050	16800	1870	977	634	197	54	40
3	5.4	53	378	280	854	8740	1600	854	558	186	52	34
4	5.6	44	319	268	714	5080	1380	819	572	175	50	31
5	4.6	37	332	284	2150	3910	1200	1230	551	170	50	28
6	4.4	32	358	308	2200	3070	1060	867	534	169	49	26
7	5.3	33	317	324	1860	3800	966	661	524	162	45	24
8	5.4	31	263	332	2470	2780	907	582	538	155	42	22
9	5.6	32	215	318	2100	2320	906	538	516	146	40	20
10	5.8	31	184	294	3800	2250	854	495	468	138	38	21
11	5.5	30	165	272	2180	2560	791	468	437	129	37	21
12	5.4	27	145	251	2640	2540	734	466	380	123	35	20
13	5.1	25	142	240	2510	8060	641	488	343	125	34	20
14	5.1	23	128	228	1680	3910	583	519	333	124	34	19
15	4.9	23	553	218	1410	2570	520	579	323	125	35	19
16	4.5	23	1400	240	1700	2020	500	620	308	120	33	19
17	4.7	30	4700	240	1160	1750	487	603	294	113	32	19
18	4.6	1100	1680	427	3110	1820	518	625	285	98	30	19
19	4.6	879	1130	942	2580	1410	567	774	271	81	28	18
20	4.7	336	1300	499	1860	1290	584	838	246	81	29	17
21	5.9	196	5100	413	1540	2700	621	957	230	78	30	17
22	8.6	166	4350	1230	1400	2610	628	1090	215	74	34	18
23	13	471	2240	1390	1390	2360	882	1160	215	72	42	30
24	51	286	1080	6480	1820	2710	992	1140	204	71	44	25
25	45	183	728	1960	3660	1840	771	1130	204	67	41	25
26	47	143	594	17100	2420	1580	650	1140	194	70	38	23
27	66	130	545	13000	9120	2210	976	1160	187	74	36	21
28	43	510	484	3670	10000	1580	1870	1160	181	69	33	21
29	38	1340	434	4070	---	1480	1660	1080	178	69	31	20
30	297	945	393	2550	---	1680	1570	975	175	68	29	20
31	157	---	350	1770	---	2830	---	854	---	62	31	---
TOTAL	872.9	7309	30870	60213	70678	115260	29458	26009	10798	3571	1192	696
MEAN	28.2	244	996	1942	2524	3718	982	839	360	115	38.5	23.2
MAX	297	1340	5100	17100	10000	16800	2170	1230	700	197	56	40
MIN	4.4	23	128	218	714	1290	487	466	175	62	28	17
AC-FT	1730	14500	61230	119400	140200	228600	58430	51590	21420	7080	2360	1380

WTR YR 1983 TOTAL 356926.90 MEAN 978 MAX 17100 MIN 4.4 AC-FT 708000

11375900 SOUTH FORK COTTONWOOD CREEK AT EVERGREEN ROAD, NEAR COTTONWOOD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: April 1982 to current year.

REMARKS.--The May 1982 values for water quality are included here to show streamflow which was omitted in the report for 1982.

WATER QUALITY RECORDS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
19...	1250	266	282	8.1	19.5	9.1	110	30	9.7	10	1.1
OCT											
07...	1500	5.4	338	8.3	18.5	12.0	140	35	12	15	1.1
APR , 1983											
25...	1420	682	402	8.1	12.5	10.6	140	35	13	12	.90

DATE	ALKA- LITY FIELD (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 CONSTITUENTS, DIS- SOLVED (MG/L)	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)
MAY , 1982										
19...	110	18	7.1	.20	13	160	160	<.02	<.10	<.10
OCT										
07...	104	22	29	<.10	13	197	190	<.02	<.10	<.10
APR , 1983										
25...	130	30	6.5	<.10	14	178	190	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
19...	<.06	<.06	--	.44	<.02	.02	.02	490	<9	1.4
OCT										
07...	.07	.06	.54	.60	.02	<.01	<.01	90	7	1.0
APR , 1983										
25...	.36	.17	.13	.30	.06	<.02	.02	50	11	2.5

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

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA

LOCATION.--Lat 40°23'14", long 122°14'15", in NE 1/4 NE 1/4 sec.7, T.29 N., R.3 W., Shasta County, Hydrologic Unit 18020102, on left bank 2.2 mi east of Cottonwood, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--927 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 26, 1963, on right bank at datum 3.59 ft higher. July 26, 1964, to Sept. 13, 1972, at site 250 ft downstream on right bank. Sept. 21, 1967, to Jan. 14, 1968, supplementary gage at a site 1,450 ft downstream on right bank at datum 2.35 ft 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.--43 years, 902 ft³/s, 653,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,000 ft³/s Mar. 1, 1983, gage height, 21.59 ft; minimum, 15 ft³/s on several days during September 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	0400	16,000	13.44	Mar. 1	0245	*86,000	21.59
Dec. 21	1900	21,500	14.56	Mar. 7	2100	14,600	12.68
Jan. 26	2200	69,000	20.07	Mar. 13	0500	28,200	15.71
Feb. 10	0800	13,800	12.89	Mar. 23	2330	14,600	13.11
Feb. 18	1630	9,400	11.50	Apr. 28	2345	10,700	11.97

Minimum daily, 88 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	312	1390	1180	3850	43300	7090	4560	1550	508	193	271
2	98	225	1050	1130	3280	39500	6320	3840	1440	527	195	280
3	96	187	1070	1080	2800	30200	5480	3320	1310	526	193	258
4	104	159	880	1030	2400	13700	4340	3080	1280	489	188	259
5	90	145	844	990	4300	9010	3570	4880	1230	470	193	259
6	88	140	830	950	7590	6890	3200	4210	1190	464	200	204
7	106	133	742	912	7270	10100	2950	3150	1150	454	199	154
8	177	124	631	925	8330	7490	2790	2750	1150	458	181	139
9	194	124	562	923	7530	6060	2710	2450	1090	453	171	139
10	181	133	506	879	11900	5540	2580	2230	1080	442	160	139
11	149	130	458	831	7810	6550	2330	2060	1030	428	151	139
12	113	123	418	777	8670	8540	2200	1950	901	415	165	142
13	122	118	410	757	7720	19700	2000	1900	825	420	153	127
14	96	118	388	734	6170	10000	1860	1870	772	439	140	118
15	107	118	2110	703	5360	7050	1750	1900	753	386	133	119
16	114	114	3140	733	6060	6010	1600	1860	731	378	154	117
17	113	127	10300	785	4930	5610	1570	1750	714	364	135	131
18	100	1690	3960	1650	7420	6230	1600	1750	701	358	124	129
19	98	1960	2370	2850	7010	4200	1810	1870	678	348	120	113
20	133	866	2610	1760	5860	3510	1840	1940	630	342	128	123
21	144	573	10500	1470	5030	8150	1780	2060	595	280	146	128
22	168	479	10500	3030	4510	8910	1770	2170	578	255	176	147
23	187	1010	6390	3080	4230	7900	2300	2200	568	259	225	296
24	245	837	3360	15000	5080	9580	3190	2170	564	244	223	198
25	265	584	2460	5450	9210	7010	2530	2120	538	250	182	160
26	268	471	2000	36000	7440	5920	2160	2090	541	252	167	140
27	212	416	1740	26200	20000	7940	2630	2080	524	245	161	130
28	157	1100	1480	8930	19100	6380	4910	2080	520	233	163	123
29	137	3440	1350	8810	---	6640	5900	1980	521	225	169	123
30	616	2420	1280	5740	---	7460	5680	1870	518	215	170	117
31	533	---	1230	4690	---	8670	---	1720	---	197	175	---
TOTAL	5302	18376	76959	139979	200860	333750	92440	75860	25672	11324	5233	4922
MEAN	171	613	2483	4515	7174	10770	3081	2447	856	365	169	164
MAX	616	3440	10500	36000	20000	43300	7090	4880	1550	527	225	296
MIN	88	114	388	703	2400	3510	1570	1720	518	197	120	113
AC-FT	10520	36450	152600	277600	398400	662000	183400	150500	50920	22460	10380	9760

CAL YR 1982	TOTAL	451351	MEAN	1237	MAX	11400	MIN	71	AC-FT	895300
WTR YR 1983	TOTAL	990677	MEAN	2714	MAX	43300	MIN	.88	AC-FT	1965000

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1982 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 1977-81.

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 May 1980 (storm season only for water years 1978-80).

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

REMARKS.--Sediment samples for Jan. 26, 27 and Mar. 3, 13 are partial depth samples. The May 1982 values for water quality are included here to show streamflow which was omitted in the report for 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 32.5°C June 16, 1980; minimum recorded, 2.5°C Nov. 23, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 29.5°C several days during July and August; minimum recorded, 5.0°C Dec. 24, 25, Jan. 13.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UHHS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
11...	1400	896	281	8.1	17.0	9.4	110	25	11	7.9	1.0
OCT											
08...	0800	672	170	7.4	13.0	9.8	71	15	8.2	6.9	1.3
APR , 1983											
21...	1015	1940	212	7.8	14.5	10.1	110	25	11	8.1	.90

DATE	ALKA- LINITY FIELD (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)	NITRO- GEN, NITRATE DIS- SOLVED (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)
MAY , 1982											
11...	102	11	4.2	<.10	18	135	140	--	<.02	<.10	<.10
OCT											
08...	73	7.0	6.4	<.10	19	107	110	.12	<.02	<.10	.12
APR , 1983											
21...	82	20	4.0	<.10	17	140	140	--	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
11...	.11	.12	.65	.77	<.01	.02	.02	30	15	1.1
OCT										
08...	<.06	.53	1.1	1.7	.02	.01	<.01	30	37	1.3
APR , 1983										
21...	<.06	<.06	--	.20	.09	.03	.05	20	19	--

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

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.0	14.5	15.0	12.0	9.0	7.5	---	---	9.0	7.0	10.0	8.5
2	19.5	15.0	14.5	11.5	8.5	8.0	---	---	8.5	7.0	9.5	9.0
3	19.5	15.5	15.0	11.5	9.0	8.0	---	---	8.5	7.5	9.5	8.5
4	19.5	15.5	13.5	12.0	11.0	9.0	---	---	8.0	6.5	9.5	8.5
5	19.5	14.0	14.5	11.0	9.5	9.0	---	---	8.0	7.5	10.0	9.0
6	17.5	14.5	14.0	11.5	11.5	9.5	---	---	9.0	8.0	10.0	9.0
7	16.0	12.5	14.0	11.0	9.5	7.0	---	---	9.0	8.0	10.0	10.0
8	14.0	12.5	13.0	11.0	7.5	6.0	8.5	8.0	9.0	8.5	---	---
9	17.5	13.0	13.0	10.5	8.0	6.0	8.0	6.5	---	---	---	---
10	18.5	13.5	13.0	7.0	8.0	6.0	7.5	6.0	---	---	---	---
11	18.5	13.5	13.5	11.0	8.0	5.5	7.5	5.5	---	---	---	---
12	19.0	15.0	13.5	11.0	7.5	6.0	7.0	6.0	---	---	---	---
13	18.5	15.0	12.5	9.5	7.5	7.0	7.0	5.0	---	---	---	---
14	19.0	15.5	12.0	8.5	7.0	6.5	7.5	6.0	---	---	---	---
15	19.0	15.5	13.0	10.0	7.5	6.5	7.5	6.5	---	---	---	---
16	18.5	14.5	11.0	10.0	8.5	7.5	9.0	7.5	---	---	---	---
17	18.5	15.0	10.0	9.5	9.0	8.0	9.5	9.0	---	---	---	---
18	17.5	14.0	9.5	7.5	8.0	6.5	9.5	8.5	---	---	---	---
19	17.0	14.5	9.0	7.5	7.5	6.0	8.5	7.5	---	---	---	---
20	17.0	14.5	9.5	7.5	7.5	7.0	7.5	6.0	---	---	---	---
21	16.0	15.0	9.0	8.0	9.0	8.0	6.5	6.0	---	---	---	---
22	17.0	14.5	9.5	8.5	7.5	6.5	6.5	6.5	---	---	---	---
23	17.5	15.0	10.5	9.0	7.5	6.0	8.5	6.5	---	---	---	---
24	17.5	14.5	10.0	8.0	6.5	5.0	9.5	8.5	---	---	---	9.0
25	17.5	15.0	9.0	7.0	6.5	5.0	9.5	9.0	---	---	12.0	8.5
26	18.5	13.5	9.0	8.0	7.5	6.5	10.0	9.0	---	---	11.0	9.0
27	15.5	12.5	9.0	8.5	7.5	6.5	10.0	9.0	---	---	12.0	9.0
28	15.0	12.5	10.0	9.0	6.5	5.5	9.5	9.5	---	---	11.0	9.0
29	---	13.5	10.0	9.5	5.5	---	9.5	8.5	---	---	10.5	10.0
30	14.5	13.0	10.0	9.0	---	---	9.5	8.5	---	---	12.0	10.0
31	15.0	11.5	---	---	---	---	9.5	8.0	---	---	12.5	9.5
MONTH	20.0	11.5	15.0	7.0	11.5	5.0	---	---	---	---	---	---

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

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 DIAH. % FINER THAN .002 MM	SED. SUSP. FALL DIAH. % FINER THAN .004 MM	SED. SUSP. FALL DIAH. % FINER THAN .008 MM	SED. SUSP. FALL DIAH. % FINER THAN .016 MM	SED. SUSP. FALL DIAH. % FINER THAN .031 MM	SED. SUSP. FALL DIAH. % FINER THAN .062 MM
NOV											
04...	1420	157	13.0	2	.85	--	--	--	--	--	--
DEC											
10...	0945	512	6.0	5	6.9	--	--	--	--	--	--
17...	1015	11900	8.5	2580	82900	--	31	40	52	64	--
JAN											
07...	1150	912	6.5	17	42	--	--	--	--	--	--
25...	1415	5030	9.0	452	6140	23	31	40	49	56	--
26...	1400	33400	9.0	3420	308000	--	27	34	44	56	--
27...	1545	16700	9.5	3320	150000	--	28	33	44	57	--
FEB											
03...	1115	2780	7.5	207	1550	--	--	--	--	--	--
MAR											
03...	1545	28600	10.0	4400	340000	--	32	39	53	65	80
13...	1310	19000	11.0	3220	165000	16	22	29	42	55	65
17...	1400	5570	9.5	545	8200	21	25	32	37	43	--
24...	1330	9080	9.0	926	22700	16	22	27	33	40	--
APR											
05...	1015	3650	9.0	232	2290	--	--	--	--	--	--
29...	1445	4480	14.0	916	11100	--	--	--	--	--	--
MAY											
03...	1010	3140	13.0	212	1800	--	--	--	--	--	--

DATE	SED. SUSP. SIEVE DIAH. % FINER THAN .062 MM	SED. SUSP. FALL DIAH. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAH. % FINER THAN .125 MM	SED. SUSP. FALL DIAH. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAH. % FINER THAN .250 MM	SED. SUSP. FALL DIAH. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAH. % FINER THAN .500 MM	SED. SUSP. FALL DIAH. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAH. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAH. % FINER THAN 2.00 MM
NOV										
04...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	--	--	--	--	--	--	--	--	--	--
17...	76	--	87	--	94	--	99	--	100	--
JAN										
07...	--	--	--	--	--	--	--	--	--	--
25...	62	--	73	--	87	--	97	--	100	--
26...	67	--	93	--	95	--	99	--	100	--
27...	70	--	87	--	96	--	99	--	100	--
FEB										
03...	55	--	71	--	86	--	95	--	100	--
MAR										
03...	--	92	--	98	--	99	--	100	--	--
13...	--	93	--	97	--	100	--	--	--	--
17...	48	--	58	--	74	--	94	--	100	--
24...	46	--	55	--	81	--	95	--	100	--
APR										
05...	40	--	47	--	62	--	90	--	98	100
29...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	38	--	43	--	58	--	84	--	97	100

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

LOCATION.--Lat 40°23'54", long 122°08'43", in SW 1/4 NE 1/4 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 downstream from Spring Branch, 5.7 mi upstream from mouth, and 7.0 mi east of Cottonwood.

DRAINAGE AREA.--357 mi².

PERIOD OF RECORD.--October 1961 to current year. October 1940 to September 1961 at site 0.6 mi 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, 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 to 90 ft³/s which is returned above the station. At times, 10 ft³/s diverted above station for irrigation. Maximum flows considered equivalent to former station, Battle Creek near Cottonwood.

AVERAGE DISCHARGE.--22 years, 528 ft³/s, 382,500 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 22	2030	5,990	7.43	Mar. 1	0730	*11,900	10.51
Jan. 26	2030	10,300	9.85	Mar. 13	1030	3,920	5.88
Feb. 25	1715	4,480	6.33				

Minimum daily, 308 ft³/s Oct. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	420	702	483	823	6390	1270	1240	1370	847	519	473
2	322	399	585	473	774	4110	1240	1170	1290	915	513	441
3	324	388	557	469	733	2870	1120	990	1180	832	515	430
4	313	375	514	461	700	2300	1080	949	1330	818	505	418
5	328	379	498	457	774	1710	1050	1000	1250	848	493	410
6	331	372	479	454	905	1460	1020	1130	1230	851	481	413
7	352	368	462	451	1470	1460	988	1010	1230	816	475	409
8	335	368	438	442	1620	1330	973	947	1210	742	483	402
9	322	370	434	439	1150	1240	968	909	1210	703	484	406
10	357	370	430	435	1320	1270	957	864	1260	673	473	400
11	338	373	430	430	1230	1770	918	834	1440	671	466	394
12	328	370	430	420	2040	1930	899	837	1170	679	460	386
13	319	367	441	417	2120	3340	851	828	1100	693	452	390
14	308	358	428	416	1390	2160	823	833	1080	735	450	391
15	318	356	1040	415	1210	1640	802	848	1080	715	444	391
16	322	357	682	430	1180	1460	795	868	1050	677	439	390
17	325	405	1150	467	1040	1490	799	848	1070	656	436	379
18	327	2050	703	568	1610	1390	815	861	1080	627	436	378
19	329	876	579	932	1290	1260	918	927	988	607	440	375
20	336	612	874	603	1100	1210	1000	990	941	604	451	377
21	344	500	2450	536	1010	1300	976	1090	890	579	451	379
22	394	465	2520	1280	953	1420	919	1140	888	571	472	401
23	518	473	1600	1060	931	1310	1020	1230	902	568	492	617
24	468	436	911	3280	1020	1360	1220	1290	892	561	462	510
25	428	411	730	1260	1990	1220	1050	1270	868	550	449	457
26	995	399	673	4650	1540	1110	957	1290	880	530	439	448
27	485	404	617	3910	1850	1250	1120	1330	855	518	435	443
28	410	799	566	1570	1920	1210	1480	1380	840	511	427	440
29	408	1250	532	1320	---	1200	1280	1450	824	512	418	435
30	640	972	526	1040	---	1170	1290	1420	810	518	414	506
31	480	---	497	898	---	1510	---	1410	---	526	417	---
TOTAL	12117	16042	23478	30466	35693	55850	30598	33183	32208	20653	14291	12689
MEAN	391	535	757	983	1275	1802	1020	1070	1074	666	461	423
MAX	995	2050	2520	4650	2120	6390	1480	1450	1440	915	519	617
MIN	308	356	428	415	700	1110	795	828	810	511	414	375
AC-FT	24030	31820	46570	60430	70800	110800	60690	65820	63880	40970	28350	25170

CAL YR 1982	TOTAL	237434	MEAN	651	MAX	3670	MIN	264	AC-FT	471000
WTR YR 1983	TOTAL	317268	MEAN	869	MAX	6390	MIN	308	AC-FT	629300

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

LOCATION.--Lat 40°17'19", long 122°11'08", in NW 1/4 NE 1/4 sec.15, T.28 N., R.3 W., Tehama County, Hydrologic Unit 18020103, on left bank 2.7 mi upstream from Bend Bridge, and 8.1 mi northeast of Red Bluff.

DRAINAGE AREA.--8,900 mi², excluding Goose Lake basin.

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: 1916(M), 1918(M), 1941(M). WSP 1931: Drainage area. WDR CA-69-2: 1965.

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

REMARKS.--Records good. Flow regulated by Shasta Lake (station 11370000) since Dec. 30, 1943. Diversions, in addition to those on tributaries, for irrigation of 22,000 acres between stations at Keswick and above Bend Bridge. Transbasin diversions from Trinity River to Whiskeytown Lake via Judge Francis Carr power-plant (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, 8,259,000 acre-ft/yr; 21 years (water years 1963-83), 13,940 ft³/s, 10,100,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291,000 ft³/s Feb. 28, 1940, gage height, 38.9 ft site and datum then in use, from rating curve extended above 170,000 ft³/s on basis of velocity-area studies; minimum (water years 1892-1983), 2,000 ft³/s Mar. 29, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 152,000 ft³/s Mar. 1, gage height, 35.70 ft; minimum daily, 7,340 ft³/s Jan. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8060	7440	20100	11200	69600	123000	66400	24000	21000	15900	14500	15100
2	8130	7450	18000	11000	68100	106000	64100	26200	21300	16300	14700	15000
3	8140	8610	18300	10800	56600	94000	61700	24800	20000	16100	14600	15100
4	8130	9030	17500	10700	45400	94700	58800	23500	19300	15900	14600	15100
5	8110	8990	17200	10000	36200	86000	44400	25500	18900	15800	14500	15200
6	8130	9000	17100	9260	43800	82200	33500	20200	19000	15800	14500	13300
7	8270	8870	15800	9180	50000	87800	25600	29300	19200	15800	14600	10800
8	8260	8980	12200	9220	49500	83400	22700	32600	19500	15800	14600	9270
9	8300	9040	9950	9130	46300	76500	22000	31900	19000	15800	14600	8780
10	8290	9020	9500	9010	74400	74800	20500	31400	18100	15800	14600	8720
11	8270	8990	9770	8830	57400	80900	16700	30900	18100	15800	14500	8680
12	8190	8980	9610	8630	53900	86100	13400	30900	17000	16000	14600	8600
13	8180	8980	9560	8170	62400	84700	11700	30400	16800	16000	14500	8540
14	8150	8920	9380	7650	65800	78000	11200	24900	16700	15800	14700	8430
15	8150	8920	19300	7400	63200	80300	10800	17800	16600	15100	14600	8650
16	8150	8920	21300	7340	64900	76300	10500	11700	16700	15000	14500	8360
17	8140	9110	39100	7470	61400	78500	10300	10000	16800	15000	14800	8360
18	8160	23300	30700	9640	67000	78500	10400	14500	16900	15100	14400	8360
19	8170	21100	26600	19100	66200	56500	10700	16900	15900	15200	14500	8260
20	8240	17300	26800	10600	62500	61500	11100	17400	16500	14900	14700	8310
21	8380	16500	54300	9230	60700	67800	11000	17900	15900	14700	14600	8320
22	8590	16200	65000	15000	58600	65300	10800	18000	16700	14700	14700	7880
23	8630	16800	60800	14000	48000	58100	11500	18400	16800	14700	14700	9370
24	8760	16700	46300	49300	47300	63100	16100	19400	15900	14700	14900	11000
25	8770	16300	43500	29200	59000	55400	14700	21400	15800	14700	14700	10700
26	9570	16200	41700	73200	53100	51100	12800	20800	15900	14700	14900	10700
27	7880	15800	28800	76000	64600	57800	13300	21700	15900	14800	14700	12200
28	7410	17100	21300	59400	73500	53000	20400	21300	15800	14700	14800	12400
29	8470	26400	15500	67800	---	63700	19900	21400	15800	14700	14600	12300
30	9810	23700	12400	80800	---	70500	20400	21300	15900	14700	14600	12400
31	9260	---	11600	73200	---	75100	---	21300	---	14800	14700	---
TOTAL	259150	392650	758970	741460	1629400	2350600	687400	697700	523700	474800	453500	318190
MEAN	8360	13090	24480	23920	58190	75830	22910	22510	17460	15320	14630	10610
MAX	9810	26400	65000	80800	74400	123000	66400	32600	21300	16300	14900	15200
MIN	7410	7440	9380	7340	36200	51100	10300	10000	15800	14700	14400	7880
AC-FT	514000	778800	1505000	1471000	3232000	4662000	1363000	1384000	1039000	941800	899500	631100
CAL YR 1982	TOTAL	6428490	MEAN	17610	MAX	68600	MIN	7410	AC-FT	12750000		
WTR YR 1983	TOTAL	9287520	MEAN	25450	MAX	123000	MIN	7340	AC-FT	18420000		

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

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1955-81. Published as "Sacramento River at Bend" May 1955 to September 1973; as Sacramento River at Bend Bridge (station 11377200) October 1973 to September 1976.

WATER TEMPERATURES: Water years 1955 to June 1980, 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 May 1983 (discontinued).

TURBIDITY: Water years 1977-81.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: May 1955 to September 1963.

SPECIFIC CONDUCTANCE: May 1955 to September 1963.

WATER TEMPERATURES: May 1955 to June 1980.

SEDIMENT RECORDS: October 1957 to September 1970, January 1977 to May 1980, (storm season only for water years 1977, 1979-80).

INSTRUMENTATION.--Temperature recorder from March 1970 to June 1980.

REMARKS.--Sediment sample for March 4 is a partial depth sample.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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
NOV 03...	1015	8900	11.5	5	120	--	--	--
DEC 01...	1250	19500	10.5	19	1000	--	--	--
22...	1100	49100	10.0	186	24700	--	--	--
23...	1100	58300	9.5	148	23300	21	25	33
JAN 03...	1045	10800	8.5	8	233	--	--	--
MAR 04...	1100	99300	10.5	619	166000	15	23	32
MAY 02...	1045	26400	10.5	105	7480	--	--	--

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
NOV 03...	--	--	--	--	--	--	--
DEC 01...	--	--	68	77	100	--	--
22...	--	--	--	--	--	--	--
23...	42	52	75	84	93	99	100
JAN 03...	--	--	--	--	--	--	--
MAR 04...	43	55	69	85	97	100	--
MAY 02...	--	--	35	49	82	100	--

11379500 ELDER CREEK NEAR PASKENTA, CA

LOCATION.--Lat 40°01'29", long 122°30'31", in SE 1/4 NW 1/4 sec.14, T.25 N., R.6 W., Tehama County, Hydrologic Unit 18020103, on left bank 2.5 mi downstream from South Fork Elder Creek, 8.2 mi northwest of Flournoy, and 10 mi north of Paskenta.

DRAINAGE AREA.--92.4 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1965, water-stage recorder at site 300 ft downstream at datum 5.13 ft lower.

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

AVERAGE DISCHARGE.--35 years, 106 ft³/s, 76,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft³/s Feb. 28, 1983, gage height, 12.10 ft present site and datum, from rating curve extended above 5,200 ft³/s on basis of slope-area measurements at gage heights 11.34 ft and 12.10 ft; maximum gage height, 13.90 ft Feb. 24, 1958, site and datum then in use; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	2245	3,100	7.22	Feb. 28	2145	*17,700	12.10
Dec. 21	1430	3,750	7.78	Mar. 23	1945	1,560	5.75
Jan. 26	1515	14,000	11.34	Mar. 27	0300	1,550	5.73

Minimum daily, 4.3 ft³/s Oct. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	23	132	104	360	4140	582	587	243	46	15	20
2	5.2	14	99	98	308	6000	522	476	221	48	15	14
3	5.2	16	88	93	268	3060	457	421	200	45	14	11
4	5.3	15	78	89	236	1630	406	434	195	41	14	9.4
5	5.2	14	76	92	631	1130	369	421	186	37	14	8.4
6	5.3	14	80	97	786	938	335	361	177	36	12	7.9
7	6.0	13	70	99	624	1060	311	321	171	36	11	7.8
8	5.2	13	61	103	627	790	302	300	162	37	11	8.2
9	5.0	14	55	98	596	700	303	276	150	37	10	8.6
10	4.8	14	51	91	754	703	283	260	141	33	10	7.9
11	4.7	13	46	85	535	660	270	248	129	31	10	7.2
12	4.5	13	43	81	767	1110	250	249	115	28	10	7.0
13	4.4	15	43	77	627	2350	230	255	106	28	9.7	6.5
14	4.3	15	38	73	467	1030	216	266	100	26	9.4	6.3
15	4.4	15	166	71	425	752	204	287	95	25	9.2	6.2
16	4.4	29	730	83	406	653	196	287	89	25	9.2	6.0
17	4.5	55	965	78	351	585	201	280	85	25	8.6	5.9
18	4.6	91	296	202	792	576	211	304	80	27	8.0	5.8
19	4.6	310	194	175	566	487	222	350	76	27	8.6	5.6
20	4.7	115	563	125	436	520	231	374	71	28	12	5.3
21	4.8	71	1580	111	365	658	236	410	68	25	11	5.4
22	8.4	94	1290	325	327	771	232	427	64	23	12	8.5
23	17	155	600	853	344	831	505	428	61	22	14	19
24	17	88	302	1490	430	808	430	417	59	21	12	13
25	29	66	224	540	929	607	321	417	55	21	11	10
26	43	55	187	5200	794	554	278	411	53	22	11	9.1
27	18	82	167	2040	2310	820	409	408	51	20	11	9.2
28	14	160	147	934	5180	565	587	383	51	19	9.9	9.6
29	30	320	133	919	---	542	526	352	50	19	9.2	8.7
30	146	210	122	556	---	668	653	312	49	17	9.5	13
31	37	---	112	436	---	755	---	280	---	16	14	---
TOTAL	461.5	2122	8738	15418	21241	36453	10278	11002	3353	891	345.3	270.5
MEAN	14.9	70.7	282	497	759	1176	343	355	112	28.7	11.1	9.02
MAX	146	320	1580	5200	5180	6000	653	587	243	48	15	20
MIN	4.3	13	38	71	236	487	196	248	49	16	8.0	5.3
AC-FT	915	4210	17330	30580	42130	72300	20390	21820	6650	1770	685	537
CAL YR 1982	TOTAL	47021.5	MEAN	129	MAX	1600	MIN	2.5	AC-FT	93270		
WTR YR 1983	TOTAL	110573.3	MEAN	303	MAX	6000	MIN	4.3	AC-FT	219300		

SACRAMENTO RIVER BASIN

11381500 MILL CREEK NEAR LOS MOLINOS, CA

LOCATION.--Lat 40°03'17", long 122°01'23", in NE 1/4 NW 1/4 sec.6, T.25 N., R.1 W., Tehama County, Hydrologic Unit 18020103, on right bank 4.5 mi northeast of Los Molinos, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--131 mi².

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, from topographic map. Prior to September 1913, nonrecording gage at site 0.3 mi downstream at different datum.

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

AVERAGE DISCHARGE.--55 years (water years 1929-83), 307 ft³/s, 222,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (water years 1929-83): Maximum discharge, 36,400 ft³/s Dec. 11, 1937, gage height, 23.4 ft from floodmarks, from rating curve extended above 14,000 ft³/s on basis of step-backwater computation and slope-area measurement of peak flow; minimum, 49 ft³/s Dec. 13, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 21	1515	5,010	9.08	Feb. 13	0130	3,190	7.63
Jan. 26	2115	*8,610	11.20	Mar. 1	0745	7,840	10.78
Feb. 8	0100	2,420	6.84	Mar. 13	0500	4,280	8.57

Minimum daily, 121 ft³/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	218	554	242	513	4670	828	708	930	660	325	199
2	129	192	394	230	445	3620	770	650	811	717	312	190
3	129	177	342	220	395	2240	663	602	766	615	304	184
4	128	170	306	215	369	1360	583	591	922	601	288	180
5	127	164	298	209	361	1010	524	599	857	652	275	177
6	127	159	284	205	443	833	477	625	841	651	261	174
7	137	156	270	205	1120	956	446	540	858	589	257	171
8	132	154	247	203	1580	839	439	514	845	480	257	168
9	128	154	231	202	1020	737	442	476	853	456	254	169
10	125	153	218	197	1080	783	430	447	886	437	247	168
11	124	152	207	192	892	1650	405	427	975	452	238	166
12	124	148	199	185	1800	1460	391	443	762	475	227	164
13	123	147	211	184	2030	3470	376	449	707	511	218	162
14	123	144	200	180	1110	1790	368	471	713	571	213	162
15	123	143	245	177	835	1180	363	510	732	527	208	161
16	123	142	391	183	708	953	364	541	724	460	202	160
17	123	186	1120	201	591	888	369	533	755	432	196	158
18	123	1490	593	337	1060	785	374	562	771	394	190	157
19	121	710	430	582	858	672	473	632	665	377	187	156
20	122	389	731	378	680	644	542	717	631	363	187	154
21	128	296	2820	325	578	649	538	820	573	355	192	154
22	205	252	1930	828	513	816	514	909	609	366	277	163
23	382	266	1250	699	484	827	655	977	637	359	232	182
24	244	226	701	2180	461	973	805	1020	615	351	216	173
25	540	201	517	988	609	701	726	965	597	343	207	163
26	797	184	430	3090	732	591	581	988	628	326	201	160
27	277	180	381	2890	1650	881	568	1020	633	315	195	159
28	200	726	344	1300	1860	964	735	1050	605	315	192	159
29	220	1160	313	1170	---	824	816	1130	590	327	189	167
30	551	1110	289	784	---	786	797	1070	587	328	183	178
31	285	---	263	614	---	1060	---	1030	---	343	186	---
TOTAL	6350	9949	16709	19595	24777	39612	16362	22016	22078	14148	7116	5038
MEAN	205	332	539	632	885	1278	545	710	736	456	230	168
MAX	797	1490	2820	3090	2030	4670	828	1130	975	717	325	199
MIN	121	142	199	177	361	591	363	427	573	315	183	154
AC-FT	12600	19730	33140	38870	49150	78570	32450	43670	43790	28060	14110	9990
CAL YR 1982	TOTAL	154819	MEAN	424	MAX	3830	MIN	121	AC-FT	307100		
WTR YR 1983	TOTAL	203750	MEAN	558	MAX	4670	MIN	121	AC-FT	404100		

11382000 THOMES CREEK AT PASKENTA, CA

LOCATION.--Lat 39°53'16", long 122°31'41", in SE 1/4 SW 1/4 sec.34, T.24 N., R.6 W., Tehama County, Hydrologic Unit 18020103, on left bank 1.2 mi downstream from Digger Creek, and 1.0 mi downstream from highway bridge at Paskenta.

DRAINAGE AREA.--203 mi².

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. WDR CA-79-4(M). WDR CA-81-4(M).

GAGE.--Water-stage recorder. Altitude of gage is 720 ft, from topographic map. Prior to June 20, 1942, nonrecording gage and water-stage recorder at several sites about 1.5 mi upstream at different datums, June 21, 1942, to Sept. 30, 1959, water-stage recorder at site 1.4 mi upstream at datum 732.85 ft and Oct. 1, 1959, to Oct. 9, 1974, at datum 731.10 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--63 years, 297 ft³/s, 215,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,800 ft³/s Dec. 22, 1964, gage height, 13.3 ft, from floodmarks, present site and datum, from rating curve extended above 6,000 ft³/s on basis of slope-area measurements at gage heights, 10.10 ft and 13.3 ft; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	0945	3,740	6.33	Feb. 18	1415	3,800	6.36
Dec. 16	2315	10,700	8.49	Feb. 28	2215	12,500	8.87
Dec. 21	1345	4,730	6.75	Mar. 13	0515	10,900	8.53
Jan. 26	1630	*19,500	10.19	Mar. 30	2330	4,630	6.73
Feb. 10	0300	2,870	5.89	May 22	0015	2,590	5.79

Minimum daily, 7.2 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	127	591	351	973	4800	1940	1130	1340	250	59	41
2	7.4	92	445	316	841	5690	1950	1090	1100	297	57	39
3	7.4	74	459	321	743	3700	1700	1140	1000	250	55	31
4	7.6	64	552	351	661	2600	1390	1260	1040	237	52	28
5	7.3	58	661	446	890	2080	1190	1240	978	234	51	24
6	7.2	53	667	515	1040	1910	1070	975	950	230	47	23
7	7.4	49	536	533	1140	1830	1020	839	927	193	44	22
8	7.9	44	435	595	1380	1790	1080	820	844	162	40	21
9	8.4	46	370	546	1710	1720	1130	711	771	162	39	20
10	8.7	46	325	475	2260	2000	1000	660	725	141	37	18
11	8.7	41	288	440	1590	1800	938	651	660	130	34	18
12	8.4	40	263	456	2620	2420	896	731	577	136	33	17
13	8.2	40	267	468	2110	6630	770	778	526	143	33	15
14	8.1	39	235	464	1500	3020	724	887	519	150	32	15
15	7.8	37	446	469	1330	2100	683	1150	506	130	33	14
16	7.8	36	2650	529	1130	1800	689	1180	460	112	31	14
17	7.8	101	3580	555	1140	1320	751	1170	375	102	30	14
18	7.6	2010	1340	933	3000	1200	794	1340	373	95	28	13
19	7.3	807	878	777	2190	988	821	1640	343	92	27	12
20	7.3	423	1130	562	1550	901	890	1790	352	87	27	11
21	7.5	297	3030	497	1230	927	957	2080	375	83	27	11
22	9.9	286	2070	608	1090	995	1030	2160	365	80	60	14
23	132	334	1160	990	1240	932	1200	2160	386	78	47	21
24	97	305	732	2390	1300	960	1060	2120	354	77	41	18
25	56	257	588	1340	1610	793	891	2170	338	75	37	18
26	189	228	517	9390	1300	748	837	2140	338	73	33	17
27	102	314	494	5380	2510	841	947	2140	331	69	32	17
28	70	997	491	2690	4310	683	1080	2040	303	65	30	17
29	124	1510	466	2260	---	710	1010	2000	290	62	28	18
30	965	949	426	1460	---	1560	1170	1810	276	61	27	24
31	210	---	390	1150	---	2770	---	1580	---	61	30	---
TOTAL	2118.1	9704	26482	38257	44388	62218	31608	43582	17722	4117	1181	585
MEAN	68.3	323	854	1234	1585	2007	1054	1406	591	133	38.1	19.5
MAX	965	2010	3580	9390	4310	6630	1950	2170	1340	297	60	41
MIN	7.2	36	235	316	661	683	683	651	276	61	27	11
AC-FT	4200	19250	52530	75880	88040	123400	62690	86440	35150	8170	2340	1160

CAL YR 1982	TOTAL	169139.4	MEAN	463	MAX	7100	MIN	3.7	AC-FT	335500
WTR YR 1983	TOTAL	281962.1	MEAN	772	MAX	9390	MIN	7.2	AC-FT	559300

11382000 THOMES CREEK AT PASKENTA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

CHEMICAL ANALYSES: Water years 1959-81.

WATER TEMPERATURES: Water years 1962-79, November 1980 to May 1983 (discontinued).

SEDIMENT RECORDS: Water years 1963-73, November 1980 to May 1983 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1961 to January 1979, November 1980 to May 1983 (storm season only).

SEDIMENT RECORDS: October 1962 to September 1973, November 1980 to May 1983 (storm season only).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 60,200 mg/L Dec. 22, 1964; minimum daily mean, no flow, Oct. 4, 1964.

SEDIMENT DISCHARGE: Maximum daily, 5,070,000 tons Dec. 22, 1964; minimum daily, 0 ton at times during some years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS (storm season only): Maximum daily mean, 5,790 mg/L Mar. 13; minimum daily mean, 0 mg/L Nov. 10-12.

SEDIMENT DISCHARGE (storm season only): Maximum daily, 152,000 tons Jan. 26; minimum daily, 0 ton Nov. 10-12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

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

11382000 THOMES CREEK AT PASKENTA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), NOVEMBER 1982 TO MAY 1983

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				127	4	1.4	591	60	96
2				92	4	.99	445	23	28
3				74	4	.80	459	26	32
4				64	3	.52	552	35	53
5				58	3	.47	661	55	98
6				53	2	.29	667	46	83
7				49	1	.13	536	27	39
8				44	1	.12	435	18	21
9				46	1	.12	370	13	13
10				46	0	0	325	7	6.1
11				41	0	0	288	7	5.4
12				40	0	0	263	8	5.7
13				40	1	.11	267	9	6.5
14				39	1	.11	235	6	3.8
15				37	1	.10	446	139	283
16				36	1	.10	2650	1550	21100
17				101	17	4.6	3580	2570	29500
18				2010	1570	11100	1340	837	3030
19				807	215	532	878	379	898
20				423	46	58	1130	472	2520
21				297	13	10	3030	1560	13700
22				286	12	9.5	2070	558	3120
23				334	22	20	1160	242	758
24				305	11	9.1	732	112	221
25				257	6	4.2	588	58	92
26				228	5	3.1	517	48	67
27				314	47	56	494	42	56
28				997	317	920	491	33	44
29				1510	401	1660	466	25	31
30				949	158	405	426	18	21
31				---	---	---	390	15	16
TOTAL				9704	---	14796.76	26482	---	75947.5

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	351	12	11	973	209	549	4800	3030	42700
2	316	11	9.4	841	163	370	5690	3210	49300
3	321	13	11	743	126	253	3700	1950	19500
4	351	17	16	661	104	186	2600	1120	7860
5	446	20	24	890	285	798	2080	651	3660
6	515	25	35	1040	288	809	1910	744	3840
7	533	26	37	1140	354	1150	1830	818	4040
8	595	36	58	1380	538	2000	1790	651	3150
9	546	22	32	1710	1060	5290	1720	632	2940
10	475	13	17	2260	1750	11400	2000	1410	7660
11	440	10	12	1590	809	3470	1800	843	4200
12	456	8	9.8	2620	1400	9900	2420	1760	14400
13	468	7	8.8	2110	995	5670	6630	5790	114000
14	464	7	8.8	1500	418	1690	3020	2140	17400
15	469	8	10	1330	349	1250	2100	1140	6460
16	529	11	16	1130	279	851	1800	744	3620
17	555	11	16	1140	465	1430	1320	660	2350
18	933	154	481	3000	1530	12400	1200	632	2050
19	777	137	319	2190	628	3710	988	344	918
20	562	43	65	1550	279	1170	901	391	951
21	497	22	30	1230	167	555	927	465	1160
22	608	80	150	1090	140	412	995	521	1400
23	990	315	2330	1240	232	777	932	539	1360
24	2390	990	7880	1300	251	881	960	567	1470
25	1340	232	839	1610	326	1420	793	377	807
26	9390	4300	152000	1300	200	702	748	195	394
27	5380	3630	56900	2510	707	5000	841	577	1310
28	2690	1550	11900	4310	2470	47100	683	242	446
29	2260	976	6560	---	---	---	710	195	374
30	1460	465	1830	---	---	---	1560	1980	15500
31	1150	312	969	---	---	---	2770	2550	20700
TOTAL	38257	---	242584.8	44388	---	121193	62218	---	355920

SACRAMENTO RIVER BASIN

11382000 THOMES CREEK AT PASKENTA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), NOVEMBER 1982 TO MAY 1983

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	1940	1160	6080	1130	451	1380	1340		
2	1950	884	4650	1090	442	1300	1100		
3	1700	660	3030	1140	458	1410	1000		
4	1390	549	2060	1260	539	1830	1040		
5	1190	372	1200	1240	407	1360	978		
6	1070	363	1050	975	324	853	950		
7	1020	358	986	839	218	494	927		
8	1080	353	1030	820	191	423	844		
9	1130	349	1060	711	149	286	771		
10	1000	303	818	660	116	207	725		
11	938	246	623	651	172	302	660		
12	896	166	402	731	279	551	577		
13	770	112	233	778	225	473	526		
14	724	82	160	887	270	647	519		
15	683	74	136	1150	354	1110	506		
16	689	84	156	1180	398	1270	460		
17	751	123	249	1170	307	970	375		
18	794	153	328	1340	520	1870	373		
19	821	153	339	1640	738	3260	343		
20	890	203	488	1790	1030	5000	352		
21	957	299	773	2080	1060	5950	375		
22	1030	309	859	2160	893	5210	365		
23	1200	435	1410	2160	800	4670	386		
24	1060	428	1220	2120	744	4260	354		
25	891	214	515	2170	818	4790	338		
26	837	186	420	2140	818	4730	338		
27	947	300	792	2140	744	4300	331		
28	1080	432	1260	2040	651	3590	303		
29	1010	326	889	2000	586	3160	290		
30	1170	502	1640	1810	512	2500	276		
31	---	---	---	1580	326	1390	---		
TOTAL	31608	---	34856	43582	---	69546	17722		
PERIOD 281962.1			914844						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, NOVEMBER 1982 TO MAY 1983

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER 1982	9704.00	14796.76	1500	16300
DECEMBER ...	26482.00	75947.50	5390	81300
JANUARY 1983	38257.00	242584.80	9150	252000
FEBRUARY ...	44388.00	121193.00	12400	134000
MARCH	62218.00	355920.00	19200	375000
APRIL	31608.00	34856.00	6200	41100
MAY	43582.00	69546.00	11400	80900
PERIOD 	256239.00	914844.06	65240	980600

11392000 THOMES CREEK AT PASKENTA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
NOV											
18...	1215	3450	7.5	2560	23800	--	22	33	45	56	65
JAN											
26...	1210	10100	8.0	4160	113000	--	22	27	34	44	--
27...	1415	4650	7.5	3320	41700	--	24	30	43	54	--
FEB											
28...	2040	11500	9.5	6160	191000	23	29	35	46	58	67
MAR											
02...	1245	5720	9.0	2900	44800	--	28	35	49	60	--
APR											
05...	1215	1190	6.5	312	1000	30	39	49	59	67	--
MAY											
04...	1330	1240	10.0	366	1230	25	31	42	53	63	--

DATE	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. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAM. % FINER THAN 2.00 MM
NOV										
18...	--	79	--	92	--	99	--	100	--	--
JAN										
26...	55	--	70	--	90	--	98	--	100	--
27...	63	--	73	--	97	--	96	--	98	100
FEB										
28...	--	81	--	94	--	100	--	--	--	--
MAR										
02...	70	--	80	--	92	--	98	--	99	100
APR										
05...	73	--	78	--	84	--	96	--	100	--
MAY										
04...	71	--	79	--	89	--	94	--	100	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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
JAN							
27...	1430	7.5	1	4650	2	5	11
27...	1435	7.5	1	4650	--	--	1
27...	1440	7.5	1	4650	3	6	15
27...	1445	7.5	1	4650	--	--	1
FEB							
04...	1300	6.5	1	653	--	--	--
04...	1305	6.5	1	653	--	--	--
04...	1310	6.5	1	653	--	1	1
APR							
05...	1115	6.5	1	1190	--	--	--
05...	1120	6.5	1	1190	--	--	0
05...	1125	6.5	1	1190	--	--	0
05...	1130	6.5	1	1190	--	--	0
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							
27...	25	34	44	62	100	--	--
27...	2	3	10	26	50	77	100
27...	36	52	70	82	100	--	--
27...	2	6	12	19	29	61	100
FEB							
04...	1	3	15	41	78	97	100
04...	3	15	31	45	59	68	100
04...	8	11	12	16	27	62	100
APR							
05...	2	6	9	13	26	60	100
05...	3	14	30	46	66	100	--
05...	4	24	50	70	85	96	100
05...	3	13	38	55	71	100	--

SACRAMENTO RIVER BASIN

11383500 DEER CREEK NEAR VINA, CA

LOCATION.--Lat 40°00'51", long 121°56'50", in NW 1/4 NE 1/4 sec.23, T.25 N., R.1 W., Tehama County, Hydrologic Unit 18020103, on left bank 0.5 mi upstream from diversion dam, and 7.9 mi northeast of Vina.

DRAINAGE AREA.--208 mi².

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.

REVISED RECORDS.--WSP 1315-A: 1940-42(M). WSP 1931: Drainage area. WDR CA-82-4: Datum.

GAGE.--Water-stage recorder. Datum of gage is 479.2 ft National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 9, 1928, nonrecording gage at site 0.8 mi downstream at different datum. Oct. 9, 1928, to Jan. 19, 1939, water-stage recorder at present site at datum 2.64 ft higher.

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

AVERAGE DISCHARGE.--65 years, 323 ft³/s, 234,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s Dec. 10, 1937, gage height, 19.2 ft present datum, from floodmarks, from rating curve extended above 9,200 ft³/s on basis of velocity-area studies; minimum, 43 ft³/s Dec. 13, 1932.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 21	1515	5,270	9.15	Feb. 12	2400	4,640	8.78
Jan. 26	2100	*12,200	12.14	Mar. 1	0745	11,300	11.77
Feb. 8	0045	3,370	7.91	Mar. 13	0800	6,350	9.74

Minimum daily, 122 ft³/s Nov. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	174	598	276	796	7360	1420	1050	967	348	209	191
2	136	153	422	263	692	6250	1300	994	859	366	205	186
3	136	142	347	253	610	3970	1090	914	796	340	203	183
4	136	137	328	248	544	2570	948	891	848	328	201	180
5	134	134	316	242	518	1900	844	903	767	319	199	177
6	135	131	298	238	690	1510	768	947	730	313	196	176
7	144	130	281	235	1450	1660	715	840	713	304	196	175
8	141	129	254	233	2420	1470	695	801	693	298	195	174
9	135	131	239	227	1720	1260	693	745	670	293	193	173
10	132	130	228	219	1720	1340	657	710	668	286	191	172
11	131	130	217	213	1430	1660	625	677	788	278	194	171
12	130	127	210	208	2700	1900	591	683	644	274	191	169
13	130	125	218	206	3420	5150	551	684	591	269	190	167
14	130	123	205	202	2100	3170	528	691	563	263	190	168
15	130	122	214	200	1540	2220	507	714	542	259	188	167
16	130	122	283	209	1210	1800	503	743	521	257	186	167
17	130	155	957	216	969	1620	517	732	505	255	185	165
18	130	1410	562	360	1670	1380	524	750	490	252	184	165
19	130	707	422	576	1380	1160	658	796	469	250	184	165
20	131	387	809	383	1080	1070	731	868	453	244	189	162
21	137	286	3310	333	918	1030	748	953	439	240	187	162
22	165	254	2380	752	814	1170	729	1020	423	235	227	169
23	235	254	1620	726	764	1220	862	1080	411	231	220	186
24	197	222	870	2790	722	1470	1070	1110	396	230	201	191
25	306	203	636	1510	881	1180	991	1070	385	229	193	174
26	612	192	525	4540	925	999	868	1070	377	226	190	169
27	200	194	450	5620	2440	1580	853	1080	370	222	186	169
28	153	630	389	2470	3680	1760	1070	1080	362	220	185	169
29	165	1000	347	1990	---	1330	1210	1090	358	217	183	176
30	449	1220	320	1290	---	1300	1140	1050	354	214	182	200
31	243	---	295	963	---	1810	---	999	---	211	183	---
TOTAL	5529	9254	18550	28191	39803	65269	24406	27735	17152	8271	6006	5218
MEAN	178	308	598	909	1422	2105	814	895	572	267	194	174
MAX	612	1410	3310	5620	3680	7360	1420	1110	967	366	227	200
MIN	130	122	205	200	518	999	503	677	354	211	182	162
AC-FT	10970	18360	36790	55920	78950	129500	48410	55010	34020	16410	11910	10350
CAL YR 1982	TOTAL	184958	MEAN	507	MAX	6550	MIN	122	AC-FT	366900		
WTR YR 1983	TOTAL	255384	MEAN	700	MAX	7360	MIN	122	AC-FT	506600		

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 upstream from golf clubhouse in Bidwell Park, 2.6 mi upstream from Lindo Channel, and 7 mi northeast of Chico.

DRAINAGE AREA.--72.4 mi².

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, from topographic map. Prior to Oct. 1, 1955, at site 0.6 mi downstream at different datum.

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

AVERAGE DISCHARGE.--53 years, 150 ft³/s, 108,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,580 ft³/s Jan. 5, 1965, gage height, 15.36 ft; minimum, 10 ft³/s Dec. 11, 1932, Aug. 15, 1939, Sept. 18, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 21	1500	3,490	7.58	Mar. 1	0845	*5,600	9.91
Jan. 26	2300	5,530	9.84	Mar. 13	0745	4,880	9.12
Feb. 8	unknown	2,820	6.85	Mar. 24	Peak above base may have occurred on this day		
Feb. 13	0200	2,460	6.47				

Minimum daily, 28 ft³/s several days during October and November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	57	411	151	474	4640	740	400	165	55	38	38
2	28	42	247	134	400	4130	600	370	150	57	38	38
3	28	38	179	120	344	3100	500	350	140	57	37	37
4	37	36	144	109	295	1690	410	330	145	60	36	35
5	29	35	121	98	276	1090	365	325	120	48	36	35
6	28	34	104	88	489	786	340	330	105	50	36	35
7	32	33	91	81	1500	900	329	283	100	49	36	34
8	31	32	79	77	2640	836	287	270	95	49	36	34
9	30	32	71	73	1740	679	264	260	85	49	35	33
10	28	31	64	68	1250	582	245	230	82	49	35	33
11	28	30	58	65	884	578	232	214	96	49	35	33
12	30	29	54	61	1530	925	223	201	84	47	35	31
13	33	29	62	59	2070	3700	210	190	80	46	35	32
14	33	28	54	56	1250	2700	200	178	75	46	35	32
15	33	28	53	55	820	1550	193	168	73	43	34	32
16	32	28	83	60	619	1100	192	161	71	43	34	32
17	32	46	617	59	490	860	195	162	70	42	34	32
18	29	724	341	139	641	720	205	168	68	43	32	32
19	29	315	238	388	609	630	305	172	66	43	34	32
20	29	167	434	255	513	560	290	180	65	43	36	32
21	32	113	2760	202	441	530	275	189	65	43	36	31
22	38	99	1990	363	380	580	250	198	63	43	42	33
23	52	108	1370	458	338	710	290	202	61	42	42	42
24	65	83	725	2130	303	1600	375	210	60	41	38	46
25	124	68	506	1050	380	1010	350	205	57	40	37	45
26	195	58	397	1990	537	746	330	205	57	41	38	36
27	60	63	322	3550	1650	1040	320	205	57	40	37	34
28	35	369	264	1550	3030	981	400	202	56	39	36	34
29	45	613	224	1130	---	767	470	210	56	40	35	34
30	135	882	196	772	---	680	430	199	56	40	35	52
31	90	---	171	587	---	1010	---	185	---	40	36	---
TOTAL	1478	4250	12430	15978	25893	41410	9815	7152	2523	1417	1119	1059
MEAN	47.7	142	401	515	925	1336	327	231	84.1	45.7	36.1	35.3
MAX	195	882	2760	3550	3030	4640	740	400	165	60	42	52
MIN	28	28	53	55	276	530	192	161	56	39	32	31
AC-FT	2930	8430	24650	31690	51360	82140	19470	14190	5000	2810	2220	2100
CAL YR 1982	TOTAL	89140	MEAN	245	MAX	4880	MIN	24	AC-FT	177200		
WTR YR 1983	TOTAL	124524	MEAN	341	MAX	4640	MIN	28	AC-FT	247000		

RESERVOIRS IN STONY CREEK BASIN, CA

11385100 EAST PARK RESERVOIR NEAR STONYFORD.--Lat 39°21'24", long 122°30'53", in SW 1/4 NE 1/4 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 southeast of Stonyford. DRAINAGE AREA, 98.2 mi². 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 Bureau of Reclamation).

Reservoir is formed by a concrete arch-type dam. Storage began in 1910. Capacity, 48,211 acre-ft between elevations 1,131.68 ft invert of sluice pipe, and 1,198.18 ft, crest of spillway. Capacity increased to 50,889 acre-ft with the addition of flashboards to an elevation of 1,199.68 ft. Dead storage, 279 acre-ft. Records of contents furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,500 acre-ft Mar. 30, 1974, elevation, 1,201.10 ft; minimum, 280 acre-ft Aug. 8 to Oct. 31, 1972, Apr. 30 to Nov. 1, 1977, elevation, 1,131.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,020 acre-ft Mar. 1, elevation, 1,200.30 ft; minimum, 27,990 acre-ft Oct. 22, elevation, 1,184.78 ft.

11386100 STONY GORGE RESERVOIR NEAR ELK CREEK.--Lat 39°35'09", long 122°31'54", in NE 1/4 SE 1/4 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 southeast of Elk Creek. DRAINAGE AREA, 301 mi². 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 Bureau of Reclamation).

Reservoir is formed by slab and buttress-type dam. Storage began in 1928. Capacity, 50,383 acre-ft between elevations 728.0 ft top of low intake, and 841.0 ft crest of spillway. No dead storage. Records of contents furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 54,630 acre-ft Mar. 26, 1971, elevation, 844.20 ft; minimum, 3,810 acre-ft Nov. 6, 1971, elevation, 779.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,000 acre-ft Apr. 28, elevation, 843.00 ft; minimum, 12,900 acre-ft Oct. 16, elevation, 800.64 ft.

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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.....	1,185.14	28,450	-720	802.58	13,890	- 8,550
Oct. 31.....	1,185.42	28,810	+360	805.58	15,800	+1,910
Nov. 30.....	1,189.40	34,210	+5,400	824.26	31,200	+15,400
Dec. 31.....	1,198.32	49,460	+15,250	835.50	43,520	+12,320
CAL YR 1982.....	--	--	+570	--	--	-3,380
Jan. 31.....	1,198.86	49,420	-40	834.30	42,100	-1,420
Feb. 28.....	1,199.60	50,750	+1,330	836.38	44,580	+2,480
Mar. 31.....	1,198.68	49,100	-1,650	838.00	46,570	+1,990
Apr. 30.....	1,198.84	49,380	+280	841.68	51,270	+4,700
May 31.....	1,198.42	48,640	-740	840.38	49,580	-1,690
June 30.....	1,198.22	48,280	-360	834.52	42,360	-7,220
July 31.....	1,197.76	47,480	-800	822.34	29,330	-13,030
Aug. 31.....	1,189.80	34,790	-12,690	816.74	24,250	-5,080
Sept. 30.....	1,185.74	29,220	-5,570	818.62	25,890	+1,640
WTR YR 1983.....	--	--	+770	--	--	+12,000

11387200 STONY CREEK ABOVE BLACK BUTTE LAKE, NEAR ORLAND, CA

LOCATION.--Lat 39°43'56", long 122°24'50", in NW 1/4 SW 1/4 sec.27, T.22 N., R.5 W., Glenn County, Hydrologic Unit 18020115, on left bank 3 ft upstream from county road bridge, 1.2 mi upstream from Black Butte Lake, and 11.7 mi west of Orland.

DRAINAGE AREA.--623 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 478.63 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Many diversions above station for irrigation. Flow regulated by Stony Gorge Reservoir 14.8 mi upstream and by East Park Reservoir, combined usable capacity, 100,700 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,400 ft³/s Feb. 28, 1983, gage height, 18.92 ft; no flow Oct. 3, 23-26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45,400 ft³/s Feb. 28, gage height, 18.92 ft; minimum daily, 1.7 ft³/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	67	518	740	2480	28600	4740	4000	1000	461	328	113
2	2.0	43	366	660	2330	24700	4100	3210	976	414	324	101
3	2.0	39	340	590	2180	17500	3330	2690	936	400	323	95
4	2.0	24	376	560	2060	10300	2820	2440	934	385	320	93
5	1.9	20	395	589	2710	5890	2500	2310	925	373	322	93
6	1.8	17	376	604	3150	3890	2220	2130	911	361	321	90
7	1.7	16	382	638	4060	3660	1600	1930	896	268	320	88
8	1.8	13	418	562	4450	2620	926	1790	892	105	320	87
9	2.2	13	411	530	4210	2550	888	1330	754	155	319	87
10	2.3	13	388	492	4650	2400	795	777	366	139	313	89
11	2.1	12	358	465	3970	2090	808	875	386	159	298	90
12	4.1	12	329	460	4560	2350	1060	1070	336	367	297	89
13	197	11	312	462	4900	12800	1190	1180	676	372	297	89
14	316	10	186	494	4160	9990	1200	1230	1350	368	296	89
15	354	10	198	442	3520	7310	1150	1260	1030	362	297	87
16	192	9.8	357	460	3280	5680	1110	1250	766	356	297	87
17	56	10	1570	466	2920	4640	1060	1380	757	352	298	86
18	25	545	1280	741	3980	4130	1040	1640	740	352	296	85
19	19	352	1080	1060	4200	3410	1080	1640	724	350	298	86
20	16	157	1140	927	3540	3240	1100	1590	715	353	297	86
21	14	105	4930	832	3220	3780	1120	1630	633	348	299	87
22	12	110	7110	1870	2770	4550	1140	1620	564	341	313	87
23	9.8	254	5670	3280	2610	4860	1910	1630	557	338	318	175
24	8.4	160	2910	12100	2840	6290	2170	1630	545	337	314	108
25	11	122	2350	6680	4350	5480	2000	1630	533	333	310	101
26	34	95	1790	18900	4840	4240	1800	1530	527	334	311	97
27	47	93	1430	9200	6900	4550	2210	1290	516	333	310	95
28	23	579	1250	4140	16400	4070	4410	1270	502	334	310	95
29	12	1180	1180	4350	---	2800	4600	1210	501	333	307	95
30	164	824	940	3000	---	2580	4640	1140	494	333	306	100
31	107	---	830	2750	---	5090	---	1070	---	328	266	---
TOTAL	1643.0	4915.8	41170	79044	115240	206040	60717	51372	21442	10144	9545	2850
MEAN	53.0	164	1328	2550	4116	6646	2024	1657	715	327	308	95.0
MAX	354	1180	7110	18900	16400	28600	4740	4000	1350	461	328	175
MIN	1.7	9.8	186	442	2060	2090	795	777	336	105	266	85
AC-FT	3260	9750	81660	156800	228600	408700	120400	101900	42530	20120	18930	5650

CAL YR 1982 TOTAL 336400.4 MEAN 922 MAX 13900 MIN 1.7 AC-FT 667200
WTR YR 1983 TOTAL 604122.8 MEAN 1655 MAX 28600 MIN 1.7 AC-FT 1198000

SACRAMENTO RIVER BASIN

11387200 STONY CREEK ABOVE BLACK BUTTE LAKE, NEAR ORLAND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURES: November 1980 to May 1983 (discontinued).

SEDIMENT RECORDS: November 1980 to May 1983 (discontinued).

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: November 1980 to May 1983 (storm season only).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,300 mg/L Mar. 1, 1983; minimum daily, 1 mg/L several days during November 1983.

SEDIMENT DISCHARGE: Maximum daily, 432,000 tons Mar. 1, 1983; minimum daily 0.03 ton several days during November 1983.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5300 mg/L Mar. 1; minimum daily mean, 1 mg/L several days during November.

SEDIMENT DISCHARGE: Maximum daily, 432,000 tons Mar. 1; minimum daily, 0.03 ton several days during November.

TEMPERATURE (DEG. C) OF WATER, NOVEMBER 1982 TO MAY 1983

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	---	---	9.0	---	---				
2		11.5	---	---	---	10.0	12.5	---				
3		---	9.0	---	10.0	10.5	---	---				
4		16.0	11.5	---	---	10.5	---	---				
5		17.0	---	7.5	---	---	---	---				
6		---	---	---	---	---	---	14.0				
7		---	---	---	8.5	11.5	12.0	---				
8		---	---	8.5	---	---	14.5	---				
9		---	---	---	---	---	---	13.0				
10		---	9.0	---	---	---	---	---				
11		---	---	---	---	12.5	---	---				
12		---	---	---	---	---	---	---				
13		13.5	---	---	---	11.5	---	14.5				
14		---	---	9.0	---	---	---	---				
15		---	---	---	---	---	---	---				
16		---	9.5	---	---	---	---	---				
17		---	14.0	9.0	---	---	13.5	---				
18		9.0	---	---	---	12.0	---	---				
19		---	---	8.5	---	---	---	---				
20		---	7.5	---	---	---	---	---				
21		---	8.5	---	---	11.5	---	---				
22		8.5	6.5	6.5	---	12.0	---	17.5				
23		---	---	---	---	---	---	---				
24		---	7.5	8.5	---	10.5	11.5	---				
25		---	---	---	---	12.0	---	---				
26		9.5	---	9.5	---	---	---	---				
27		---	---	9.5	---	---	---	19.0				
28		---	---	9.0	---	11.0	12.0	---				
29		9.5	---	---	---	---	13.5	---				
30		9.0	---	---	---	---	---	---				
31		---	7.0	---	---	---	---	---				
MONTH		---	---	---	---	---	---	---				

11387200 STONY CREEK ABOVE BLACK BUTTE LAKE, NEAR ORLAND, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), NOVEMBER 1982 TO MAY 1983

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				67	3	.54	518	88	123
2				43	3	.35	366	37	37
3				39	3	.32	340	23	21
4				24	3	.19	376	34	35
5				20	3	.16	395	37	39
6				17	3	.14	376	25	25
7				16	3	.13	382	28	29
8				13	3	.11	418	29	33
9				13	3	.11	411	21	23
10				13	2	.07	388	14	15
11				12	2	.06	358	9	8.7
12				12	1	.03	329	7	6.2
13				11	1	.03	312	8	6.7
14				10	1	.03	186	6	3.0
15				10	1	.03	198	10	5.3
16				9.8	1	.03	357	69	86
17				10	1	.03	1570	1550	7020
18				545	1370	2620	1280	940	3250
19				352	120	114	1080	440	1280
20				157	39	17	1140	356	1480
21				105	20	5.7	4930	3860	66400
22				110	10	3.6	7110	2650	63600
23				254	71	50	5670	1600	24500
24				160	35	15	2910	420	3300
25				122	14	4.6	2350	265	1680
26				95	3	.77	1790	151	730
27				93	4	1.3	1430	97	375
28				579	396	1470	1250	75	253
29				1180	806	2710	1180	66	210
30				824	258	574	940	42	107
31				---	---	---	830	34	76
TOTAL				4915.8	---	7588.33	41170	---	174756.9
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	740	27	54	2480	569	3810	28600	5300	432000
2	660	22	39	2330	352	2210	24700	4150	277000
3	590	18	29	2180	310	1820	17500	2500	118000
4	560	16	24	2060	210	1170	10300	1600	44500
5	589	18	29	2710	862	7110	5890	1140	18100
6	604	16	26	3150	823	7070	3890	1050	11000
7	638	14	24	4060	769	8680	3660	914	9710
8	562	12	18	4450	1100	13200	2620	515	3640
9	530	12	17	4210	960	10900	2550	480	3300
10	492	12	16	4650	1040	13100	2400	450	2920
11	465	12	15	3970	740	7930	2090	410	2310
12	460	11	14	4560	820	10100	2350	510	3240
13	462	9	11	4900	850	11200	12800	2840	103000
14	494	8	11	4160	570	6400	9990	1940	52300
15	442	9	11	3520	480	4560	7310	950	18800
16	460	10	12	3280	450	3990	5680	705	10800
17	466	11	14	2920	430	3390	4640	490	6140
18	741	136	464	3980	1070	12700	4130	370	4130
19	1060	273	781	4200	1190	13500	3410	315	2900
20	927	179	448	3540	720	6880	3240	310	2710
21	832	156	350	3220	400	3480	3780	330	3370
22	1870	642	4100	2770	270	2020	4550	547	7160
23	3280	1000	14000	2610	190	1340	4860	470	6170
24	12100	2720	91900	2840	220	1690	6290	710	12100
25	6680	1230	22200	4350	1010	14300	5480	440	6510
26	18900	4810	342000	4840	1200	15700	4240	265	3030
27	9200	4690	128000	6900	1530	28500	4550	447	5550
28	4140	2500	27900	16400	3530	242000	4070	310	3410
29	4350	1340	15700	---	---	---	2800	177	1490
30	3000	830	6720	---	---	---	2580	205	1580
31	2750	695	5160	---	---	---	5090	610	8380
TOTAL	79044	---	660087	115240	---	458750	206040	---	1185250

SACRAMENTO RIVER BASIN

11387200 STONY CREEK ABOVE BLACK BUTTE LAKE, NEAR ORLAND, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), NOVEMBER 1982 TO MAY 1983

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	4740	590	7550	4000	340	3670			
2	4100	555	6140	3210	265	2300			
3	3330	490	4410	2690	200	1450			
4	2820	425	3240	2440	170	1120			
5	2500	345	2330	2310	150	936			
6	2220	255	1530	2130	120	690			
7	1600	161	731	1930	93	485			
8	926	103	258	1790	78	377			
9	888	95	228	1330	67	241			
10	795	89	191	777	40	84			
11	808	90	196	875	29	69			
12	1060	112	321	1070	38	110			
13	1190	128	411	1180	52	166			
14	1200	110	356	1230	58	193			
15	1150	86	267	1260	60	204			
16	1110	67	201	1250	59	199			
17	1060	58	166	1380	103	424			
18	1040	55	154	1640	195	863			
19	1080	54	157	1640	200	886			
20	1100	52	154	1590	189	811			
21	1120	49	148	1630	176	775			
22	1140	55	169	1620	169	739			
23	1910	150	774	1630	162	713			
24	2170	160	937	1630	162	713			
25	2000	120	648	1630	168	739			
26	1800	90	437	1530	172	711			
27	2210	130	776	1290	174	606			
28	4410	855	11900	1270	168	576			
29	4600	590	7940	1210	150	490			
30	4640	375	4700	1140	132	406			
31	---	---	---	1070	113	326			
TOTAL	60717	---	57420	51372	---	22072			
PERIOD 558498.8			2565924.23						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, NOVEMBER 1982 TO MAY 1983

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
NOVEMBER	4915.80	7588.33	219	7810
DECEMBER ...	41170.00	174756.90	8050	183000
JANUARY 1983	79044.00	660087.00	24800	685000
FEBRUARY ...	115240.00	458750.00	31700	490000
MARCH	206040.00	1185250.00	74400	1260000
APRIL	60717.00	57420.00	11200	68600
MAY	51372.00	22072.00	7170	29200
PERIOD	558498.80	2565924.23	157539	2723610

11387200 STONY CREEK ABOVE BLACK BUTTE LAKE, NEAR ORLAND, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	SED. SUSP. FALL DIAM. % FINER THAN .031 MM
NOV 18...	1410	920	9.0	2340	5810	--	37	52	67	82
DEC 17...	1200	1530	14.0	1530	6320	29	41	55	69	80
JAN 24...	1220	11800	8.5	1800	57300	--	20	26	35	44
FEB 03...	1315	2200	10.0	288	1710	41	50	61	70	76
MAR 01...	1155	26300	9.0	4720	335000	--	27	35	46	57

DATE	TIME	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. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
NOV 18...	91	--	--	98	--	100	--	--	--	--	--
DEC 17...	--	--	88	--	93	--	97	--	100	--	--
JAN 24...	--	--	53	--	64	--	79	--	98	--	100
FEB 03...	--	--	80	--	81	--	87	--	97	--	100
MAR 01...	68	--	--	81	--	93	--	98	--	99	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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								
24...	1250	8.5	1	12300	--	--	--	1
24...	1255	8.5	1	12300	--	--	1	3
24...	1300	8.5	1	12300	--	--	1	4
24...	1305	8.5	1	12300	--	--	--	2
24...	1310	8.5	1	12300	--	--	1	3
FEB								
03...	1330	10.0	1	2200	--	--	3	67
03...	1335	10.0	1	2200	--	--	--	1
03...	1340	10.0	1	2200	--	--	--	5
03...	1345	10.0	1	2200	--	--	--	2
03...	1350	10.0	1	2200	--	--	--	--
MAR								
01...	1230	9.0	1	26000	--	--	--	--
01...	1235	9.0	1	26000	--	--	2	5
01...	1240	9.0	1	26000	1	4	16	31
01...	1245	9.0	1	26000	--	--	1	5
01...	1250	9.0	1	26000	--	--	--	1

SACRAMENTO RIVER BASIN

11387200 STONY CREEK ABOVE BLACK BUTTE LAKE, NEAR ORLAND, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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							
24...	1	4	14	39	74	100	--
24...	5	11	24	48	90	100	--
24...	8	15	26	42	63	100	--
24...	4	8	14	22	46	52	100
24...	6	18	38	63	75	100	--
FEB							
03...	97	99	100	--	--	--	--
03...	2	6	19	37	68	100	--
03...	22	52	81	96	100	--	--
03...	8	16	34	64	87	100	--
03...	1	6	17	40	71	100	--
MAR							
01...	1	1	3	7	30	100	--
01...	11	22	39	60	83	100	--
01...	45	58	88	100	--	--	--
01...	15	30	50	76	100	--	--
01...	4	9	21	39	70	100	--

DATE	TIME	TEMPER- ATURE (DEG C)	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
DEC							
03...	1040	9.0	15	338	119	8.7	1
JAN							
10...	1300	19.5	14	353	102	7.0	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM
DEC							
03...	3	17	54	69	83	94	100
JAN							
10...	1	18	24	48	69	86	100

11387990 SOUTH DIVERSION CANAL NEAR ORLAND, CA

LOCATION.--Lat 39°48'36", long 122°19'45", in SW 1/4 NE 1/4 sec. 32, T.23 N., R.4 W., Tehama County, Hydrologic Unit 18020103, on left bank 0.4 mi downstream from Black Butte Dam, and 8.2 mi northwest of Orland.

PERIOD OF RECORD.--July 1955 to current year. Prior to October 1961, published as an adjustment to Snow Creek at Black Butte damsite, near Orland.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 372.64 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 23, 1956, at site 0.5 mi 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 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 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 759 acre-ft.

AVERAGE DISCHARGE.--28 years, 100 ft³/s, 72,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 320 ft³/s May 8, 1969; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	3.4	2.3	.50	.30	2.4	.10	2.3	194	247	192	158
2	110	2.8	.70	.40	.20	3.3	.10	2.1	157	209	200	149
3	44	3.0	.90	.30	.20	.40	.10	1.9	106	152	212	133
4	79	3.0	.80	.30	.40	.10	.10	1.1	82	151	212	113
5	131	5.4	1.3	.40	6.8	.10	0	1.0	70	198	204	126
6	120	.10	1.4	.70	11	.10	0	1.1	99	215	220	153
7	101	.30	1.7	.50	6.2	0	.10	1.7	164	198	207	165
8	72	0	1.8	.50	.10	.10	.10	1.4	207	203	184	176
9	3.8	0	1.8	.50	.10	.10	1.1	.70	213	217	190	164
10	1.0	0	1.7	.50	.10	1.6	1.8	1.4	240	222	209	157
11	123	0	1.7	.50	.10	.60	2.0	7.1	207	216	200	150
12	209	.10	1.7	.40	.20	.20	35	83	171	200	186	179
13	200	1.6	1.7	.30	.10	.50	84	123	181	245	166	198
14	181	2.3	1.5	.30	.10	.10	62	155	216	272	169	182
15	105	2.1	1.4	.30	.10	.10	67	154	254	242	188	196
16	4.1	2.5	1.5	.30	.10	.10	90	149	265	199	192	204
17	1.5	3.4	1.7	.30	.10	.10	81	151	218	157	184	161
18	77	3.9	1.5	3.5	.30	.10	122	185	192	158	190	134
19	102	1.9	1.4	1.9	.30	.10	124	206	174	170	179	134
20	88	1.7	1.5	.40	.30	.30	79	189	174	172	143	148
21	62	1.7	8.2	.40	.30	.50	47	155	207	196	133	190
22	18	2.6	14	6.2	.30	1.1	31	125	216	217	157	206
23	4.1	4.6	1.6	16	.30	1.4	10	129	184	202	168	181
24	2.6	2.8	1.7	3.5	.30	.20	.40	144	176	186	165	134
25	2.2	2.2	.20	.70	5.5	.10	1.4	161	182	218	169	108
26	2.3	2.5	.30	20	1.1	.10	1.5	181	190	222	157	106
27	2.2	3.4	.50	.50	.70	.30	1.9	191	197	205	154	127
28	2.3	11	.70	.30	7.1	.10	3.0	202	200	195	152	119
29	2.7	4.4	.30	.30	---	.10	2.5	204	216	188	179	133
30	2.8	4.3	.30	.30	---	.10	2.5	189	241	174	181	118
31	2.9	---	.50	.30	---	.10	---	196	---	172	173	---
TOTAL	1961.5	77.00	58.30	61.30	42.70	14.50	850.70	3293.80	5593	6218	5615	4602
MEAN	63.3	2.57	1.88	1.98	1.52	.47	28.4	106	186	201	181	153
MAX	209	11	14	20	11	3.3	124	206	265	272	220	206
MIN	1.0	0	.20	.30	.10	0	0	.70	70	151	133	106
AC-FT	3890	153	116	122	85	29	1690	6530	11090	12330	11140	9130
CAL YR 1982	TOTAL	34172.30	MEAN	93.6	MAX	309	MIN	0	AC-FT	67780		
WTR YR 1983	TOTAL	28387.80	MEAN	77.8	MAX	272	MIN	0	AC-FT	56310		

11387995 BLACK BUTTE LAKE NEAR ORLAND, CA

LOCATION.--Lat 39°48'50", long 122°20'12", in SE 1/4 SW 1/4 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 northwest of Orland.

DRAINAGE AREA.--738 mi².

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 between elevations 414.6 ft normal minimum operating level, and 473.5 ft spillway crest. An additional storage of 6,640 acre-ft is available for release if needed. South Diversion Canal (station 11387990) 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, 156,220 acre-ft Mar. 3, 1983, elevation, 476.25 ft; minimum since initial season of operation, 1,006 acre-ft Nov. 6, 1977, elevation, 397.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 156,220 acre-ft Mar. 3, elevation, 476.25 ft; minimum, 20,555 acre-ft Dec. 5, elevation, 429.78 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29906	22881	28179	23811	56289	119645	62579	138388	114107	95978	81953	66105
2	29485	22698	24455	23709	50171	148576	69169	137085	113018	95485	81472	64954
3	29217	22474	21500	23507	45223	156220	74484	133214	112476	95098	80928	63787
4	28819	22238	20660	23264	41563	150170	78839	128195	111895	94713	80387	62770
5	28277	22100	20555	22965	43054	136435	82630	123816	111241	94223	79880	61655
6	27758	22141	20594	22712	46389	119765	85964	121053	110626	93840	79279	60472
7	27262	22169	20568	22726	47713	103889	88230	119165	109976	93248	78744	59303
8	26882	22197	20660	22838	50409	87026	88600	119966	108985	92315	78243	58070
9	26756	22238	20726	22923	51079	72736	90225	121659	107849	91421	77650	56878
10	26677	22266	20779	22937	52364	62062	91010	121822	106270	90498	77060	55677
11	26195	22307	20739	23065	51634	54441	91867	122146	104926	89716	76473	54667
12	25443	22266	20660	23608	52413	51441	93076	122430	103741	89478	75950	53273
13	24961	22072	20699	24307	53892	63044	94748	122511	102710	89072	75490	51926
14	24618	21921	20699	24991	52120	66530	97076	122106	102453	88600	74971	50600
15	24603	21744	20713	25733	48338	64731	99113	121578	102307	88230	74544	49225
16	24692	21594	20924	26568	43879	60713	100703	121094	101941	88063	74029	47851
17	24662	21473	22881	27358	39286	55652	102233	120811	101576	88029	73456	46616
18	24336	22377	23840	29151	39755	51658	103483	120892	101320	87962	72886	45468
19	23985	23107	25156	31739	41226	48361	104407	120892	101030	87861	72377	44229
20	23637	23335	27055	32863	39613	46412	105560	120973	100666	87627	71930	43076
21	23307	23421	33940	32900	37467	46639	106832	121094	100376	87193	71486	41837
22	23121	23680	40497	33408	36938	48129	108114	121376	99978	86693	71101	40704
23	22965	24440	41352	34795	39165	49202	111279	121578	99653	86196	70718	39961
24	22796	24766	38600	45736	44185	51950	114771	121497	99365	85666	70365	38963
25	22853	24916	32575	43661	50624	52266	117769	121175	99041	85139	69985	38001
26	22824	25021	24736	71190	52120	50648	120087	120650	98610	84614	69634	36957
27	22838	25156	22740	93180	58933	50123	123980	119765	98217	84123	69227	36028
28	22796	27040	23292	90941	83407	49108	130501	118645	97716	83798	68763	35191
29	22867	30452	23307	84876	---	48036	133897	117610	97111	83310	68244	34366
30	23121	31213	23522	76103	---	48245	137171	116462	96544	82856	67698	33774
31	23079	---	23753	65430	---	55196	---	115398	---	82468	67298	---
MAX	29906	31213	41352	93180	83407	156220	137171	138388	114107	95978	81953	66105
MIN	22796	21473	20555	22712	36938	46412	62579	115398	96544	82468	67298	33774
a	431.63	436.78	432.10	451.89	457.83	448.05	472.02	466.75	461.70	457.54	452.55	438.21
b	-7287	+8134	-7460	+41677	+17977	-28211	+81975	-21773	-18854	-14076	-15170	-33524
c	736	226	241	183	186	406	906	2188	2720	3003	2501	1796

CAL YR 1982 b -35920
WTR YR 1983 b +3408

- a Elevation, in feet NGVD, at end of month.
- b Change in contents, in acre-feet.
- c Evaporation, in acre-feet.

11388000 STONY CREEK BELOW BLACK BUTTE DAM, NEAR ORLAND, CA

LOCATION.--Lat 39°49'07", long 122°19'26", in NW 1/4 SW 1/4 sec.28, T.23 N., R.4 W., Tehama County, Hydrologic Unit 18020103, on left bank 200 ft downstream from road bridge, 0.6 mi downstream from Black Butte Dam, 8.1 mi northwest of Orland.

DRAINAGE AREA.--738 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 12, 1960, water-stage recorder at site 0.6 mi upstream at different datum. Dec. 12, 1960, to Nov. 30, 1963, nonrecording gage at bridge 200 ft upstream at datum 4.04 ft 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, and Stony Gorge Reservoir (station 11386100), usable capacity, 50,400 acre-ft. Prior to October 1956, figures of daily discharge included water diverted to South Diversion Canal, which diverts 0.6 mi 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).--28 years, 683 ft³/s, 494,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft³/s Feb. 24, 1958, gage height, 11.82 ft site and datum then in use, from rating curve extended above 7,500 ft³/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 Dec. 25, 1964, gage height, 10.41 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,500 ft³/s Mar. 2, gage height, 10.04 ft; minimum, no flow Nov. 7-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	134	149	2320	862	7520	14800	686	3360	1600	481	322	432		
2	110	149	2480	854	5590	14600	517	3910	1540	442	328	499		
3	101	149	2070	854	4620	15000	503	4620	1330	422	334	485		
4	118	149	974	846	3790	14900	508	5010	1260	407	334	472		
5	136	95	549	846	2580	15000	512	4690	1260	372	344	472		
6	147	.60	393	808	2830	14700	517	3680	1210	303	334	476		
7	147	0	397	615	4670	14400	508	2990	1200	309	334	468		
8	108	0	398	521	5010	13400	503	1540	1290	325	341	476		
9	47	0	396	508	5110	11900	503	455	1220	318	358	472		
10	50	0	396	508	5010	10000	499	771	1140	315	365	476		
11	119	0	396	434	5110	7950	499	778	911	312	344	476		
12	168	23	396	219	5110	6060	494	936	862	251	322	490		
13	174	102	348	115	4980	6060	334	1160	846	264	325	512		
14	175	103	210	94	5500	6820	22	1370	666	276	315	531		
15	107	100	203	60	5760	6750	79	1470	594	243	306	536		
16	49	100	272	57	5700	6690	251	1460	634	210	312	526		
17	51	100	1110	56	5280	6720	256	1440	653	192	334	503		
18	82	100	1080	65	4280	5970	386	1440	673	181	348	468		
19	89	100	512	57	4180	4850	615	1440	666	196	338	446		
20	99	100	517	438	4740	4490	569	1410	660	275	331	450		
21	134	100	2170	1030	4280	4230	526	1430	579	322	328	455		
22	124	101	5050	2230	3050	4420	517	1440	522	325	318	455		
23	112	102	5670	4250	1650	4870	522	1440	508	351	286	442		
24	106	102	5640	9490	526	4900	499	1560	508	368	272	434		
25	87	102	5500	9820	2850	4870	584	1640	508	361	266	438		
26	47	102	4980	11000	5500	4870	714	1640	503	351	280	459		
27	47	103	2760	12200	7250	4850	707	1650	512	328	300	415		
28	47	105	1200	10700	9240	4490	1450	1680	531	313	312	354		
29	80	105	1270	10300	---	3520	2720	1650	555	309	325	334		
30	149	698	1010	8930	---	2540	3090	1630	545	328	334	286		
31	149	---	862	9010	---	1520	---	1610	---	325	338	---		
TOTAL	3293	3139.60	51529	97777	131716	246140	20090	61300	25486	9775	10028	13738		
MEAN	106	105	1662	3151	4704	7940	670	1977	850	315	323	458		
MAX	175	698	5670	12200	9240	15000	3090	5010	1600	481	365	536		
MIN	47	0	203	56	526	1520	22	455	503	181	266	286		
AC-FT	6530	6230	102200	193900	261300	488200	39850	121600	50550	19390	19890	27250		
CAL YR 1982	TOTAL	338978.60	MEAN	929	MAX	7410	MIN	0	AC-FT	672400	MEAN a	993	AC-FT a	719000
WTR YR 1983	TOTAL	674011.60	MEAN	1847	MAX	15000	MIN	0	AC-FT	1337000	MEAN a	1951	AC-FT a	1412000

a Adjusted for diversions to South Diversion Canal near Orland, Wackerman Ranch, and for change in contents in and evaporation from Black Butte Lake.

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 1958-79. 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.

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, 24.5°C several days during August and Sept. 1; minimum recorded, 6.0°C several days during December and January.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11388000 STONY CREEK BELOW BLACK BUTTE DAM, NEAR ORLAND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

SACRAMENTO RIVER BASIN

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA

LOCATION.--Lat 39°27'28", long 121°59'35", in SE 1/4 NE 1/4 sec.32, T.19 N., R.1 W., Glenn County, Hydrologic Unit 18020104, on left bank 100 ft upstream from highway bridge, 0.5 mi south of Butte City, and at mile 115.8 upstream from Sacramento.

DRAINAGE AREA.--12,075 mi².

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 below National Geodetic Vertical Datum of 1929. Prior to December 1930, at site 0.5 mi 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. Records tabulated below do not include overbank flow into the Butte basin.

AVERAGE DISCHARGE.--45 years (water years 1939-83), 13,670 ft³/s, 9,904,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1940-83), 170,000 ft³/s Feb. 7, 1942, gage height, 96.87 ft; minimum recorded, 1,050 ft³/s July 15, 25, 26, 1931, gage height, 67.49 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157,000 ft³/s Mar. 2, gage height, 95.89 ft; minimum daily, 7,800 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7920	10500	32000	16200	83300	116000	78000	32800	23600	14000	12100	12700
2	7890	8650	25200	15600	76500	151000	73900	33800	23300	14200	11900	13100
3	7860	8340	22600	15100	73800	150000	70700	34800	23300	14500	12000	13000
4	7910	9140	21600	14800	66400	139000	68200	33600	21800	14400	11900	13100
5	7890	9440	20000	14500	54600	118000	64700	32800	21200	14200	12000	13300
6	7800	9410	19500	13800	49200	108000	53000	35400	20600	14000	11800	13300
7	7840	9320	19100	13200	60500	103000	42300	28000	20400	13800	11900	11800
8	7950	9190	17500	12900	72100	104000	35200	36300	20500	13600	12000	9990
9	7980	9250	15000	12800	71700	102000	32200	36100	20300	13500	12000	8650
10	7950	9290	13400	12600	65600	91500	30700	34800	19800	13500	11900	8100
11	7950	9500	12800	12400	75500	87600	28300	34100	19300	13500	11800	7990
12	8010	9260	12600	12100	74200	94900	24300	33700	18700	13500	11800	8030
13	7890	9210	12500	11700	75000	100000	20900	33500	17600	13600	11900	7980
14	7840	9270	12200	11300	77000	115000	18700	32500	17200	13400	11900	7950
15	7840	9200	12000	10800	76400	98400	17600	27400	16800	13000	12100	7920
16	7840	9250	22200	10600	74700	92900	16600	21000	16400	12600	12000	8100
17	7910	9320	27700	10500	74400	87300	16000	15600	16300	12400	11800	7930
18	7870	13100	41800	10600	72100	86800	15600	13800	16300	12500	12000	8030
19	7930	30800	33400	20200	74400	85100	15500	17300	16100	12400	11800	8130
20	7930	22000	28800	20800	75100	72100	15800	18700	15200	12500	11900	8130
21	7950	17900	39200	16100	72300	72300	16100	19400	15600	12300	12200	8310
22	8230	16800	66700	15000	69200	77000	15700	20100	14800	12200	12500	8320
23	8580	18200	80600	30500	66000	80100	15700	20300	15300	12200	12500	8230
24	8840	18900	80600	43500	57200	78300	18600	20800	15200	12200	12500	9790
25	8880	17200	61900	72500	55300	77600	23900	21800	14500	12300	12700	11000
26	11900	16400	54200	59300	70900	70200	20400	23200	14300	12300	12600	11000
27	11300	16300	49700	90900	77200	67500	18100	23100	14300	12200	12700	11100
28	8880	17400	35400	123000	91300	74400	24300	23900	14300	12200	12600	12200
29	8250	30400	26100	90800	---	70800	34100	23900	14200	12100	12700	12400
30	11800	35900	20500	83200	---	72300	30700	24100	14100	12100	12500	12500
31	12900	---	17300	86600	---	75500	---	23700	---	12000	12500	---
TOTAL	265510	428840	954100	983900	1981900	2918600	955800	830300	531300	403200	376500	302080
MEAN	8565	14290	30780	31740	70780	94150	31860	26780	17710	13010	12150	10070
MAX	12900	35900	80600	123000	91300	151000	78000	36300	23600	14500	12700	13300
MIN	7800	8340	12000	10500	49200	67500	15500	13800	14100	12000	11800	7920
AC-FT	526600	850600	1892000	1952000	3931000	5789000	1896000	1647000	1054000	799700	746800	599200
CAL YR 1982	TOTAL	7256400	MEAN	19880	MAX	80600	MIN	7190	AC-FT	14390000		
WTR YR 1983	TOTAL	10932030	MEAN	29950	MAX	151000	MIN	7800	AC-FT	21680000		

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 60 ft downstream from highway bridge at Colusa, and at mile 89.4 upstream from Sacramento.

DRAINAGE AREA.--12,090 mi².

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 below National Geodetic Vertical Datum of 1929. Prior to December 1930, water-stage recorder in center fender pier 50 ft 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.--43 years (water years 1941-83), 11,780 ft³/s, 8,535,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1941-83), 51,800 ft³/s Mar. 4, 1983, gage height, 68.50 ft; maximum gage height, 69.20 ft Feb. 18, 1942; minimum recorded, 820 ft³/s July 25, 26, 1931, gage height, 34.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,800 ft³/s Mar. 4, gage height, 68.50 ft; minimum daily, 8,070 ft³/s Oct. 15, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8360	12300	33000	16900	43300	45500	42800	31000	24700	14500	12000	12500
2	8270	10400	29100	15900	42700	49100	42500	32200	24500	14500	11800	12800
3	8250	9310	24900	15100	42100	51200	41800	32700	24400	14900	11900	13000
4	8280	9490	23500	14700	41200	51300	41300	32600	23700	14800	11800	12900
5	8260	10100	22000	14400	39200	48800	40700	32100	22800	14600	11800	13200
6	8230	10100	20900	13800	37300	46800	38800	32700	22200	14400	11800	13200
7	8170	9950	20300	13000	38400	45600	35400	31100	21800	14200	11700	12600
8	8240	9810	19300	12600	40900	45400	32500	31000	21500	14000	11800	10700
9	8330	9750	16700	12400	41600	45400	30300	33600	21600	13800	11800	9360
10	8310	9820	14400	12200	40800	44500	29000	33100	21100	13700	11700	8440
11	8280	9920	13200	12000	41300	43800	27700	32800	20600	13700	11600	8230
12	8230	9810	12800	11700	42200	44100	25000	32500	20200	13600	11500	8220
13	8210	9650	12600	11300	41800	44500	22000	32400	19000	13600	11600	8230
14	8180	9690	12400	10900	42400	46400	19300	32200	18400	13500	11600	8200
15	8070	9650	12100	10300	42400	45600	17700	30000	17900	13300	11800	8150
16	8110	9630	16700	10100	42200	44400	16700	25200	17500	12800	11800	8410
17	8090	9670	24300	9880	42000	43800	16000	19500	17100	12500	11600	8200
18	8140	10500	34300	9980	41800	43700	15600	15400	17100	12500	11600	8220
19	8150	23000	33900	13900	41800	43700	15500	16100	17100	12500	11600	8310
20	8070	26300	31000	22900	42300	42400	15700	19000	16300	12400	11600	8300
21	8130	21100	31500	17500	41900	41400	16000	19800	16100	12400	11800	8390
22	8310	18600	39300	14700	41400	42300	16000	20400	15800	12200	12000	8440
23	8700	18300	42300	24000	40900	42700	15800	21000	15600	12200	12200	8390
24	9030	19900	43300	31700	39600	42900	17000	21300	16000	12200	12200	9080
25	9250	19100	41100	40400	38300	42900	21500	22000	15200	12300	12300	10700
26	10600	17900	38900	40300	39900	41800	22700	23400	14800	12300	12400	10900
27	12800	17500	37900	41400	42500	40800	19900	23700	14800	12200	12500	11000
28	10400	17600	34900	46400	43300	41700	20500	24300	14800	12100	12400	11700
29	9160	23400	30000	44900	---	41700	29600	24500	14700	12000	12400	12400
30	10200	33100	24000	43300	---	41400	31400	24800	14600	12000	12400	12500
31	14000	---	19400	43300	---	42200	---	24700	---	12000	12400	---
TOTAL	274810	435350	810000	651860	1155500	1377800	776700	827100	561900	407700	369400	304670
MEAN	8865	14510	26130	21030	41270	44450	25890	26680	18730	13150	11920	10160
MAX	14000	33100	43300	46400	43300	51300	42800	33600	24700	14900	12500	13200
MIN	8070	9310	12100	9880	37300	40800	15500	15400	14600	12000	11500	8150
AC-FT	545100	863500	1607000	1293000	2292000	2733000	1541000	1641000	1115000	808700	732700	604300
CAL YR 1982	TOTAL	6467650	MEAN	17720	MAX	43300	MIN	7070	AC-FT	12830000		
WTR YR 1983	TOTAL	7952790	MEAN	21790	MAX	51300	MIN	8070	AC-FT	15770000		

SACRAMENTO RIVER BASIN

11389950 LITTLE BUTTE CREEK AT MAGALIA, CA

LOCATION.--Lat 39°48'38", long 121°35'00", in NW 1/4 NE 1/4 sec.36, T.23 N., R.3 E., Butte County, Hydrologic Unit 18020120, on left bank 1,000 ft downstream from Magalia Dam, and 0.4 mi northwest of Magalia.

DRAINAGE AREA.--11.4 mi².

PERIOD OF RECORD.--October 1968 to current year.

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

REMARKS.--Records good. Flow regulated by Paradise Reservoir, usable capacity, 11,500 acre-ft, and Magalia Reservoir, usable capacity, 2,640 acre-ft. 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).--15 years, 18.5 ft³/s, 13,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,180 ft³/s Jan. 24, 1970, gage height, 6.47 ft; minimum daily, 0.01 ft³/s Sept. 25, 1974, and many days in 1976-77.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 696 ft³/s Mar. 13, gage height, 5.46 ft; minimum daily, 0.45 ft³/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.65	9.5	18	91	551	142	86	7.8	.69	.59	.65
2	.47	.70	3.8	17	78	560	136	79	10	.68	.63	.69
3	.49	.71	1.9	16	38	446	133	65	7.9	.65	.63	.70
4	.47	.68	1.0	15	35	293	107	49	6.5	.65	.65	.65
5	.48	.65	.80	14	44	242	75	52	4.1	.65	.65	.63
6	.57	.65	.71	13	95	201	74	50	1.6	.61	.61	.58
7	.57	.65	.68	12	285	221	71	48	.76	.61	.64	.57
8	.50	.69	.65	11	393	204	69	48	.74	.63	.66	.59
9	.57	.71	.65	11	287	165	68	48	.69	.65	.66	.59
10	.53	.82	.65	9.9	230	146	66	39	.73	.65	.66	.59
11	.51	.82	.65	9.1	179	138	67	26	.98	.65	.65	.60
12	.56	.82	.68	8.2	257	198	65	25	3.8	.65	.65	.63
13	.60	.86	.66	7.8	302	573	62	24	3.6	.65	.67	.64
14	.62	.89	.65	7.6	209	311	48	22	1.1	.65	.68	.60
15	.62	.89	.70	7.6	170	219	23	22	.53	.65	.70	.59
16	.52	.89	1.7	10	154	183	20	20	.53	.65	.70	.59
17	.46	1.8	1.2	11	148	185	21	19	.53	.64	.69	.59
18	.46	6.5	.83	33	154	172	44	18	.54	.65	.69	.61
19	.45	2.6	.71	83	143	142	105	17	.56	.65	.66	.60
20	.47	1.3	6.9	49	140	131	89	14	.58	.65	.70	.62
21	.61	.83	62	30	137	136	40	13	.59	.67	.68	.62
22	.69	1.0	56	43	113	147	41	12	.60	.65	.65	.71
23	.62	1.0	90	59	69	161	76	12	.61	.65	.66	.80
24	.74	.87	81	218	54	226	84	9.6	.61	.67	.65	.68
25	3.6	.82	58	126	32	211	79	1.2	.61	.65	.62	.66
26	.92	.76	49	159	93	172	62	.82	.62	.66	.59	.65
27	.66	1.2	43	348	176	222	48	.79	.64	.65	.56	.65
28	.65	5.5	33	181	354	197	60	.76	.65	.65	.58	.65
29	.93	17	26	155	---	168	56	1.6	.65	.61	.61	.70
30	1.2	28	23	127	---	156	66	3.1	.65	.61	.65	.76
31	.68	---	20	103	---	156	---	3.4	---	.61	.67	---
TOTAL	21.70	81.26	576.02	1912.2	4460	7233	2097	829.27	59.80	20.04	20.09	19.19
MEAN	.70	2.71	18.6	61.7	159	233	69.9	26.8	1.99	.65	.65	.64
MAX	3.6	.28	.90	348	393	573	142	.86	.10	.69	.70	.80
MIN	.45	.65	.65	7.6	32	131	20	.76	.53	.61	.56	.57
AC-FT	43	161	1140	3790	8850	14350	4160	1640	119	40	40	38
a	378	263	223	262	216	230	271	658	953	1079	1298	848

CAL YR 1982 TOTAL 12550.81 MEAN 34.4 MAX 644 MIN .41 AC-FT 24890
WTR YR 1983 TOTAL 17329.57 MEAN 47.5 MAX 573 MIN .45 AC-FT 34370

a 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 NW 1/4 NW 1/4 sec.36, T.22 N., R.2 E., Butte County, Hydrologic Unit 18020105, on right bank 0.7 mi downstream from Little Butte Creek, and 7.5 mi east of Chico.

DRAINAGE AREA.--147 mi².

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, from topographic map. Prior to Aug. 13, 1944, water-stage recorder at site 0.4 mi upstream at different datum.

REMARKS.--Records good. Flow slightly regulated by storage in Magalia Reservoir, usable capacity, 2,640 acre-ft and since 1957 by Paradise Reservoir, usable capacity, 11,500 acre-ft. Diversions above station for irrigation and domestic use of about 7,000 acre-ft annually. Butte Creek receives water above station from West Branch Feather River by way of Toadtown Canal.

AVERAGE DISCHARGE (unadjusted).--53 years, 417 ft³/s, 302,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s Dec. 22, 1964, gage height, 14.12 ft, from rating curve extended above 8,900 ft³/s on basis of slope-area measurement at gage height 13.35 ft; minimum, 10 ft³/s Nov. 29, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 21	1515	3,770	5.50	Feb. 13	0145	4,840	6.34
Jan. 27	0015	8,060	8.74	Mar. 1	1145	7,170	8.09
Feb. 8	0315	4,200	5.84	Mar. 13	0730	*9,070	9.49

Minimum daily, 90 ft³/s Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	242	795	448	1150	6310	1620	1210	967	431	243	216
2	164	223	541	429	1020	6010	1540	1110	908	438	249	226
3	168	226	451	413	888	4600	1370	1030	859	419	234	215
4	168	224	413	404	803	3020	1210	975	935	405	233	209
5	168	217	394	394	796	2380	1060	974	852	397	228	203
6	169	203	381	382	1270	1970	977	961	827	391	232	205
7	193	213	361	376	2840	2310	923	891	826	379	223	200
8	181	209	343	367	3720	2150	893	862	806	359	224	203
9	179	176	333	359	2800	1800	865	832	784	349	217	209
10	168	118	322	350	2490	1710	831	791	781	340	216	208
11	153	162	311	342	1920	1670	816	745	874	336	211	205
12	129	215	299	333	3190	2390	785	738	737	329	202	166
13	157	213	312	326	3730	6910	744	731	696	325	204	107
14	162	211	293	322	2390	3810	703	736	672	319	203	109
15	163	205	292	318	1890	2650	662	748	645	313	209	90
16	162	206	336	333	1600	2180	644	769	636	305	217	99
17	162	252	1180	336	1370	2050	645	747	630	303	214	99
18	149	1500	650	551	1690	1840	674	772	635	296	214	94
19	152	717	517	909	1520	1570	1030	826	582	292	211	98
20	169	449	785	615	1290	1440	985	896	555	288	218	99
21	153	358	3360	515	1170	1550	895	960	526	286	218	160
22	206	341	2490	799	1070	1760	856	985	517	280	244	215
23	273	354	2000	941	964	1780	969	1010	512	274	248	231
24	217	316	1210	3050	903	2130	1120	1020	497	272	232	239
25	326	287	924	1720	1060	1790	1100	993	478	265	223	224
26	606	265	777	3040	1310	1520	991	995	470	265	223	152
27	203	266	674	4720	2420	2040	940	978	467	264	217	124
28	149	736	600	2430	4170	1660	1210	995	451	259	218	121
29	142	1330	544	2030	---	1470	1330	1020	441	258	215	125
30	314	1540	513	1620	---	1550	1260	1010	435	254	210	171
31	296	---	480	1350	---	2000	---	969	---	246	212	---
TOTAL	6123	11974	22881	30522	51434	78020	29648	28279	20001	9937	6862	5022
MEAN	198	399	738	985	1837	2517	988	912	667	321	221	167
MAX	606	1540	3360	4720	4170	6910	1620	1210	967	438	249	239
MIN	122	118	292	318	796	1440	644	731	435	246	202	90
AC-FT	12140	23750	45380	60540	102000	154800	58810	56090	39670	19710	13610	9960
a	3740	5670	6840	6970	6400	6950	6850	7240	6900	7040	6420	3920

CAL YR 1982 TOTAL 236829 MEAN 649 MAX 6980 MIN 93 AC-FT 469800
WTR YR 1983 TOTAL 300703 MEAN 824 MAX 6910 MIN 90 AC-FT 596400

a Diversion, in acre-feet, to Toadtown Canal from West Branch Feather River, furnished by Pacific Gas and Electric Co.

SACRAMENTO RIVER BASIN

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA

LOCATION.--Lat 39°00'36", long 121°49'25", in NW 1/4 NE 1/4 sec.2, T.13 N., R.1 E., Colusa County, Hydrologic Unit 18020104, on right bank 1,200 ft downstream from Wilkins Slough, 5.8 mi southeast of Grimes, and at mile 62.9 upstream from Sacramento.

DRAINAGE AREA.--12,926 mi².

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 below National Geodetic Vertical Datum of 1929.

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.--45 years (water years 1939-83), 10,350 ft³/s, 7,499,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1939-83), 32,300 ft³/s Mar. 4, 1983, gage height, 52.16 ft; maximum gage height, 52.75 ft Mar. 1, 1940; minimum discharge, 100 ft³/s Aug. 1, 1931, gage height, 14.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,300 ft³/s Mar. 4, gage height, 52.16 ft; minimum daily, 7,720 ft³/s Oct. 16-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8270	13300	26100	18900	29300	29500	28700	25500	23000	13400	10800	11700
2	8160	11700	25300	17400	29000	30300	28700	25900	22900	13400	10600	12000
3	8140	10200	24200	16300	28800	31500	28500	26000	22900	13700	10600	12300
4	8110	9660	23500	15700	28600	32200	28300	26000	22600	13800	10600	12300
5	8100	10100	22600	15200	28100	31800	28200	25900	21800	13600	10500	12600
6	8080	10200	21500	14800	27500	31000	27800	26000	21200	13300	10600	12700
7	7990	10100	20600	14000	27500	30300	27000	25900	20700	13200	10500	12500
8	7960	9910	19900	13400	28200	30000	26100	25400	20300	13000	10600	11100
9	7960	9770	18000	13100	28600	29800	25400	26200	20300	12600	10600	9660
10	7960	9750	15600	12800	28400	29500	25000	26200	20100	12500	10500	8480
11	7960	9750	14000	12600	28400	29200	24700	26100	19700	12600	10300	8090
12	7960	9750	13200	12300	28700	29100	23900	26000	19400	12500	10300	8030
13	7960	9670	12800	11900	28700	29300	22600	25900	18600	12400	10400	8090
14	7960	9550	12700	11600	28800	29700	20400	25900	17800	12500	10500	8110
15	7810	9540	12400	11000	28800	30000	18600	25500	17200	12300	10500	8120
16	7720	9540	13700	10700	28700	29600	17500	24300	16700	11700	10700	8340
17	7720	9540	21300	10400	28600	29400	16700	21500	16300	11300	10500	8380
18	7720	9840	25400	10500	28500	29300	16200	17200	16100	11100	10400	8300
19	7720	17100	26000	11900	28500	29200	16000	15600	16200	11200	10500	8340
20	7720	24100	25300	20600	28600	28900	16000	17900	15700	11100	10400	8360
21	7720	21900	25100	19600	28500	28500	16200	18700	15000	11100	10600	8380
22	7840	19400	27300	16300	28400	28600	16500	19100	14900	11000	10900	8510
23	8330	18300	28700	19600	28300	28800	16200	19700	14300	10900	11100	8530
24	8660	19400	29200	25100	28100	28800	16700	19800	14700	10900	11100	8760
25	8990	19400	28800	27700	27600	28800	19800	20200	14400	11000	11300	10300
26	9460	18300	28200	28500	27700	28700	22400	21200	13900	11000	11500	11000
27	12300	17600	27700	28400	28500	28400	20800	21800	13700	11000	11500	11100
28	11600	17500	27000	29600	28900	28400	19900	22300	13700	10900	11600	11400
29	9910	20000	25600	29900	---	28600	24400	22700	13700	10900	11700	12300
30	9580	25400	24100	29600	---	28400	25700	22900	13600	10800	11700	12600
31	12900	---	21700	29400	---	28500	---	23000	---	10800	11600	---
TOTAL	266270	420270	687500	558800	796300	914100	664900	716300	531400	371500	335000	300380
MEAN	8589	14010	22180	18030	28440	29490	22160	23110	17710	11980	10810	10010
MAX	12900	25400	29200	29900	29300	32200	28700	26200	23000	13800	11700	12700
MIN	7720	9540	12400	10400	27500	28400	16000	15600	13600	10800	10300	8030
AC-FT	528100	833600	1364000	1108000	1579000	1813000	1319000	1421000	1054000	736900	664500	595800
CAL YR 1982	TOTAL	5547080	MEAN	15200	MAX	29200	MIN	5300	AC-FT	11000000		
WTR YR 1983	TOTAL	6562720	MEAN	17980	MAX	32200	MIN	7720	AC-FT	13020000		

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, 21.5°C Sept. 15; minimum recorded, 7.5°C Jan. 2-4.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

SACRAMENTO RIVER BASIN

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11390672 STONE CORRAL CREEK NEAR SITES, CA

LOCATION.--Lat 39°17'18", long 122°18'00", in NW 1/4 NW 1/4 sec.34, T.17 N., R.4 W., Colusa County, Hydrologic Unit 18020104, on left bank at road bridge, 2.4 mi southeast of Sites.

DRAINAGE AREA.--38.2 mi².

PERIOD OF RECORD.--March 1958 to September 1964, October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft, from topographic map.

REMARKS.--No known diversion or regulation above station.

COOPERATION.--Records furnished by Bureau of Reclamation and reviewed by Geological Survey.

AVERAGE DISCHARGE.--24 years (water years 1959-64, 1966-83), 8.94 ft³/s, 6,480 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft³/s Jan. 26, 1983, gage height, 16.64 ft, from rating curve extended above 1,200 ft³/s on basis of slope-conveyance study at gage height 13.0 ft and a slope-area measurement at 16.45 ft; 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 from floodmarks, discharge, 1,940 ft³/s from slope-conveyance study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,700 ft³/s Jan. 26, gage height, 16.64 ft; no flow many days during the year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	7.9	8.0	38	1350	57	45	5.0	1.2		
2	0	0	3.1	6.8	34	1980	50	22	5.4	1.1		
3	0	0	2.0	6.6	29	436	45	18	4.8	.91		
4	0	0	1.5	6.2	24	245	40	16	4.6	.91		
5	0	0	1.3	6.3	49	175	36	18	4.0	.68		
6	0	.01	1.1	5.9	262	146	34	16	3.3	.63		
7	0	.01	.91	5.8	255	230	32	14	3.1	.53		
8	0	.01	.74	5.7	141	110	30	13	2.9	.53		
9	0	.01	.68	5.8	69	87	28	12	2.8	.48		
10	0	.02	.63	5.4	54	74	27	12	2.8	.36		
11	0	.02	.58	5.2	46	69	28	11	2.8	.28		
12	0	.02	.58	4.8	54	89	26	11	2.7	.28		
13	0	.02	.58	4.8	38	278	22	10	2.5	.25		
14	0	.02	.58	4.5	32	83	21	10	2.3	.19		
15	0	.02	.58	4.6	32	77	21	9.6	2.1	.11		
16	0	.02	.68	4.8	34	86	20	8.9	2.0	.09		
17	0	.03	.91	5.2	26	96	20	8.7	2.0	.09		
18	0	.06	.58	10	57	75	20	8.5	1.7	.11		
19	0	.04	.48	8.4	26	75	22	8.3	1.7	.12		
20	0	.03	.68	4.4	22	169	22	7.6	1.7	.11		
21	0	.03	34	2.9	21	184	19	7.6	1.7	.08		
22	0	.11	501	304	20	323	17	7.8	1.6	.06		
23	0	.25	110	638	37	317	27	7.4	1.5	.06		
24	0	.08	26	754	40	197	25	7.0	1.4	.04		
25	0	.07	15	70	627	110	20	6.7	1.3	.05		
26	0	.07	17	1910	238	90	17	6.5	1.2	.05		
27	0	.08	13	321	1160	210	79	5.9	1.1	.04		
28	0	12	11	95	2150	98	137	5.8	1.2	.02		
29	.01	18	10	131	---	83	34	5.4	1.2	.02		
30	.01	40	9.4	58	---	72	128	5.3	1.2	0		
31	0	---	8.6	46	---	63	---	5.0	---	0		
TOTAL	0.02	71.03	781.09	4449.1	5615	7677	1104	350.0	73.6	9.38	0	0
MEAN	.000	2.37	25.2	144	201	248	36.8	11.3	2.45	.30	0	0
MAX	.01	40	501	1910	2150	1980	137	45	5.4	1.2	0	0
MIN	0	0	.48	2.9	20	63	17	5.0	1.1	0	0	0
AC-FT	.04	141	1550	8820	11140	15230	2190	694	146	19	0	0
CAL YR 1982	TOTAL	4135.16	MEAN	11.3	MAX	629	MIN	0	AC-FT	8200		
WTR YR 1983	TOTAL	20130.22	MEAN	55.2	MAX	2150	MIN	0	AC-FT	39930		

11394500 MIDDLE FORK FEATHER RIVER NEAR MERRIMAC, CA

LOCATION.--Lat 39°42'30", long 121°16'10", in NW 1/4 NE 1/4 sec.2, T.21 N., R.6 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 400 ft downstream from bridge on Milsap Bar Road, 500 ft downstream from Little North Fork, 4.5 mi southeast of Merrimac, and 20 mi northeast of Oroville.

DRAINAGE AREA.--1,062 mi².

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, 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 between stations near Clío 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.--32 years, 1,471 ft³/s, 1,066,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,200 ft³/s Dec. 22, 1964, gage height, 26.5 ft from floodmarks, present site, from rating curve extended above 19,000 ft³/s on basis of slope-area measurement of maximum flow; minimum daily, 51 ft³/s Sept. 14, 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 10, 1937, reached a stage of 19.4 ft from floodmarks, discharge, 46,100 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	1400	7,270	10.16	Mar. 1	1000	16,100	12.83
Dec. 22	2345	13,500	12.15	Mar. 13	1115	*32,700	16.42
Jan. 27	0430	14,500	12.42	Mar. 31	0615	7,600	10.28
Feb. 13	0200	13,000	12.00	May. 29	Unknown	Unknown	Unknown

Minimum daily, 325 ft³/s Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	869	2310	1550	3150	15000	5380	4180	6840	2430	769	503
2	381	762	2000	1470	2770	14400	5450	3910	6580	2670	750	494
3	382	678	1960	1410	2480	12300	4920	3620	5800	2390	732	484
4	382	639	1870	1350	2230	8950	4400	3510	6110	2240	709	471
5	377	607	1640	1340	2120	7310	3970	3570	6220	2280	686	453
6	375	566	1520	1350	2260	6370	3640	3500	6500	2270	663	445
7	414	535	1400	1350	3630	6630	3410	3350	6580	2050	651	432
8	394	520	1290	1380	6120	6740	3310	3110	6360	1790	646	419
9	371	526	1120	1400	7250	6190	3290	2900	6000	1650	629	411
10	358	516	1080	1370	8590	6610	3170	2730	6500	1550	602	407
11	352	496	1030	1340	6370	7360	3090	2540	7220	1510	602	403
12	346	479	988	1290	8560	7800	2950	2580	6600	1500	586	399
13	339	471	991	1240	11000	24400	2850	2670	5300	1510	581	391
14	333	465	934	1200	8720	17500	2720	3000	4420	1510	571	391
15	330	451	912	1180	7330	14700	2650	3360	4340	1470	555	387
16	329	445	922	1190	5650	10400	2520	3600	4700	1340	560	379
17	330	654	2050	1230	4600	8240	2480	4090	5020	1270	545	372
18	331	5080	1660	1520	5080	6860	2600	4450	4650	1180	531	368
19	333	3210	1440	1890	4940	5950	4550	5090	4300	1130	526	368
20	325	1780	2460	1640	4630	5300	4180	5480	4150	1080	555	364
21	345	1460	9920	1580	4210	4830	3840	6000	3800	1050	540	360
22	502	1660	9120	1920	3720	4580	3520	6200	3550	1010	618	360
23	848	1510	10600	2410	3550	4490	3700	6410	3410	998	576	403
24	847	1240	6890	7680	3370	4660	3910	6350	3230	956	560	432
25	1840	1090	5210	6280	3510	4560	3630	6530	3010	929	545	407
26	3720	996	3960	7750	4100	4320	3490	6800	2960	909	536	403
27	1400	968	3160	11200	5260	4190	3140	7180	2850	863	531	416
28	1010	1920	2480	7300	8480	3820	4040	7600	2630	831	526	411
29	937	3840	2120	6240	---	3530	4680	7780	2490	812	517	446
30	1230	3270	1890	4670	---	3980	4490	7500	2430	800	498	550
31	1060	---	1690	3720	---	6760	---	7320	---	793	494	---
TOTAL	20903	37703	86617	88440	143680	248730	109970	146910	144550	44771	18390	12529
MEAN	674	1257	2794	2853	5131	8024	3666	4739	4818	1444	593	418
MAX	3720	5080	10600	11200	11000	24400	5450	7780	7220	2670	769	550
MIN	325	445	912	1180	2120	3530	2480	2540	2430	793	494	360
AC-FT	41460	74780	171800	175400	285000	493400	218100	291400	286700	88800	36480	24850

CAL YR 1982 TOTAL 927966 MEAN 2542 MAX 27900 MIN 250 AC-FT 1841000
WTR YR 1983 TOTAL 1103193 MEAN 3022 MAX 24400 MIN 325 AC-FT 2188000

NOTE.--NO gage-height record April 15 to June 22.

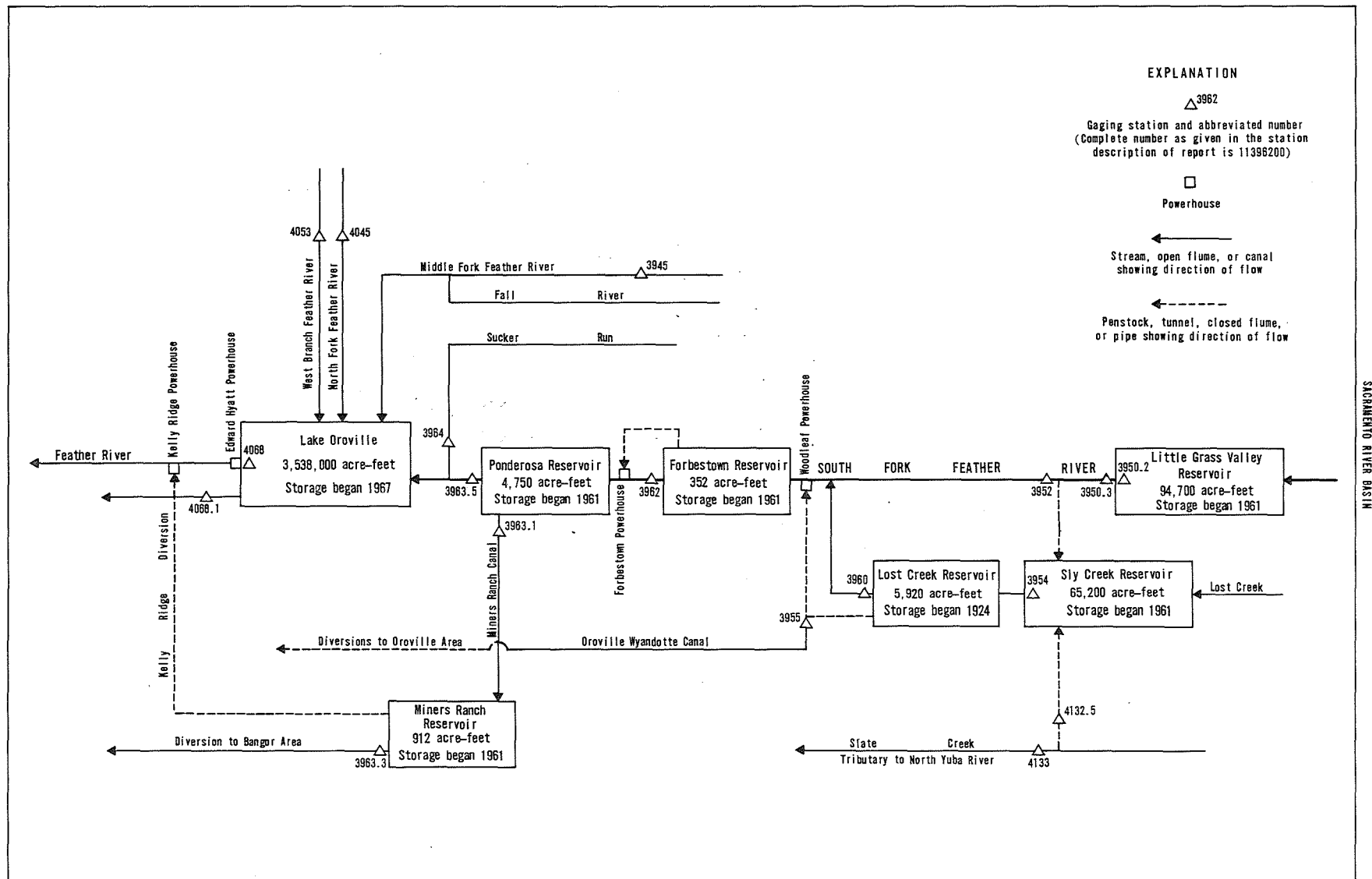


FIGURE 5. — Schematic diagram showing diversions and storage in South Fork Feather River basin.

11395020 LITTLE GRASS VALLEY RESERVOIR NEAR LA PORTE, CA

LOCATION.--Lat 39°43'25", long 121°01'10", in SE 1/4 NW 1/4 sec.31, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 300 ft upstream from dam on South Fork Feather River, 3.3 mi northwest of La Porte.

DRAINAGE AREA.--25.8 mi².

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 between elevations 4,876 ft invert of release valve, and 5,047 ft 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 Apr. 29, 1965, elevation, 5,047.9 ft; minimum since reservoir first filled, 30,300 acre-ft on many days in 1977, elevation, 4,994.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,500 acre-ft June 21-24, elevation, 5,046.9 ft; minimum, 40,000 acre-ft Sept. 30, elevation, 5,005.5 ft.

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

4,990	26,300
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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51600	51900	57200	58600	67200	71500	75000	74900	86800	93500	77200	59500
2	51300	51900	57600	58700	67100	72200	75200	74900	87300	93700	76300	59500
3	51000	52000	57600	58900	66900	72700	75200	74900	87400	93700	75500	59500
4	50500	52000	57400	59100	66800	73000	75000	74900	87700	93700	74400	59400
5	50200	52000	57200	59300	66700	73300	75000	75000	88100	93500	73700	59400
6	49800	52000	56900	59300	66700	73400	74900	75000	88400	93500	72700	59000
7	49500	52100	56500	59400	66900	73900	74700	75000	88700	93200	71800	58100
8	49400	52100	56000	59500	67200	74100	74700	75000	89000	93000	70900	57200
9	49200	52200	55700	59700	67500	74400	74600	75000	89300	92700	69900	56300
10	49200	52200	55300	59800	67600	75000	74600	75000	89600	92500	69000	55400
11	49200	52200	54800	59900	67600	75300	74400	75000	90100	92400	68200	54600
12	49200	52200	54500	60000	68400	76200	74300	75000	90400	92000	67300	53800
13	49200	52300	54000	60200	68900	78200	74100	75200	90700	91700	66400	53000
14	49200	52300	53700	60200	69300	77800	74000	75200	91100	91100	65400	52200
15	49100	52300	53200	60300	69500	77200	73900	75300	91400	90600	64900	51400
16	49100	52300	53000	60400	69600	76800	73700	75500	91700	90100	64500	50600
17	49100	52800	52800	60600	69600	76300	73600	75600	92400	89500	64100	49800
18	49100	54400	52400	61000	69800	76000	73600	75700	93000	89000	63700	49000
19	49100	54800	52100	61100	69900	75700	73600	76200	93700	88200	63300	48200
20	49000	55200	52300	61300	69800	75500	73400	77100	94200	87400	62900	47400
21	49100	55400	53400	61500	69800	75300	73100	77900	94500	86600	62500	46600
22	49200	55800	54600	61700	69800	75300	73100	79000	94500	85700	62100	45700
23	49600	56100	55500	62100	69600	75200	73600	80100	94500	84700	61900	44900
24	49700	56000	56300	63200	69500	75200	74000	81000	94500	84000	61500	44100
25	50700	55700	56800	63800	69600	75000	74100	81600	94300	83000	61100	43500
26	51200	55300	57200	64900	69800	74700	74100	82200	94300	82200	60700	42800
27	51300	55200	57600	65600	70100	74700	74300	83000	94200	81400	60300	42100
28	51400	55500	57800	66200	70500	74600	74600	84000	93800	80600	59900	41300
29	51500	56300	58100	66700	---	74400	74700	84700	93700	79800	59700	40700
30	51800	56800	58200	67100	---	74700	74900	85500	93500	79000	59700	40000
31	51800	---	58500	67300	---	75000	---	86300	---	78100	59500	---
MAX	51800	56800	58500	67300	70500	78200	75200	86300	94500	93700	77200	59500
MIN	49000	51900	52100	58600	66700	71500	73100	74900	86800	78100	59500	40000
a	5016.4	5020.7	5022.0	5028.8	5031.1	5034.2	5034.1	5041.8	5046.3	5036.3	5022.8	5005.5
b	-200	+5000	+1700	+8800	+3200	+4500	-100	+11400	+7200	-15400	-18600	-19500

CAL YR 1982 b -18400
WTR YR 1983 b -12000

a Elevation, in feet, at end of month.
b 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 SW 1/4 NW 1/4 sec.31, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.1 mi downstream from Little Grass Valley Dam, and 3.5 mi northwest of La Porte.

DRAINAGE AREA.--25.9 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1960, at site 0.4 mi 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 upstream at datum 4,850.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good above 20 ft³/s and fair below. 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).--29 years, 102 ft³/s, 73,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft³/s Feb. 1, 1963; minimum, 0.2 ft³/s Oct. 28-31, Nov. 2, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s Mar. 13, gage height, 11.43 ft; minimum daily, 3.5 ft³/s Nov. 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	191	9.8	19	9.2	192	205	230	194	504	220	474	16		
2	191	9.5	18	9.2	194	201	253	194	633	220	473	16		
3	191	9.2	132	9.2	194	200	254	196	759	219	472	16		
4	191	9.2	232	9.2	194	199	246	200	760	219	470	16		
5	191	8.9	232	8.6	194	200	233	209	758	219	470	16		
6	189	8.9	264	8.4	194	199	221	215	757	219	469	239		
7	187	8.7	291	8.3	196	201	215	212	757	219	467	414		
8	85	6.0	291	8.2	198	203	211	213	553	219	467	411		
9	9.2	3.7	291	8.3	196	202	210	212	318	219	465	410		
10	9.0	3.7	291	8.1	195	208	209	210	326	219	464	409		
11	8.9	3.7	291	8.1	194	251	208	207	334	219	464	408		
12	8.9	3.6	290	8.1	200	326	208	208	338	273	529	407		
13	8.9	3.6	290	8.1	199	1050	208	212	342	332	568	407		
14	8.9	3.5	290	8.1	196	1240	208	220	346	332	538	406		
15	8.9	3.5	289	8.1	196	1030	208	237	345	332	336	404		
16	8.9	3.5	289	8.1	194	760	208	262	345	331	195	403		
17	8.9	4.0	292	8.1	195	619	207	287	234	331	206	402		
18	8.9	14	290	8.6	196	473	207	321	106	330	206	402		
19	8.9	6.1	289	8.5	196	382	280	277	105	420	206	400		
20	8.9	4.2	293	8.4	194	335	372	199	105	484	206	399		
21	9.2	4.0	184	8.4	195	299	371	199	207	483	206	399		
22	9.2	4.0	15	8.5	196	278	274	199	337	482	206	398		
23	10	4.1	13	8.9	196	268	194	200	337	482	206	398		
24	9.5	141	11	13	196	269	191	363	336	480	206	397		
25	15	239	10	10	196	244	189	504	336	480	205	396		
26	14	239	10	12	196	219	188	504	336	479	205	395		
27	10	239	9.9	12	196	214	186	505	335	478	205	395		
28	10	243	9.7	10	199	209	186	507	335	477	205	393		
29	9.8	156	9.5	9.7	---	208	186	508	335	477	98	392		
30	11	19	9.4	9.4	---	210	191	505	275	475	16	392		
31	10	---	9.2	80	---	221	---	505	---	475	16	---		
TOTAL	1640.9	1415.4	5254.7	350.8	5477	11123	6752	8984	11894	10844	9919	9956		
MEAN	52.9	47.2	170	11.3	196	359	225	290	396	350	320	332		
MAX	191	243	293	80	200	1240	372	508	760	484	568	414		
MIN	8.9	3.5	9.2	8.1	192	199	186	194	105	219	16	16		
AC-FT	3250	2810	10420	696	10860	22060	13390	17820	23590	21510	19670	19750		
CAL YR 1982	TOTAL	69125.5	MEAN	189	MAX	885	MIN	3.5	AC-FT	137100	MEAN a	164	AC-FT a	118700
WTR YR 1983	TOTAL	83610.8	MEAN	229	MAX	1240	MIN	3.5	AC-FT	165800	MEAN a	212	AC-FT a	153800

a 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 NE 1/4 SE 1/4 sec.30, T.21 N., R.8 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 0.1 mi downstream from diversion dam, 3.1 mi upstream from Rock Creek, and 5.8 mi north of Strawberry Valley.

DRAINAGE AREA.--37.7 mi².

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

REVISED RECORDS.--WDR CA-80-4: 1976(M).

GAGE.--Water-stage recorder and since July 23, 1982, 130° V notch weir. Datum of gage is 3,535.02 ft 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 500 ft 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).--23 years, 163 ft³/s, 118,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,330 ft³/s Jan. 31, 1963, gage height, 13.21 ft, from rating curve extended above 700 ft³/s on basis of computation of peak flow over diversion dam; minimum daily, 0.3 ft³/s Dec. 25, 1962, to Jan. 2, 1963, Mar. 1-3, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,210 ft³/s Mar. 13, gage height, 9.96 ft; minimum daily, 2.9 ft³/s Nov. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.7	6.6	6.6	6.9	281	6.1	10	232	9.6	10	10
2	11	4.1	6.6	6.6	6.8	195	6.1	10	246	9.6	10	10
3	11	4.1	6.6	6.6	6.8	91	6.1	10	327	9.7	10	10
4	11	21	7.0	6.6	6.7	6.6	6.1	10	324	9.7	10	10
5	11	24	7.0	17	6.6	5.8	6.1	10	312	9.8	10	10
6	11	2.9	7.0	6.3	6.8	5.7	6.0	9.8	312	9.8	10	11
7	11	2.9	7.0	12	7.0	5.8	5.9	9.8	309	9.8	10	12
8	11	4.4	7.0	6.1	7.1	5.8	5.9	9.8	195	9.8	10	12
9	10	6.0	7.0	6.1	7.2	5.7	5.9	9.8	10	9.8	10	12
10	10	6.0	7.2	6.2	7.2	5.8	5.9	9.8	10	9.8	10	12
11	10	6.1	7.2	6.2	7.0	5.9	5.9	9.8	10	9.8	10	12
12	10	6.0	7.2	6.2	11	132	5.9	9.7	10	9.8	10	12
13	11	6.0	7.2	6.2	30	2290	5.9	9.6	10	9.8	24	12
14	11	6.0	7.2	6.1	7.1	1400	5.9	9.6	10	9.8	10	12
15	11	6.0	7.2	6.1	7.0	772	5.9	9.6	10	9.8	10	13
16	11	6.0	7.3	6.2	6.1	391	5.9	9.6	10	9.8	9.6	13
17	11	6.2	64	6.3	5.5	249	5.9	9.7	9.9	9.8	9.6	13
18	11	6.9	6.8	6.4	5.7	122	5.9	10	9.6	9.8	9.6	13
19	11	6.5	6.8	6.3	5.6	21	6.0	32	9.6	9.9	9.6	14
20	11	6.4	10	6.3	5.5	5.9	6.1	9.7	9.6	10	9.6	25
21	11	6.3	195	6.3	5.5	5.9	26	9.8	9.7	10	9.6	27
22	11	6.3	49	6.4	5.5	5.9	5.9	9.9	10	10	10	31
23	11	6.3	9.6	6.5	5.4	5.9	5.9	10	9.9	10	12	45
24	11	6.5	6.7	7.3	5.4	5.9	5.9	108	9.8	10	11	66
25	12	6.8	6.5	6.9	5.6	5.9	5.9	267	9.8	10	10	35
26	12	6.8	6.4	7.1	5.6	5.9	5.9	265	9.8	10	10	12
27	11	6.8	6.4	16	5.8	5.9	5.9	262	9.8	10	10	12
28	11	7.1	6.3	7.0	6.2	5.9	6.0	260	9.8	10	10	12
29	11	7.3	19	6.9	---	5.9	8.7	253	9.8	10	9.8	12
30	11	6.9	6.6	6.7	---	6.0	10	232	9.7	10	10	12
31	11	---	6.6	6.7	---	6.1	---	212	---	10	10	---
TOTAL	339	212.3	518.0	226.2	204.6	6062.2	205.5	2107.0	2473.8	305.7	324.4	512
MEAN	10.9	7.08	16.7	7.30	7.31	196	6.85	68.0	82.5	9.86	10.5	17.1
MAX	12	24	195	17	30	2290	26	267	327	10	24	66
MIN	10	2.9	6.3	6.1	5.4	5.7	5.9	9.6	9.6	9.6	9.6	10
AC-FT	672	421	1030	449	406	12020	408	4180	4910	606	643	1020
MEAN a	65.9	100	291	115	366	649	342	506	504	373	337	329
AC-FT a	4050	5960	17870	7140	20300	39930	20350	31090	29970	22930	20740	19550
b	3380	5540	16840	6640	19890	27910	19940	26910	25060	22320	20100	18530

CAL YR 1982 TOTAL 17028.2 MEAN 47 MAX 1280 MIN 2.9 AC-FT 33780 MEAN a 276 AC-FT a 199700
WTR YR 1983 TOTAL 13490.7 MEAN 37 MAX 2290 MIN 2.9 AC-FT 26760 MEAN a 331 AC-FT a 239900

a Adjusted for diversion to South Fork tunnel.

b Diversion, in acre-feet, from South Fork Feather River to South Fork diversion tunnel.

11395400 SLY CREEK RESERVOIR NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°35'01", long 121°06'59", in NE 1/4 NE 1/4 sec.19, T.20 N., R.8 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 100 ft upstream from dam on Lost Creek, 1.4 mi northwest of Strawberry Valley.

DRAINAGE AREA.--24.0 mi².

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 daily.

REMARKS.--Reservoir is formed by earthfill dam. Storage began in November 1961. Total capacity, 65,000 acre-ft between elevations 3,285 ft invert of outlet, and 3,531 ft 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. Reservoir completely drained Sept. 12 to Oct. 17, 1981, for powerhouse construction.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 65,600 acre-ft June 22, 1978, elevation, 3,530.9 ft; minimum observed under normal operating conditions since reservoir first filled, 860 acre-ft Feb. 11, 1976, elevation, 3,320.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 65,500 acre-ft June 25, elevation 3,530.7 ft; minimum, 23,700 acre-ft Nov. 17, elevation, 3,442.7 ft.

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

3,299	0	3,380	7,360
3,300	40	3,400	11,500
3,305	245	3,420	16,600
3,310	450	3,450	26,300
3,315	655	3,480	38,500
3,320	860	3,510	53,400
3,340	2,150	3,532	66,200
3,360	4,300		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49600	35700	29600	40600	42200	57200	57400	60700	64500	64600	60600	46600
2	49100	35000	29500	40000	42400	57900	57600	60800	64300	64600	60400	45400
3	48500	34700	29300	39600	42100	57700	57600	61000	64200	64500	60400	44300
4	47900	34000	29400	39100	41800	57400	57200	61100	64100	64500	60300	43100
5	47300	33400	29400	38400	41500	57300	57500	61300	64000	64500	60100	42000
6	46800	32900	29800	38200	41300	57100	57800	61600	63900	64200	60100	41400
7	46200	32300	29800	37500	42400	57400	58100	61800	63700	63900	60000	40900
8	45600	31500	29800	36900	43600	57300	58300	62000	63600	63500	59800	40500
9	44800	30600	29800	36300	44800	57700	58200	62100	63500	63200	59700	40000
10	44100	29400	29700	35700	45800	58000	58100	62200	63400	62900	60100	39700
11	43300	28600	29600	35100	46200	58000	58000	62200	63300	62600	59900	39400
12	42400	27600	29500	34400	47600	58400	58300	62300	63200	62400	59700	39100
13	41600	26600	29400	33900	49600	59000	58300	62100	63100	62200	59500	38700
14	40800	25700	29200	33300	50700	58400	57800	62200	63000	62100	59400	38400
15	40100	24900	29000	32600	51300	58200	57200	62400	62800	61900	59100	38000
16	39300	24100	28800	32000	51700	58100	57200	62500	62800	61800	58400	37600
17	38500	23700	30000	31400	51900	58000	56900	63000	63000	61500	57700	37300
18	37700	25800	30500	31800	52300	57900	56600	63300	63300	61300	56700	36900
19	36900	27100	30700	31700	52600	57900	57100	63400	63600	61200	55400	36500
20	36100	27400	32000	31200	52700	57800	57600	63400	63900	61200	54300	36200
21	35300	27300	35600	30700	52800	57700	58200	63700	63900	61200	53100	35700
22	34600	27100	38600	31200	52800	57600	58400	64200	64200	61200	54800	35800
23	34100	26700	40100	31700	52800	57600	58700	64600	64600	61200	54000	35400
24	34000	26300	40800	34400	53100	57500	58800	64800	65000	61100	53400	34800
25	35500	26100	41300	36300	53700	57500	58800	64800	65500	61000	53200	34400
26	36600	25800	41500	38100	53700	57400	58700	64800	65400	61000	52500	34100
27	37100	25700	41800	41400	54100	57400	58800	64800	65400	60900	51900	34000
28	37400	26600	42000	43200	55300	57300	59500	64800	65300	60900	51000	33800
29	37200	28400	42100	43100	---	57300	59800	64800	64800	60800	50000	33500
30	36800	29300	41800	42800	---	57300	60300	64700	64600	60700	49000	33200
31	36200	---	41100	42400	---	57200	---	64600	---	60600	47800	---
MAX	49600	35700	42100	43200	55300	59000	60300	64800	65500	64600	60600	46600
MIN	34000	23700	28800	30700	41300	57100	56600	60700	62800	60600	47800	33200
a	3474.8	3457.9	3485.5	3488.4	3513.4	3516.7	3522.1	3529.2	3529.2	3522.6	3499.3	3467.7
b	-13900	-6900	+11800	+1300	+12900	+1900	+3100	+4300	0	-4000	-12800	-14600

CAL YR 1982 b -17000
WTR YR 1983 b -16900

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

b Change in contents, in acre-feet.

NOTE.--No elevation record Apr. 5-21, Aug. 2 to Sept. 14, Sept. 27-30.

SACRAMENTO RIVER BASIN

11395500 OROVILLE-WYANDOTTE CANAL NEAR CLIPPER MILLS, CA

LOCATION.--Lat 39°33'15", long 121°11'31", in NW 1/4 NE 1/4 sec.33, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, in concrete valve house at head of canal, 2.5 mi 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 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 upstream in abandoned portion of canal, 0.3 mi 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, 15,200 acre-ft/yr; 21 years (water years 1963-83), 8.50 ft³/s, 6,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft³/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 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	1.9						0	.91	7.4	14	18
2	12	1.9						0	.90	7.4	15	18
3	12	2.3						0	.95	7.4	15	18
4	12	2.8						0	.95	7.3	15	18
5	11	2.9						0	.92	7.4	15	18
6	11	2.9						0	.86	7.3	15	18
7	11	2.8						0	.86	7.4	15	18
8	11	2.1						0	2.1	7.4	15	18
9	11	.50						0	2.8	7.4	15	19
10	11	0						0	2.9	7.4	16	19
11	11	0						0	3.0	7.4	17	19
12	11	0						.16	3.0	7.4	18	19
13	11	0						.25	3.0	9.8	18	19
14	11	0						.25	2.9	11	18	19
15	11	1.4						.26	2.9	11	18	19
16	11	3.6						.26	2.9	11	18	19
17	11	3.3						.24	2.9	11	18	19
18	9.2	1.6						.26	3.0	11	18	19
19	7.2	0						.27	3.0	11	18	19
20	7.2	0						.27	3.0	11	18	19
21	7.2	0						.25	3.1	11	18	19
22	7.2	0						.27	4.2	11	18	19
23	7.2	0						.27	4.8	11	18	19
24	7.2	0						.28	4.8	11	19	19
25	7.2	0						.26	4.9	11	19	19
26	7.2	0						.25	4.8	11	19	19
27	7.2	0						.66	4.7	11	19	19
28	5.5	0						.87	4.8	11	19	18
29	2.9	0						.88	4.8	11	19	18
30	2.5	0						.94	5.9	11	19	16
31	2.3	---						.86	---	11	19	---
TOTAL	279.2	30.0	0	0	0	0	0	8.01	90.55	296.4	535	557
MEAN	9.01	1.00	0	0	0	0	0	.26	3.02	9.56	17.3	18.6
MAX	13	3.6	0	0	0	0	0	.94	5.9	11	19	19
MIN	2.3	0	0	0	0	0	0	0	.86	7.3	14	16
AC-FT	554	60	0	0	0	0	0	16	180	588	1060	1100
CAL YR 1982	TOTAL	2208.36	MEAN	36.05	MAX	24	MIN	0	AC-FT	4380		
WTR YR 1983	TOTAL	1796.16	MEAN	4.92	MAX	19	MIN	0	AC-FT	3560		

11396000 LOST CREEK NEAR CLIPPER MILLS, CA

LOCATION.--Lat 39°34'25", long 121°08'26", in SE 1/4 SW 1/4 sec.24, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.3 mi downstream from Lost Creek Reservoir, and 2.8 mi north of Clipper Mills.

DRAINAGE AREA.--30.0 mi².

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, from topographic map.

REMARKS.--Records fair. Flow regulated by Sly Creek Reservoir 1.5 mi upstream (station 11395400) and Lost Creek Reservoir 0.3 mi upstream, usable capacity, 5,920 acre-ft 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, 52,850 acre-ft/yr; 22 years (water years 1962-83), 25.0 ft³/s, 18,110 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s Dec. 22, 1955, gage height, 6.90 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,610 ft³/s Mar. 13, gage height, 6.05 ft; minimum daily, 0.78 ft³/s Jan. 15, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.7	2.1	1.3	2.2	732	156	3.9	205	11	1.1	.90
2	1.4	1.7	1.8	1.3	1.8	1470	99	3.8	200	8.2	1.1	.93
3	1.5	1.7	1.7	1.2	1.6	1440	184	3.3	165	5.6	1.1	.94
4	1.5	1.6	1.6	1.1	1.4	1020	309	3.1	158	2.8	1.1	.96
5	1.5	1.6	1.5	1.0	1.5	788	7.2	11	146	1.4	1.1	1.2
6	1.5	1.6	1.4	1.0	3.8	623	2.5	5.8	133	1.9	1.0	1.1
7	1.9	1.6	1.3	1.0	8.0	502	2.4	1.9	128	3.4	1.0	.95
8	2.4	1.8	1.3	1.0	9.0	686	2.3	1.9	122	4.9	1.0	1.1
9	2.4	1.7	1.3	.98	8.1	258	2.2	1.8	58	4.7	1.0	1.9
10	1.9	1.7	1.3	.89	8.3	301	2.0	1.7	65	4.2	.97	2.4
11	1.7	1.7	1.3	.89	5.7	486	2.0	1.7	38	3.8	.94	2.0
12	1.7	1.7	1.3	.89	8.2	692	1.9	1.7	31	3.5	.94	1.4
13	1.4	1.7	1.3	.89	8.0	2250	1.8	1.6	27	3.3	.94	1.1
14	1.4	1.7	1.2	.89	5.6	1680	1.7	1.6	21	3.1	.94	1.1
15	1.4	1.8	1.2	.78	4.3	1010	1.7	1.5	11	2.4	.94	1.1
16	1.5	1.8	1.3	.88	3.2	722	1.7	1.4	1.3	1.3	.94	1.1
17	1.6	2.1	1.6	.78	2.4	610	1.7	1.4	1.3	1.3	1.2	1.2
18	1.6	4.0	1.4	1.6	3.1	488	1.8	1.3	3.0	1.3	1.3	1.3
19	1.7	2.0	1.3	1.5	2.5	375	1.9	1.3	26	1.3	1.1	1.4
20	1.8	1.7	4.5	1.1	2.1	309	1.9	1.3	1.2	1.3	1.0	1.3
21	2.0	1.6	11	1.0	1.8	247	1.8	1.3	1.2	1.2	.98	1.2
22	2.1	1.7	10	2.5	1.6	195	1.8	1.3	11	1.2	.94	1.3
23	2.1	1.6	8.3	2.2	1.4	151	2.5	1.3	10	1.2	.94	.96
24	2.1	1.6	5.0	6.4	1.3	159	2.9	1.3	13	1.1	.94	1.0
25	2.6	1.6	3.4	3.8	3.0	100	3.1	73	12	1.1	.89	1.3
26	2.0	1.5	2.6	5.6	3.9	41	2.9	191	11	1.1	.89	1.3
27	1.8	1.5	2.1	9.6	6.7	41	2.9	190	10	1.1	.89	1.4
28	1.7	2.6	1.7	5.8	68	13	135	188	1.4	1.1	.89	1.4
29	1.7	3.1	1.6	4.5	---	4.3	9.4	187	1.1	1.1	.89	1.4
30	2.0	3.0	1.4	3.3	---	23	4.0	189	7.6	1.1	.89	1.4
31	1.8	---	1.4	2.6	---	361	---	182	---	1.1	.89	---
TOTAL	55.1	56.7	80.2	68.27	178.5	17777.3	951.0	1258.2	1619.1	83.1	30.74	38.04
MEAN	1.78	1.89	2.59	2.20	6.38	573	31.7	40.6	54.0	2.68	.99	1.27
MAX	2.6	4.0	11	9.6	68	2250	309	191	205	11	1.3	2.4
MIN	1.4	1.5	1.2	.78	1.3	4.3	1.7	1.3	1.1	1.1	.89	.90
AC-FT	109	112	159	135	354	35260	1890	2500	3210	165	61	75
a	20950	29230	34720	33850	31930	30910	33620	35600	34590	35670	35170	33720
CAL YR 1982	TOTAL	19213.00	MEAN	52.6	MAX	2720	MIN	1.1	AC-FT	38110		
WTR YR 1983	TOTAL	22196.25	MEAN	60.8	MAX	2250	MIN	.78	AC-FT	44030		

a Diversion, in acre-feet, to Woodleaf powerplant, furnished by Oroville-Wyandotte Irrigation District.

11396200 SOUTH FORK FEATHER RIVER BELOW FORBESTOWN DAM, CA

LOCATION.--Lat 39°33'05", long 121°12'30", in SE 1/4 NE 1/4 sec.32, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 500 ft downstream from Forbestown Dam, 0.4 mi upstream from Oroleve Creek, and 4.0 mi northeast of Forbestown.

DRAINAGE AREA.--87.5 mi².

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, 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 above station diverts most flow through Forbestown powerplant except fishwater releases and uncontrolled spill over Forbestown Dam. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--21 years, 68.2 ft³/s, 49,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,510 ft³/s Jan. 31, 1963, gage height, 13.85 ft in gage well, 15.3 ft from floodmarks; minimum daily, 0.6 ft³/s Apr. 4, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,620 ft³/s Mar. 13, gage height, 12.51 ft; minimum daily, 4.4 ft³/s during several days in November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	121	65	143	1760	478	233	491	44	18	11
2	11	4.4	85	55	133	2240	351	198	476	48	17	11
3	11	4.4	70	56	123	1920	426	176	584	47	16	11
4	11	4.4	58	58	115	1390	586	171	576	34	16	11
5	11	4.4	49	57	118	1140	199	198	552	27	16	11
6	11	4.4	49	53	156	976	164	176	515	27	16	11
7	11	4.4	39	42	410	896	114	157	505	27	16	11
8	11	4.4	36	48	450	1010	156	147	429	27	16	11
9	11	4.5	36	43	370	583	146	143	143	27	15	11
10	11	4.4	32	41	436	608	141	135	104	33	14	11
11	11	4.5	28	26	328	778	138	131	110	30	11	11
12	11	4.5	31	36	459	1030	131	123	93	24	8.9	11
13	11	4.5	37	38	585	4440	121	122	81	24	8.9	11
14	11	4.5	23	34	368	3050	121	120	76	24	9.1	11
15	11	5.0	25	34	294	1980	117	119	67	24	9.2	11
16	11	5.6	25	34	238	1460	113	116	40	24	9.2	11
17	11	5.7	88	34	195	1260	111	112	40	24	9.1	11
18	11	107	68	34	232	962	110	112	58	24	8.9	11
19	11	14	51	56	201	716	117	119	65	24	9.9	11
20	11	5.4	102	27	175	589	126	116	22	24	11	11
21	11	5.4	874	5.4	162	551	136	129	44	24	11	11
22	11	5.6	668	68	156	500	122	108	57	24	11	11
23	12	5.6	446	48	140	442	147	106	49	21	11	11
24	16	5.6	204	77	142	478	166	143	49	20	11	11
25	98	5.6	154	50	174	370	195	383	49	20	11	11
26	94	5.6	127	270	252	277	169	553	49	20	11	11
27	46	7.1	107	652	425	273	159	545	49	20	11	11
28	36	79	96	328	635	251	354	535	46	20	11	11
29	28	212	88	248	---	190	311	527	26	20	11	11
30	13	193	78	199	---	192	269	483	27	20	11	11
31	13	---	71	161	---	664	---	468	---	19	11	---
TOTAL	598	734.9	3966	2977.4	7615	32976	5994	6904	5472	815	376.2	330
MEAN	19.3	24.5	128	96.0	272	1064	200	223	182	26.3	12.1	11.0
MAX	98	212	874	652	635	4440	586	553	584	48	18	11
MIN	11	4.4	23	5.4	115	190	110	106	22	19	8.9	11
AC-FT	1190	1460	7870	5910	15100	65410	11890	13690	10850	1620	746	655
a	21880	32170	37310	37660	33880	37570	35930	37550	36370	37600	37210	35300

CAL YR 1982 TOTAL 55305.7 MEAN 152 MAX 3810 MIN 4.4 AC-FT 109700
WTR YR 1983 TOTAL 68758.5 MEAN 188 MAX 4440 MIN 4.4 AC-FT 136400

a 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 SE 1/4 NW 1/4 sec.33, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, on right bank 800 ft downstream from Ponderosa Dam, and 3 mi northwest of Forbestown.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 975 ft, 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.--21 years, 204 ft³/s, 147,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 298 ft³/s June 8, 9, 1983; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	280	255	260	249	238	150	248	235	281	281	275
2	0	280	254	260	250	0	150	249	253	280	281	275
3	38	283	254	261	252	0	150	248	157	278	281	275
4	99	287	254	188	255	0	138	251	268	279	247	278
5	77	287	255	258	255	0	148	253	280	279	285	281
6	71	288	251	258	255	0	112	253	282	279	287	283
7	220	285	246	265	254	0	146	252	297	279	288	283
8	252	275	248	278	244	0	147	251	298	279	289	283
9	264	261	252	271	244	0	150	251	298	279	289	282
10	269	249	254	260	251	0	150	251	291	279	288	277
11	270	249	255	258	252	0	189	251	276	279	283	276
12	270	250	258	256	253	0	253	250	273	280	282	276
13	270	254	262	256	252	0	258	212	274	283	283	276
14	270	258	260	256	253	0	265	256	274	285	284	277
15	277	260	257	255	252	0	277	258	272	285	285	284
16	282	261	254	256	253	0	278	261	262	285	285	291
17	281	261	251	254	254	31	277	261	272	283	284	59
18	278	254	252	251	253	69	276	187	272	281	283	0
19	258	247	253	251	251	108	276	242	272	281	283	0
20	245	249	256	251	251	128	224	246	272	280	281	0
21	289	253	248	252	251	128	250	253	273	280	278	79
22	292	254	231	252	253	128	252	255	275	280	278	0
23	263	255	234	251	255	128	253	263	277	280	279	134
24	141	254	241	248	255	137	252	264	278	281	281	278
25	105	254	251	251	255	148	251	265	278	281	281	285
26	245	254	259	250	254	147	251	266	279	283	281	285
27	245	254	262	250	252	147	251	265	279	283	281	285
28	219	254	262	250	249	143	250	267	278	284	281	285
29	171	255	262	250	---	118	248	270	277	285	281	285
30	253	255	226	250	---	149	248	261	280	285	281	272
31	269	---	259	249	---	150	---	251	---	283	279	---
TOTAL	6483	7860	7816	7856	7057	2097	6520	7811	8152	8719	8730	6719
MEAN	209	262	252	253	252	67.6	217	252	272	281	282	224
MAX	292	288	262	278	255	238	278	270	298	285	289	291
MIN	0	247	226	188	244	0	112	187	157	278	247	0
AC-FT	12860	15590	15500	15580	14000	4160	12930	15490	16170	17290	17320	13330
a	11490	14570	14990	15030	13590	3820	12150	14810	14210	14690	14660	11040
CAL YR 1982	TOTAL	89472.4	MEAN	245	MAX	292	MIN	0	AC-FT	177500		
WTR YR 1983	TOTAL	85820.0	MEAN	235	MAX	298	MIN	0	AC-FT	170200		

a Diversion, in acre-feet, to Kelly Ridge powerplant, furnished by Oroville-Wyandotte Irrigation District.

11396330 BANGOR CANAL BELOW MINERS RANCH RESERVOIR, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'15", long 121°27'16", in NE 1/4 SW 1/4 sec.18, T.19 N., R.5 E., Butte County, Hydrologic Unit 18020124, on left bank 400 ft downstream from outlet at Miners Ranch Dam, and 5 mi east of Oroville.

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

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 815 ft, from topographic map.

REMARKS.--Records good. Flow regulated by Miners Ranch Reservoir, capacity, 912 acre-ft. Canal completed in November 1962. Water is used for irrigation. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--20 years, 14.9 ft³/s, 10,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 65 ft³/s Aug. 17-20, 1963; no flow for several days in 1965, 1969.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	8.2	2.8	2.8	3.0	3.0	2.2	2.4	16	19	21	18
2	7.7	7.2	2.8	2.8	3.0	2.8	2.0	2.4	16	19	21	18
3	7.7	5.9	2.8	2.8	3.0	2.5	2.1	2.4	15	19	21	18
4	7.4	6.2	2.8	2.8	3.0	2.4	2.3	2.4	15	19	21	18
5	7.6	6.0	2.8	2.8	3.0	2.4	2.8	2.4	16	19	21	18
6	7.5	5.9	2.8	2.8	3.0	2.4	3.0	2.4	16	19	21	17
7	7.2	6.0	2.8	2.8	3.1	2.4	2.8	2.4	16	19	21	16
8	9.1	6.0	2.8	2.8	3.0	2.4	2.7	2.4	16	19	21	16
9	9.9	5.9	2.8	2.8	3.0	2.4	2.6	2.4	17	19	21	16
10	8.9	5.9	2.8	3.0	3.0	2.4	2.6	2.4	17	19	21	16
11	11	5.9	2.8	3.0	3.0	2.4	2.6	2.4	17	19	21	16
12	14	5.3	2.8	3.0	3.0	2.5	2.6	2.4	16	19	21	16
13	13	4.7	2.8	3.0	3.0	2.6	2.6	2.4	16	20	21	16
14	13	4.7	2.8	3.0	3.0	2.4	2.6	2.4	16	21	21	16
15	13	4.7	2.8	3.0	3.0	2.4	2.7	2.4	16	21	21	16
16	13	4.7	2.8	3.0	3.0	2.4	2.8	2.4	16	21	21	16
17	13	4.7	2.8	3.0	3.0	2.4	2.9	3.5	16	21	21	16
18	13	3.9	2.8	3.0	3.0	2.5	5.2	5.6	16	21	21	16
19	13	2.8	2.8	3.0	3.0	2.4	4.5	7.3	16	21	21	16
20	11	2.8	2.8	3.0	3.0	2.4	2.2	8.4	16	21	21	15
21	11	2.8	2.8	3.0	3.0	2.4	2.2	9.4	16	21	21	15
22	11	2.8	2.8	3.0	3.0	2.4	2.3	9.6	17	21	21	15
23	11	2.8	2.8	3.0	3.0	2.4	2.4	12	19	21	21	15
24	11	2.8	2.8	3.1	3.0	2.4	2.4	16	19	21	21	16
25	10	2.8	2.8	3.0	3.0	2.4	2.4	16	19	21	21	16
26	10	2.8	2.8	3.0	3.0	2.4	2.4	16	19	21	21	15
27	8.0	2.8	2.8	3.0	3.0	2.4	2.4	16	19	21	21	16
28	6.9	2.8	2.8	3.0	3.0	2.4	2.4	16	19	21	21	16
29	7.7	2.8	2.8	3.0	---	2.4	2.4	16	19	21	21	14
30	7.8	2.9	2.8	3.0	---	2.4	2.4	16	19	21	21	12
31	7.8	---	2.8	3.0	---	2.4	---	16	---	21	20	---
TOTAL	311.7	135.5	86.8	91.3	84.1	75.9	79.5	222.2	506	626	650	480
MEAN	10.1	4.52	2.80	2.95	3.00	2.45	2.65	7.17	16.9	20.2	21.0	16.0
MAX	14	8.2	2.8	3.1	3.1	3.0	5.2	16	19	21	21	18
MIN	6.9	2.8	2.8	2.8	3.0	2.4	2.0	2.4	15	19	20	12
AC-FT	618	269	172	181	167	151	158	441	1000	1240	1290	952
CAL YR 1982	TOTAL	3628.7	MEAN	9.94	MAX	20	MIN	2.8	AC-FT	7200		
WTR YR 1983	TOTAL	3349.0	MEAN	9.18	MAX	21	MIN	2.0	AC-FT	6640		

11396350 SOUTH FORK FEATHER RIVER AT PONDEROSA DAM, CA

LOCATION.--Lat 39°32'52", long 121°18'11", in NW 1/4 SE 1/4 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 upstream from Sucker Run, and 2.6 mi northwest of Forbestown.

DRAINAGE AREA.--108 mi².

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 downstream at different datum.

REMARKS.--Records good. Daily record June 4 to Aug. 29, 1981 was not determined as releases under partially open spillway gates could not be calculated. 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).--21 years, 476 ft³/s, 344,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s Dec. 22, 1964, gage height, 11.52 ft in gage well, 12.7 ft outside from floodmarks, site and datum then in use; no flow for several months most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,560 ft³/s Mar. 13; no flow Oct. 24-29.

CORRECTIONS.--The date of the maximum discharge for the water year 1982 published in the report for 1982 is corrected to Feb. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	310	370	641	458	685	3360	1290	886	939	377	366	316		
2	508	161	548	458	647	4340	1100	825	909	399	366	344		
3	365	177	505	447	622	3780	1170	746	1160	399	366	334		
4	394	235	475	548	586	2790	1290	725	1010	393	370	319		
5	400	250	458	447	580	2370	943	712	954	388	360	329		
6	394	196	458	437	679	2130	869	760	932	382	360	326		
7	253	243	458	431	1390	2080	643	692	893	377	360	301		
8	192	245	442	393	1540	2180	803	666	862	377	355	334		
9	230	271	437	399	1290	1760	774	653	523	377	355	334		
10	288	297	426	399	1410	1610	760	622	453	377	344	324		
11	248	396	410	415	1080	1800	719	603	475	377	344	336		
12	244	184	405	415	1380	2080	610	616	464	371	339	315		
13	244	198	405	426	1610	6750	580	656	453	371	339	344		
14	244	282	401	426	1190	4960	567	598	447	366	334	344		
15	243	349	399	421	1010	3400	541	586	436	366	334	344		
16	230	257	405	415	909	2600	541	560	442	366	331	305		
17	230	251	517	415	810	2320	517	554	399	366	177	563		
18	236	777	487	442	862	1940	517	634	415	371	309	670		
19	240	539	442	493	817	1680	517	554	458	371	300	685		
20	283	315	559	470	767	1410	616	548	377	371	339	648		
21	199	426	2350	415	719	1410	598	526	415	382	344	591		
22	221	426	1650	499	634	1370	554	517	415	382	344	685		
23	238	426	1460	598	653	1330	604	505	415	382	344	569		
24	0	426	878	869	672	1450	692	487	393	382	344	382		
25	0	421	705	641	733	1330	817	774	393	382	339	350		
26	0	415	616	868	976	1170	719	999	393	382	339	351		
27	0	405	548	1850	1240	1170	659	991	399	377	320	199		
28	0	512	505	1110	1730	1110	847	984	399	371	344	314		
29	0	780	481	954	---	1020	1060	976	388	371	339	350		
30	53	883	517	862	---	915	947	932	371	371	339	388		
31	143	---	464	774	---	1380	---	925	---	371	339	---		
TOTAL	6630	11113	19452	18195	27221	68995	22864	21812	16982	11695	10483	11994		
MEAN	214	370	627	587	972	2226	762	704	566	377	338	400		
MAX	508	883	2350	1850	1730	6750	1290	999	1160	399	370	685		
MIN	0	161	399	393	580	915	517	487	371	366	177	199		
AC-FT	13150	22040	38580	36090	53990	136900	45350	43260	33680	23200	20790	23790		
MEAN a	423	632	880	840	1224	2294	979	955	838	659	620	624		
AC-FT a	26010	37630	54080	51670	67990	141000	58280	58750	49850	40490	38110	37120		
CAL YR 1982	TOTAL	194070	MEAN	532	MAX	5460	MIN	0	AC-FT	384900	MEAN a	777	AC-FT a	562400
WTR YR 1983	TOTAL	247436	MEAN	678	MAX	6750	MIN	0	AC-FT	490800	MEAN a	913	AC-FT a	661000

a Adjusted for diversion to Miners Ranch Canal.

11396400 SUCKER RUN NEAR FORBESTOWN, CA

LOCATION.--Lat 39°33'12", long 121°18'04", in NW 1/4 NE 1/4 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 upstream from confluence with South Fork Feather River, and 2.8 mi northwest of Forbestown.

DRAINAGE AREA.--18.7 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 960 ft, from topographic map.

REMARKS.--Records good. See schematic diagram of South Fork Feather River basin.

AVERAGE DISCHARGE.--18 years, 28.3 ft³/s, 20,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s Apr. 11, 1982, gage height, 9.90 ft, from floodmarks, from rating curve extended above 750 ft³/s on basis of slope-area measurement of maximum flow; minimum daily, 0.40 ft³/s Oct. 7, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 7.4 ft from floodmarks, discharge, 2,190 ft³/s from rating curve extended above 600 ft³/s on basis of computation of maximum flow over rock control.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	1300	360	3.80	Feb. 13	0215	384	5.02
Dec. 21	1630	810	5.02	Mar. 1	1630	895	3.88
Jan. 26	2215	750	4.88	Mar. 13	0600	*1,330	6.05

Minimum daily, 7.5 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	15	64	32	84	670	173	156	46	27	16	12
2	10	14	46	31	75	534	178	134	47	27	16	12
3	9.9	13	38	30	67	329	152	120	45	26	15	11
4	9.8	13	33	29	62	230	140	114	44	25	15	11
5	9.8	13	30	28	65	203	130	137	41	24	15	10
6	10	13	27	27	108	171	120	136	39	24	15	9.6
7	12	13	25	26	203	227	112	109	39	24	14	9.2
8	10	14	24	25	248	193	106	101	38	24	14	8.9
9	9.8	14	23	24	195	161	102	94	37	23	14	8.9
10	9.6	15	22	24	226	163	97	88	40	23	14	8.9
11	9.4	14	22	24	148	154	102	83	40	22	13	8.7
12	9.3	13	22	23	263	241	99	80	37	22	13	8.6
13	9.3	13	28	23	258	745	91	77	36	21	12	8.3
14	9.3	13	23	22	168	306	86	73	35	21	12	8.3
15	9.1	13	22	22	141	237	82	71	34	20	12	8.0
16	9.1	13	22	23	126	221	78	68	33	20	12	8.0
17	9.2	28	50	23	107	239	76	65	32	20	12	8.0
18	9.4	207	32	42	130	210	78	63	32	20	12	7.8
19	9.2	63	27	50	105	183	83	61	31	20	12	7.7
20	9.4	35	108	33	93	181	111	58	30	20	13	7.5
21	10	26	496	29	86	198	90	57	30	20	13	7.6
22	13	31	325	71	80	221	81	55	29	19	13	7.9
23	14	31	182	59	76	212	116	53	29	19	13	8.7
24	12	24	94	255	72	262	156	51	28	18	12	9.4
25	59	22	69	107	123	234	178	50	28	18	12	9.1
26	56	21	56	192	155	201	127	49	27	18	12	8.8
27	19	21	49	364	300	243	117	48	27	18	12	8.6
28	16	46	43	150	357	203	202	47	26	18	12	8.6
29	15	114	39	156	---	186	209	46	27	17	11	8.5
30	29	134	37	119	---	187	182	45	26	17	11	14
31	18	---	34	97	---	208	---	45	---	17	11	---
TOTAL	454.6	1019	2112	2160	4121	7953	3654	2434	1033	652	403	273.6
MEAN	14.7	34.0	68.1	69.7	147	257	122	78.5	34.4	21.0	13.0	9.12
MAX	59	207	496	364	357	745	209	156	47	27	16	14
MIN	9.1	13	22	22	62	154	76	45	26	17	11	7.5
AC-FT	902	2020	4190	4280	8170	15770	7250	4830	2050	1290	799	543
CAL YR 1982	TOTAL	20342.7	MEAN	55.7	MAX	1180	MIN	7.5	AC-FT	40300		
WTR YR 1983	TOTAL	26269.2	MEAN	72.0	MAX	745	MIN	7.5	AC-FT	52100		

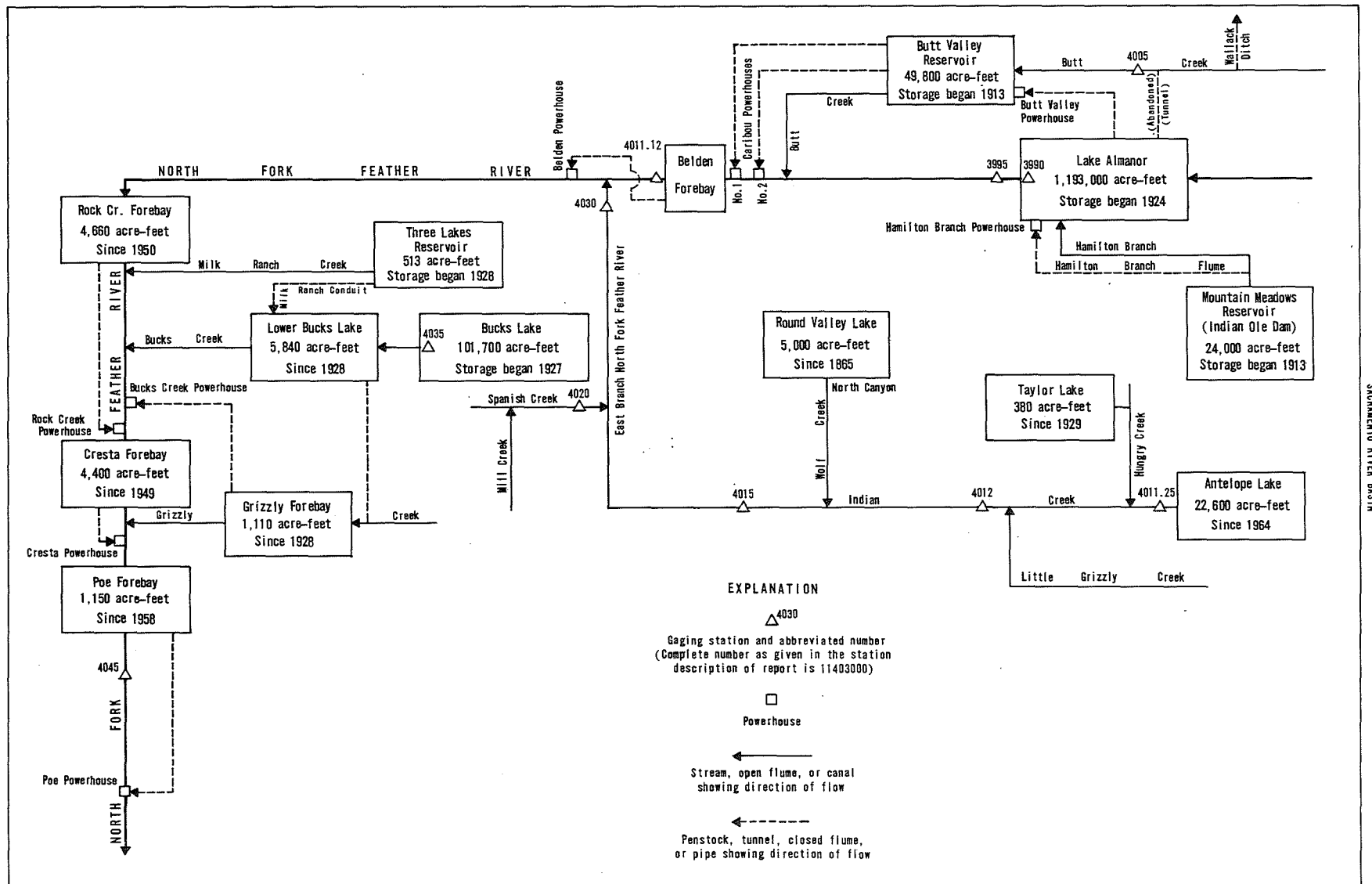


FIGURE 6. — Schematic diagram showing diversions and storage in North Fork Feather River basin.

11399000 LAKE ALMANOR AT PRATTVILLE, CA

LOCATION.--Lat 40°12'50", long 121°09'40", in SW 1/4 NE 1/4 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 northwest of Lake Almanor Dam, and 5.6 mi northwest of Canyon Dam.

DRAINAGE AREA.--491 mi².

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 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 southeast at same datum.

REMARKS.--Lake is formed by earthfill dam; storage began in July 1913; dam raised to gage height 4,455 ft in 1917 and 4,515 ft in 1927. Capacity, 1,184,000 acre-ft between gage heights 4,495.5 ft, upper storage limit and 4,422 ft, bottom of lowest outlet, of which 8,950 acre-ft 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 FOR PERIOD OF RECORD.--Maximum contents, 1,143,000 acre-ft June 8, 1982, gage height, 4,494.00 ft; minimum, 5,230 acre-ft Feb. 5, 1918, gage height, 4,416.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,101,000 acre-ft July 7, 8 gage height, 4,492.44 ft; minimum, 866,800 acre-ft Jan. 21, gage height, 4,483.31 ft.

Capacity table (gage height, in feet NGVD, 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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	921940	908460	903730	914940	902740	925940	952410	900500	964600	1083590	1078530	1013270
2	921180	907960	905470	911690	904480	928200	949620	900010	969950	1087850	1076670	1011450
3	920680	907460	905220	908700	905720	929960	946590	900010	975580	1092390	1074550	1009110
4	919680	906960	906710	905970	907710	930460	943810	900010	980960	1095860	1073220	1007300
5	918930	905970	907460	903230	907210	930460	940020	900750	985850	1098270	1071360	1005480
6	918430	905220	905970	900010	908700	930210	935990	900010	991000	1100410	1069770	1003670
7	917430	903730	905720	898520	910700	930710	932470	899760	996420	1100940	1067910	1001590
8	915190	903480	903480	895300	909700	931470	928950	899510	1001590	1100940	1066050	999780
9	913690	902240	901500	892830	911440	931970	924940	898770	1006260	1100680	1064200	997710
10	911690	900260	899510	899860	911940	933230	921680	897530	1011710	1100140	1062350	995390
11	910950	898770	897530	887400	912440	935490	919180	898020	1016920	1099610	1060230	993320
12	908950	897780	896040	884690	917180	940530	917180	897530	1020040	1098000	1058380	991260
13	908210	896290	894310	881980	918180	950130	914940	897780	1023440	1097730	1056560	989450
14	906710	895300	891940	878780	920180	957730	913190	897530	1026830	1098000	1054680	987910
15	905220	894060	890110	875100	920680	960270	910950	897530	1030500	1098000	1052570	986100
16	903980	892830	888630	873880	919180	963070	909200	898020	1033380	1096930	1050730	984050
17	902240	893320	892090	870690	917430	964090	907460	898770	1037050	1095860	1048620	981730
18	901000	892260	893320	870450	919430	965110	905720	899760	1041780	1094520	1046770	979940
19	899020	901250	895300	868490	919180	965110	904480	901250	1045720	1092920	1044930	977360
20	898770	902490	900010	867270	917930	965110	903730	903230	1049410	1092120	1042560	975070
21	899020	903480	907210	866780	916180	965110	901990	905970	1052570	1090790	1041250	973270
22	897780	902740	911440	869230	914440	965360	901000	909450	1055210	1089450	1039150	972510
23	897530	901500	912940	871180	912690	964850	901500	913190	1057320	1087850	1036790	971740
24	897030	898770	914190	875840	911440	964600	901990	918180	1061020	1085990	1034160	970210
25	900750	897280	915440	877800	910950	962560	901000	923190	1064990	1084920	1031800	968420
26	903230	895550	915690	886660	910450	961290	899260	928200	1069770	1083590	1029190	966380
27	905220	895050	918180	896540	912940	960270	898770	933730	1072690	1082530	1026310	964850
28	906710	896540	919430	893320	918430	958240	900010	940020	1075340	1081990	1024480	963070
29	908700	900500	919180	895800	---	956970	900260	946330	1077740	1091200	1021350	961290
30	908700	902740	917930	898270	---	956210	900010	952150	1080660	1080660	1018740	960020
31	907710	---	915930	900500	---	954690	---	959000	---	1080130	1015610	---
MAX	921940	908460	919430	914940	920680	965360	952410	959000	1080660	1100940	1078530	1013270
MIN	897030	892830	888630	866780	902740	925940	898770	897530	964600	1080130	1015610	960020
a	4484.97	4484.77	4485.30	4484.68	4485.40	4486.84	4484.66	4487.01	4491.68	4491.65	4489.21	4487.05
b	-15700	-4970	+13200	-15400	+17900	+36300	-54700	+59000	+121700	-530	-64500	-55600

CAL YR 1982 b -8760

WTR YR 1983 b +36580

a Elevation, in feet, at end of month.

b 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 NE 1/4 SW 1/4 sec.28, T.27 N., R.8 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.5 mi downstream from Almanor Dam, 4.5 mi southeast of Prattville, and 9 mi upstream from Butt Creek.

DRAINAGE AREA.--493 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1936, nonrecording gages or water-stage recorders at several sites within 0.5 mi of present site at various datums.

REMARKS.--Flow regulated by Lake Almanor (station 11399000) 0.5 mi upstream and Mountain Meadows Reservoir since 1924, capacity, 24,000 acre-ft. 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).--78 years, 914 ft³/s, 662,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s Mar. 19, 1907, before construction of dam, gage height, 16.2 ft at former site, from rating curve extended above 3,700 ft³/s; no flow at times during 1914, 1919, 1923.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 803 ft³/s Apr. 2; minimum daily discharge, 34 ft³/s several days during January.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	35	35	36	37	42	505	37	36	38	36	36
2	35	35	35	36	37	42	803	37	35	38	36	36
3	35	35	36	36	37	41	801	37	35	38	36	36
4	35	35	36	36	37	40	797	37	35	38	36	36
5	35	35	36	35	37	40	792	37	35	37	35	36
6	35	35	36	35	37	40	788	37	35	36	35	36
7	35	35	36	35	37	40	786	37	36	36	35	36
8	35	35	35	35	38	40	782	37	36	36	35	36
9	35	35	35	35	38	40	779	37	36	36	35	36
10	35	35	35	35	38	40	778	37	36	36	35	35
11	35	35	35	35	38	41	468	36	36	36	35	35
12	35	35	35	35	41	42	41	36	36	36	36	35
13	35	35	35	35	41	47	41	36	36	36	37	35
14	35	35	35	35	39	43	39	36	36	36	37	35
15	35	35	35	34	39	42	38	36	36	36	37	36
16	35	35	35	34	39	42	37	36	36	36	37	37
17	35	35	35	34	38	42	37	36	36	36	37	37
18	35	36	35	34	38	42	37	37	36	36	37	37
19	35	35	35	34	39	42	37	37	37	36	37	37
20	35	35	35	34	38	42	37	37	37	36	37	37
21	35	35	36	34	38	42	37	37	37	36	37	37
22	35	35	36	35	38	42	37	37	37	36	37	37
23	35	35	36	36	38	41	37	37	37	36	37	37
24	35	35	36	36	38	41	37	37	37	36	36	37
25	35	35	36	36	38	41	37	37	37	36	36	37
26	35	35	36	38	38	41	37	37	37	36	37	37
27	35	35	36	39	38	41	37	37	37	36	37	37
28	35	35	36	37	39	41	37	37	38	36	37	37
29	35	35	36	37	---	41	37	37	37	36	37	37
30	35	36	36	37	---	40	37	38	37	36	37	37
31	35	---	36	37	---	126	---	38	---	36	36	---
TOTAL	1085	1052	1101	1100	1069	1367	8793	1142	1088	1125	1125	1090
MEAN	35.0	35.1	35.5	35.5	38.2	44.1	293	36.8	36.3	36.3	36.3	36.3
MAX	35	36	36	39	41	126	803	38	38	39	37	37
MIN	35	35	35	34	37	40	37	36	35	36	35	35
AC-FT	2150	2090	2180	2180	2120	2710	17440	2270	2160	2230	2230	2160
MEAN a	1141	1063	849	1421	1360	1808	2385	2160	1238	1647	2188	1881
AC-FT a	70170	63250	52210	87400	75510	111200	141900	132800	73660	101300	134500	111900

CAL YR 1982 TOTAL 12762.2 MEAN 35.0 MAX 38 MIN 6.2 AC-FT 25310 MEAN a 1320 AC-FT a 955900
WTR YR 1983 TOTAL 21137.0 MEAN 57.9 MAX 803 MIN 34 AC-FT 41930 MEAN a 1597 AC-FT a 1156000

a Adjusted for diversion through Butt Valley powerhouse and leakage from Almanor-Butt Creek tunnel at outlet.

11400500 BUTT CREEK BELOW ALMANOR-BUTT CREEK TUNNEL, NEAR PRATTVILLE, CA

LOCATION.--Lat 40°11'12", long 121°11'11", in NW 1/4 NW 1/4 sec.22, T.27 N., R.7 E., Plumas County, Hydrologic Unit 18020121, on right bank 400 ft downstream from outlet of old tunnel from Lake Almanor to Butt Creek, and 2.2 mi southwest of Prattville.

DRAINAGE AREA.--69.3 mi².

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, from topographic map. Prior to Oct. 5, 1937, at site 200 ft downstream at datum 4 ft lower.

REMARKS.--No regulation above station. Howell-Bunger valve in conduit from Lake Almanor to Butt Valley powerhouse 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 7,310 acre-ft 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).--47 years (including records for station 114000000 Butt Creek above Almanor-Butt Creek tunnel, near Prattville for water years 1960-64), 84.7 ft³/s, 61,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,830 ft³/s Dec. 23, 1964, gage height, 5.87 ft, from rating curve extended above 1,400 ft³/s; minimum daily discharge, 26 ft³/s several days during May and June 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft³/s Mar. 13, gage height, 3.00 ft; minimum daily discharge, 55 ft³/s several days during October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	71	86	85	132	294	440	285	590	152	72	65
2	56	67	79	82	124	274	442	282	481	148	72	65
3	56	65	77	79	115	271	411	301	463	138	71	63
4	56	63	80	75	111	253	396	318	516	132	70	63
5	56	62	79	71	107	233	384	311	448	127	69	62
6	56	62	78	70	104	231	379	292	428	123	69	62
7	60	62	75	70	119	228	384	286	415	118	69	62
8	57	63	69	70	152	239	404	286	403	115	69	62
9	56	63	72	69	156	242	408	268	389	110	69	62
10	56	63	70	69	185	279	389	258	417	106	69	62
11	56	62	69	69	174	332	380	262	421	101	67	61
12	55	61	68	69	259	320	260	281	343	99	67	61
13	55	60	68	69	360	835	165	294	310	96	67	59
14	55	59	67	70	248	625	162	313	295	93	67	60
15	55	59	67	67	207	430	164	341	281	91	66	60
16	55	59	71	69	183	363	178	352	271	90	66	60
17	55	78	131	70	171	315	193	347	266	88	66	60
18	55	220	91	79	254	281	203	364	251	87	65	60
19	55	142	78	90	230	250	272	400	230	86	66	60
20	55	95	87	79	192	233	303	437	218	85	66	60
21	57	79	191	75	173	222	295	482	206	85	70	58
22	69	77	136	75	166	211	297	530	197	83	81	60
23	86	75	120	76	172	195	319	578	189	82	75	63
24	65	72	110	201	173	185	282	585	179	80	71	66
25	88	69	107	173	167	175	259	579	173	76	68	67
26	160	68	103	235	165	162	240	596	169	75	65	68
27	74	71	86	474	158	160	246	590	163	74	64	68
28	66	94	83	270	189	154	275	608	157	73	64	68
29	73	129	85	206	---	150	282	629	153	73	63	68
30	114	106	89	166	---	308	286	596	150	73	63	71
31	84	---	91	145	---	511	---	620	---	73	63	---
TOTAL	2052	2376	2763	3567	4946	8961	9098	12671	9172	3032	2109	1886
MEAN	66.2	79.2	89.1	115	177	289	303	409	306	97.8	68.0	62.9
MAX	160	220	191	474	360	835	442	629	590	152	81	71
MIN	55	59	67	67	104	150	162	258	150	73	63	58
AC-FT	4070	4710	5480	7080	9810	17770	18050	25130	18190	6010	4180	3740
CAL YR 1982	TOTAL	44390	MEAN 122	MAX 934	MIN 50	AC-FT	88050					
WTR YR 1983	TOTAL	62633	MEAN 172	MAX 935	MIN 55	AC-FT	124200					

11401112 NORTH FORK FEATHER RIVER BELOW BELDEN DAM, CA

LOCATION.--Lat 40°04'18", long 121°09'46", in SE 1/4 SW 1/4 sec.26, T.26 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.2 mi downstream from Belden Dam, 0.4 mi upstream from Deadwood Canyon, and 6.2 mi northeast of Belden.

DRAINAGE AREA.--612 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow regulated by Belden Reservoir 0.2 mi upstream, Lake Almanor (station 11399000), Butt Valley Reservoir, and Mountain Meadows Reservoir, combined capacity, 1,267,000 acre-ft. 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 (adjusted for diversion to Belden powerhouse).--14 years, 1,179 ft³/s, 854,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s Nov. 18, 1974, gage height, 8.89 ft; minimum daily discharge, 2.3 ft³/s Oct. 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft³/s Apr. 1, gage height, 7.29 ft; minimum daily discharge, 57 ft³/s Feb. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	61	60	61	61	374	805	498	139	140	140	143
2	60	62	60	63	60	565	1330	495	151	142	143	142
3	60	63	60	61	60	491	1370	473	133	142	140	142
4	60	61	60	60	60	338	1300	491	131	137	142	142
5	60	61	60	60	60	244	1310	511	131	143	142	142
6	60	60	60	61	60	225	1310	495	131	142	142	64
7	60	60	60	60	60	155	1300	472	131	142	142	61
8	61	60	60	60	58	61	1300	466	131	142	142	61
9	60	60	61	60	58	60	1300	467	131	140	142	60
10	60	60	60	61	59	60	1270	447	131	142	143	60
11	60	61	58	60	60	59	1270	430	132	142	142	61
12	61	61	60	60	61	60	563	351	131	142	142	61
13	60	61	61	60	60	105	269	141	131	140	142	61
14	60	60	61	60	61	121	433	423	131	142	142	61
15	60	60	60	62	60	305	422	484	133	142	142	61
16	60	60	60	61	61	183	387	501	134	142	142	61
17	60	61	61	60	60	179	361	499	135	143	142	61
18	60	60	61	60	60	179	429	436	135	142	143	61
19	61	60	61	59	61	153	431	131	135	142	142	61
20	65	60	61	61	57	152	457	131	134	139	142	61
21	65	61	60	61	60	138	478	131	135	142	142	61
22	60	60	60	67	60	135	449	131	135	142	142	60
23	60	60	60	62	60	103	476	399	135	142	142	61
24	60	61	60	60	60	127	489	564	135	142	142	60
25	60	60	61	60	60	124	473	528	136	143	142	61
26	60	60	60	61	61	257	457	510	135	142	142	61
27	59	60	60	60	60	516	443	529	135	142	142	61
28	60	60	61	61	61	474	442	521	134	142	142	61
29	60	60	60	60	---	489	478	521	135	142	142	61
30	59	61	60	65	---	469	491	508	135	142	142	61
31	58	---	61	60	---	546	---	294	---	142	142	---
TOTAL	1869	1815	1868	1887	1679	7447	22293	12978	4021	4391	4401	2235
MEAN	60.3	60.5	60.3	60.9	60.0	240	743	419	134	142	142	74.5
MAX	65	63	61	67	61	565	1370	564	151	143	143	143
MIN	58	60	58	59	57	59	269	131	131	137	140	60
AC-FT	3710	3600	3710	3740	3330	14770	44220	25740	7980	8710	8730	4430
MEAN a	1350	1249	1066	1567	1850	2460	2973	2632	1603	1668	2006	1856
AC-FT a	83000	74330	65550	96330	102700	151300	176900	161800	95400	102600	123300	110400
CAL YR 1982	TOTAL	41796	MEAN 115	MAX 1050	MIN 51	AC-FT 82900	MEAN a 1484	AC-FT a 1075000				
WTR YR 1983	TOTAL	66884	MEAN 183	MAX 1370	MIN 57	AC-FT 132700	MEAN a 1856	AC-FT a 1344000				

a Adjusted for diversion through Belden powerhouse.

11401500 INDIAN CREEK NEAR CRESCENT MILLS, CA

LOCATION.--Lat 40°04'42", long 120°55'36", in SW 1/4 SW 1/4 sec.25, T.26 N., R.9 E., Plumas County, Hydrologic Unit 18020122, on left bank 0.8 mi upstream from Dixie Creek, and 1.5 mi south of Crescent Mills.

DRAINAGE AREA.--739 mi².

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, from topographic map. Prior to March 1918, nonrecording gage at site 800 ft upstream at different datum.

REMARKS.--Records good. Natural flow affected by storage in Round Valley Reservoir since 1865, capacity 5,000 acre-ft, Taylor Lake since 1929, capacity, 380 acre-ft, and Antelope Lake since November 1963, capacity, 22,500 acre-ft. Diversions above station for irrigation of about 11,800 acres of which 9,700 acres are in Indian and Genesee Valleys. See schematic diagram of North Fork Feather River basin.

AVERAGE DISCHARGE.--62 years (water years 1907-9, 1912-17, 1931-83), 561 ft³/s, 406,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 25,000 ft³/s Mar. 19, 1907, gage height, 20.2 ft site and datum then in use; minimum daily, 0.90 ft³/s July 28, 29, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0530	1,580	5.98	Mar. 2	1845	6,510	10.36
Nov. 18	2400	1,900	6.41	Mar. 14	0130	*15,500	15.03
Nov. 29	1715	1,500	5.87	Mar. 31	1100	3,690	8.16
Dec. 21	2000	4,330	8.76	Apr. 9	0615	2,710	7.08
Jan. 24	1500	3,240	7.81	Apr. 30	0730	3,780	8.26
Jan. 27	0915	4,510	8.90	May 25	0815	5,310	9.51
Feb. 13	1130	5,000	9.28				

Minimum daily, 85 ft³/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	256	891	444	1140	5110	3340	3650	4230	722	146	115
2	110	227	684	421	1030	6390	3250	3600	3910	732	138	112
3	108	208	602	423	948	6010	2880	3550	3650	689	125	108
4	103	197	546	418	852	4620	2420	3500	3640	639	118	102
5	101	188	520	408	839	3560	2120	3300	3330	606	109	100
6	104	181	501	404	822	3000	1940	3100	3060	579	106	101
7	116	175	474	410	1130	2750	1900	2850	2940	533	106	98
8	110	176	412	412	1900	2880	2090	2600	2830	510	117	91
9	105	177	379	414	1970	2990	2490	2200	2710	599	111	87
10	103	178	375	403	2620	3360	2440	1950	2570	548	112	92
11	100	177	350	387	2050	4460	2240	1900	2830	498	110	94
12	98	171	337	370	2950	4640	2030	1970	2520	403	112	88
13	97	167	363	363	4830	8850	1830	2150	2140	352	105	90
14	96	163	321	356	4080	12800	1720	2400	1940	322	105	88
15	98	159	317	359	2890	7850	1680	2600	1810	295	106	87
16	96	155	308	374	2140	5830	1850	3000	1690	282	108	89
17	93	172	614	381	1760	4530	2190	2800	1630	274	112	85
18	95	976	546	461	2600	3630	2240	3300	1540	253	103	86
19	99	1360	462	774	2500	2970	2560	3680	1400	226	103	86
20	96	744	621	641	2010	2600	2960	3930	1280	219	123	86
21	126	531	3520	570	1750	2410	3240	4220	1200	211	138	89
22	163	456	3650	638	1580	2230	3370	4610	1120	214	185	111
23	226	423	3370	759	1670	2110	3470	4940	1070	211	187	132
24	205	362	1860	2650	1720	2100	3400	5210	1000	210	160	136
25	540	316	1250	2400	1880	2000	3190	5240	950	200	148	136
26	1270	297	1050	1930	2120	1710	3080	5160	894	184	134	131
27	631	294	884	4250	2440	1700	2770	5110	844	184	134	138
28	369	477	707	3330	3210	1580	3060	5090	797	183	127	135
29	291	1270	616	2230	---	1510	3630	5100	764	179	108	131
30	330	1270	542	1600	---	1610	3710	4950	743	172	107	158
31	305	---	490	1310	---	3390	---	4660	---	175	108	---
TOTAL	6488	11903	27562	30290	57431	121180	79090	112320	61032	11404	3811	3182
MEAN	209	397	889	977	2051	3909	2636	3623	2034	368	123	106
MAX	1270	1360	3650	4250	4830	12800	3710	5240	4230	732	187	158
MIN	93	155	308	356	822	1510	1680	1900	743	172	103	85
AC-FT	12870	23610	54670	60080	113900	240400	156900	222800	121100	22620	7560	6310

CAL YR 1982	TOTAL	369670	MEAN	1013	MAX	11400	MIN	37	AC-FT	733200
WTR YR 1983	TOTAL	525693	MEAN	1440	MAX	12800	MIN	85	AC-FT	1043000

11402000 SPANISH CREEK ABOVE BLACKHAWK CREEK, AT KEDDIE, CA

LOCATION.--Lat 40°00'11", long 120°57'12", in SE 1/4 NE 1/4 sec.27, T.25 N., R.9 E., Plumas County, Hydrologic Unit 18020122, on right bank 200 ft upstream from Blackhawk Creek, and 0.9 mi southeast of Keddle.

DRAINAGE AREA.--184 mi².

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 downstream not equivalent owing to inflow.

REVISED RECORDS.--WSP 1041: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 3,129.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow regulated by five small reservoirs having a combined capacity of 800 acre-ft. Approximately 4,600 acres irrigated above station (from information furnished by U.S. Forest Service). City of Quincy diverts about 450 acre-ft annually for municipal supply. See schematic diagram of North Fork Feather River basin.

AVERAGE DISCHARGE.--50 years, 277 ft³/s, 200,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,400 ft³/s Dec. 22, 1964, gage height, 13.53 ft, from rating curve extended above 5,200 ft³/s on basis of slope-area measurement at gage height 12.47 ft; minimum, 3.8 ft³/s Aug. 12, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0215	1,770	5.25	Feb. 13	0330	4,930	8.01
Nov. 18	1445	2,430	5.93	Mar. 1	0645	6,660	9.17
Nov. 29	1500	2,000	5.50	Mar. 13	1000	*8,740	10.37
Dec. 21	0815	4,340	7.56	Mar. 31	0315	1,890	5.38
Jan. 24	0515	4,520	7.70	Apr. 28	2245	1,820	5.31
Jan. 27	0245	7,030	9.40	May 24	0015	1,890	5.38

Minimum daily, 51 ft³/s Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	127	583	241	582	5890	1150	1240	1310	322	95	73
2	61	114	392	230	515	4500	1100	1050	1190	340	91	74
3	62	104	308	223	455	2970	928	1000	1130	313	90	69
4	63	98	283	219	405	1870	782	1020	1160	294	88	68
5	63	94	262	214	381	1470	678	979	1100	289	86	66
6	63	90	244	212	414	1250	607	955	1050	283	80	63
7	70	87	228	213	1030	1280	567	852	1050	258	77	61
8	68	91	207	217	1760	1260	564	805	1030	236	76	59
9	64	92	192	214	1770	1170	580	725	980	224	73	58
10	62	96	181	207	2640	1380	550	686	972	213	73	60
11	61	92	169	201	1540	1720	532	635	1080	206	76	60
12	61	86	165	195	2910	1790	489	661	886	197	72	57
13	59	84	178	189	3610	6330	452	687	783	194	68	54
14	61	82	158	184	1850	3000	424	750	756	194	69	52
15	61	80	151	182	1250	1920	401	859	728	190	68	52
16	60	79	146	186	1040	1490	404	960	688	179	73	52
17	59	91	573	188	871	1290	446	898	695	170	69	51
18	60	1380	386	266	1260	1090	468	973	684	156	67	51
19	60	776	285	453	1090	910	584	1140	597	144	70	52
20	59	377	525	326	880	807	811	1280	543	142	74	54
21	63	257	3930	282	756	759	764	1430	501	137	75	55
22	104	225	2680	414	671	736	721	1560	495	130	85	56
23	164	209	2190	524	671	724	817	1650	500	115	78	73
24	128	183	1000	3310	655	814	881	1640	464	115	73	72
25	330	164	649	1530	757	738	900	1590	434	116	71	69
26	809	151	524	1860	1020	654	779	1600	421	118	71	78
27	218	149	432	4460	1750	690	763	1610	401	111	71	72
28	153	380	364	1700	2730	642	1320	1670	363	107	68	71
29	127	1500	321	1140	---	592	1590	1700	339	99	63	80
30	182	1040	286	856	---	727	1440	1570	330	99	57	103
31	155	---	262	689	---	1590	---	1460	---	101	66	---
TOTAL	3671	8378	18254	21325	35263	52053	22492	35635	22660	5792	2313	1915
MEAN	118	279	589	688	1259	1679	750	1150	755	187	74.6	63.8
MAX	809	1500	3930	4460	3610	6330	1590	1700	1310	340	95	103
MIN	59	79	146	182	381	592	401	635	330	99	57	51
AC-FT	7280	16620	36210	42300	69940	103200	44610	70680	44950	11490	4590	3800
CAL YR 1982	TOTAL	177473	MEAN	486	MAX	7480	MIN	39	AC-FT	352000		
WTR YR 1983	TOTAL	229751	MEAN	629	MAX	6330	MIN	51	AC-FT	455700		

11403500 BUCKS LAKE NEAR BUCKS LODGE, CA

LOCATION.--Lat 39°53'45", long 121°12'10", in NW 1/4 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 northwest of Bucks Lodge, and 15 mi west of Quincy.

DRAINAGE AREA.--28.6 mi².

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 between elevations 5,064.75 ft, sill of outlet gate and 5,154.85 ft, 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 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, 106,720 acre-ft June 8-10, 1982, elevation, 5,157.6 ft; minimum, 12,330 acre-ft Feb. 27, 1929, elevation, 5,090.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 105,977 acre-ft June 11, 12, elevation, 5,157.2 ft; minimum, 49,105 acre-ft Jan. 14, 17, elevation, 5,122.6 ft.

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

5,064.75	274	5,075	2,400	5,100	21,180	5,125	52,545
5,066	388	5,080	4,744	5,105	26,642	5,130	59,997
5,068	635	5,085	7,921	5,110	32,519	5,140	75,894
5,070	977	5,090	11,742	5,115	38,794	5,150	92,950
5,072	1,438	5,095	16,183	5,120	45,472	5,160	111,223

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64637	56228	53568	54450	55632	63857	81058	81564	103026	104682	101198	89446
2	64169	55930	53568	54155	55930	64952	81564	81564	105759	104682	100833	89099
3	63857	55632	53276	53861	56079	65424	81902	81395	104313	104682	100469	88579
4	63545	55335	53130	52401	56079	65895	81902	81395	104867	104682	100105	88059
5	62922	54693	52984	51967	56377	66210	81902	81733	105051	104682	99924	87540
6	62613	54597	52837	51678	56824	66686	81227	81733	105236	104682	99743	87023
7	61994	54302	53714	51245	57425	67478	80889	81564	105420	104682	99563	86506
8	61994	53861	53422	51100	58177	67795	80889	81564	105605	104497	99201	85989
9	61223	53422	53422	50957	58782	68114	80889	81733	105605	104497	98659	85475
10	60610	53276	53130	50814	59238	68594	80889	81733	105791	104497	98297	84962
11	60304	52837	52837	50386	59086	69392	80889	81564	105977	104682	97759	84448
12	59845	52545	52691	50100	60150	70679	80554	81396	105977	105236	97579	83937
13	59541	52401	52401	49530	61070	73763	80554	81396	105791	105605	97579	83427
14	59086	52112	51967	49105	61530	74909	80386	81564	105605	105605	97579	82917
15	58630	51678	51678	49247	62149	75730	79883	81902	105605	105605	97220	82577
16	58177	51534	51678	49247	62149	76225	79548	82577	105420	105605	96682	82071
17	57726	51534	52256	49105	62149	76886	79548	82917	105420	105605	96502	81733
18	57274	52984	52256	49530	62458	77217	79716	83427	105420	105236	95967	81227
19	56824	53422	51967	49388	62458	77801	79883	84277	105236	105420	95433	80554
20	56377	53568	52545	49530	62458	78214	80218	85304	105236	105051	95076	80218
21	56079	52984	53568	49671	62304	78547	80554	86334	105236	104682	94543	79716
22	56079	52837	54450	49957	61994	78714	80721	87540	105236	104497	94189	79381
23	56079	52545	55040	50243	61839	79880	81227	88752	105051	104128	93658	79047
24	55930	52545	55335	51245	61685	79047	81395	89970	105051	103944	93127	78880
25	56526	52112	55483	51678	61685	79047	81395	91544	105051	103576	92774	78880
26	56526	51823	55632	52984	61685	79213	81227	92950	105051	103209	92071	78880
27	56228	51823	55781	53861	61994	79047	81058	94543	104867	103026	91895	78714
28	56079	52256	55483	54032	62613	79213	81058	96146	104867	102659	91192	78214
29	56228	52984	55188	54745	---	79213	81394	97938	104682	102476	90843	77881
30	56526	53422	55040	55040	---	80051	81733	99743	104682	101926	90144	77548
31	56377	---	54597	55483	---	80386	---	101562	---	101562	89795	---
MAX	64637	56228	55781	55483	62613	80386	81902	101562	105977	105605	101198	89446
MIN	55930	51534	51678	49105	55632	63857	79548	81395	103026	101562	89795	77548
a	5127.6	5125.6	5126.4	5127.0	5131.7	5142.7	5143.5	5154.8	5156.5	5154.8	5148.2	5141.0
b	-8580	-2960	+1180	+886	+7130	+17800	+1350	+19800	+3120	-3120	-11800	-12200

CAL YR 1982 MAX 106720 MIN 51534 b -43900

WTR YR 1983 MAX 105977 MIN 49105 b +12600

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

b Change in contents, in acre-feet.

11404500 NORTH FORK FEATHER RIVER AT PULGA, CA

LOCATION.--Lat 39°47'39", long 121°27'03", in SW 1/4 NE 1/4 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 downstream from Flea Valley Creek and Pulga, and 1.5 mi downstream from Poe Dam.

DRAINAGE AREA.--1,953 mi².

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 1315-A. 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, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1937, at site 1.1 mi upstream at different datum. Oct. 1, 1937, to Sept. 30, 1958, at present site at datum 5.00 ft higher.

REMARKS.--Records 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. Diversion through Poe powerhouse began on May 29, 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 (including diversion through Poe powerhouse).--73 years, 3,016 ft³/s, 2,185,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (prior to diversion to Poe powerhouse).--Maximum discharge, 72,400 ft³/s Dec. 23, 1955, gage height, 35.60 ft present datum, from rating curve extended above 34,000 ft³/s; minimum daily discharge, 235 ft³/s Oct. 31, 1932.
1958 to current year: Maximum discharge, 73,000 ft³/s Dec. 22, 1964, gage height, 35.80 ft, from rating curve extended above 34,000 ft³/s; minimum daily discharge, 5.4 ft³/s Sept. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,300 ft³/s Mar. 13, gage height, 27.12 ft in gage well; minimum daily discharge, 49 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	54	277	69	527	18300	7540	6420	7510	62	62	62
2	52	51	65	67	284	18300	7700	6000	6860	61	59	61
3	54	54	56	66	175	15000	6830	6000	6540	60	65	59
4	53	54	52	64	207	11000	5920	5860	6810	60	59	64
5	52	56	70	62	344	8990	5330	5860	6660	59	64	63
6	54	55	74	62	216	7520	4850	6000	6300	277	60	61
7	54	54	57	60	1020	7610	4610	5450	6230	104	62	62
8	52	54	64	60	7140	7300	4690	5180	6120	59	62	61
9	52	54	55	59	6710	6880	5010	4910	5380	56	60	60
10	51	53	61	57	9140	7590	4910	4270	5550	55	62	61
11	51	55	57	57	5450	9050	4610	4020	5740	60	60	61
12	50	54	55	58	9930	10400	3490	4270	4470	61	62	63
13	51	54	58	57	14300	27000	3120	4520	3950	76	63	61
14	53	54	56	56	9800	22800	2930	4520	3960	63	62	60
15	53	53	56	55	7090	14300	2780	5040	4170	62	62	61
16	54	57	58	56	5580	10800	2770	5580	3600	59	64	61
17	54	69	134	55	4480	9100	3300	5450	3650	57	106	64
18	53	3920	69	91	5970	7510	3480	5720	2140	59	65	61
19	53	1550	64	120	5820	6200	4780	5860	1450	63	61	60
20	52	57	226	90	4520	5410	5180	6000	1620	62	62	63
21	56	52	7660	79	3770	5040	5310	6560	1450	60	62	56
22	66	58	8110	118	3270	4730	5450	7000	760	61	61	53
23	51	56	7340	126	3160	4510	5400	7440	701	62	62	53
24	51	51	2420	5990	3200	4720	5720	8200	561	61	61	53
25	565	54	614	4340	3560	4460	6560	9070	501	63	60	55
26	1630	55	120	4920	4560	3970	5580	9100	525	61	62	53
27	62	57	95	14000	5780	4260	5180	9060	490	55	61	56
28	53	124	87	7070	9970	3840	4650	9390	382	60	61	104
29	55	1580	82	4260	---	3510	4650	9510	347	62	62	83
30	54	1570	74	2200	---	4520	7290	9060	246	60	62	49
31	53	---	72	1130	---	8290	---	8370	---	62	61	---
TOTAL	3746	10119	28338	45554	135973	282910	149620	199690	104673	2142	1957	1844
MEAN	121	337	914	1469	4856	9126	4987	6442	3489	69.1	63.1	61.5
MAX	1630	3920	8110	14000	14300	27000	7700	9510	7510	277	106	104
MIN	50	51	52	55	175	3510	2770	4020	246	55	59	49
AC-FT	7430	20070	56210	90360	269700	561200	296800	396100	207600	4250	3880	3660
MEAN a	2290	2956	4100	5015	8692	13050	8951	10378	7410	3427	2742	2485
AC-FT a	140800	175900	252100	308400	482700	802400	532600	638100	440900	210800	168600	147900

CAL YR 1982 TOTAL 571560 MEAN 1566 MAX 26100 MIN 49 AC-FT 1134000 MEAN a 4826 AC-FT a 3494000
WTR YR 1983 TOTAL 966566 MEAN 2648 MAX 27000 MIN 49 AC-FT 1917000 MEAN a 5941 AC-FT a 4301000

a 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 September 1983 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to September 1983 (discontinued).

INSTRUMENTATION.--Temperature recorder since October 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.5°C on several days during August 1981; minimum recorded, 0.5°C Jan. 4, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug. 17; minimum recorded, 3.5°C Jan. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11404500 NORTH FORK FEATHER RIVER NEAR PULGA, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

SACRAMENTO RIVER BASIN

11405300 WEST BRANCH FEATHER RIVER NEAR PARADISE, CA

LOCATION.--Lat 39°47'12", long 121°33'42", in SE 1/4 SE 1/4 sec.6, T.22 N., R.4 E., Butte County, Hydrologic Unit 18020121, on right bank 0.6 mi upstream from Griffin Gulch, and 4.0 mi northeast of Paradise.

DRAINAGE AREA.--110 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2131: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,370 ft, 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 DeSabra and Centerville plants of Pacific Gas and Electric Co. Upper Miocene Canal diverts about 50 ft³/s to Lime Saddle powerplant. Flow regulated by Round Valley Reservoir, usable capacity, 5,000 acre-ft and Philbrook Reservoir, capacity, 5,010 acre-ft.

AVERAGE DISCHARGE.--26 years, 324 ft³/s, 234,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,300 ft³/s Dec. 22, 1964, gage height, 26.2 ft from floodmarks, from rating curve extended above 14,000 ft³/s; minimum daily, 0.29 ft³/s Aug. 24, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0015	2,050	8.67	Jan. 26	2300	8,270	14.58
Nov. 18	0900	3,520	10.24	Feb. 12	2400	5,330	12.02
Nov. 28	2100	2,080	8.55	Mar. 1	1015	6,270	12.85
Dec. 17	0300	2,250	8.76	Mar. 13	0630	*12,100	17.64
Dec. 22	2015	4,110	10.84	Mar. 31	0245	2,310	8.84

Minimum daily, 1.5 ft³/s several days during October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	45	534	227	781	4800	1350	952	1170	373	26	4.7
2	2.0	29	332	207	677	4230	1350	854	1130	386	25	5.1
3	1.7	22	259	192	596	3290	1160	813	998	358	24	4.6
4	1.6	18	270	179	529	2270	1030	805	1250	411	24	4.0
5	1.6	13	236	171	516	1930	929	815	1160	457	22	3.5
6	1.7	11	209	164	870	1630	855	783	1120	436	19	3.2
7	2.3	9.6	176	154	2040	2090	797	714	1130	436	17	2.9
8	2.0	9.3	140	149	2860	1960	783	676	1130	312	16	2.6
9	1.8	17	121	183	2110	1650	786	625	1100	240	12	2.6
10	1.6	68	106	184	2390	1730	737	590	1120	210	5.3	2.6
11	1.5	36	97	176	1640	1720	719	567	1280	243	5.8	2.5
12	1.5	8.5	88	145	3460	2750	659	588	949	241	4.9	2.5
13	1.5	7.7	99	104	3370	8250	612	603	869	209	4.3	26
14	1.5	7.0	80	98	2000	3530	542	641	894	254	6.6	27
15	1.5	6.3	77	94	1620	2300	488	712	895	224	6.6	27
16	1.5	5.9	177	107	1320	1840	478	763	873	173	6.8	26
17	1.5	89	1250	115	1120	1690	505	742	941	153	6.5	25
18	1.5	2190	478	432	1550	1450	537	800	780	114	5.8	24
19	1.5	685	322	592	1320	1240	1060	939	657	98	5.6	24
20	1.5	285	965	315	1050	1150	1000	1120	601	88	5.6	24
21	1.9	176	3040	227	920	1150	903	1220	600	81	5.8	9.1
22	11	155	2380	433	830	1170	839	1270	554	80	5.9	3.8
23	50	161	1800	542	791	1150	880	1330	483	67	6.9	6.2
24	15	110	963	2600	744	1330	923	1330	432	63	6.7	12
25	338	84	702	1220	930	1150	868	1290	482	56	6.1	5.3
26	802	71	564	2730	1150	989	766	1340	526	47	5.9	5.6
27	188	86	462	3730	1750	1170	732	1350	514	38	5.6	12
28	112	870	378	1730	3140	996	988	1410	459	34	5.2	13
29	111	1390	322	1450	---	930	1060	1500	429	31	4.7	16
30	342	1110	288	1120	---	1240	1040	1430	345	28	4.3	60
31	120	---	257	923	---	1860	---	1360	---	26	4.2	---
TOTAL	2128.9	7775.3	17172	20693	42074	64635	25376	29932	24871	5967	310.1	386.8
MEAN	68.7	259	554	668	1503	2085	846	966	829	192	10.0	12.9
MAX	802	2190	3040	3730	3460	8250	1350	1500	1280	457	26	60
MIN	1.5	5.9	77	94	516	930	478	567	345	26	4.2	2.5
AC-FT	4220	15420	34060	41040	83450	128200	50330	59370	49330	11840	615	767

CAL YR 1982	TOTAL	188505.4	MEAN	516	MAX	7640	MIN	1.3	AC-FT	373900
WTR YR 1983	TOTAL	241321.1	MEAN	661	MAX	8250	MIN	1.5	AC-FT	478700

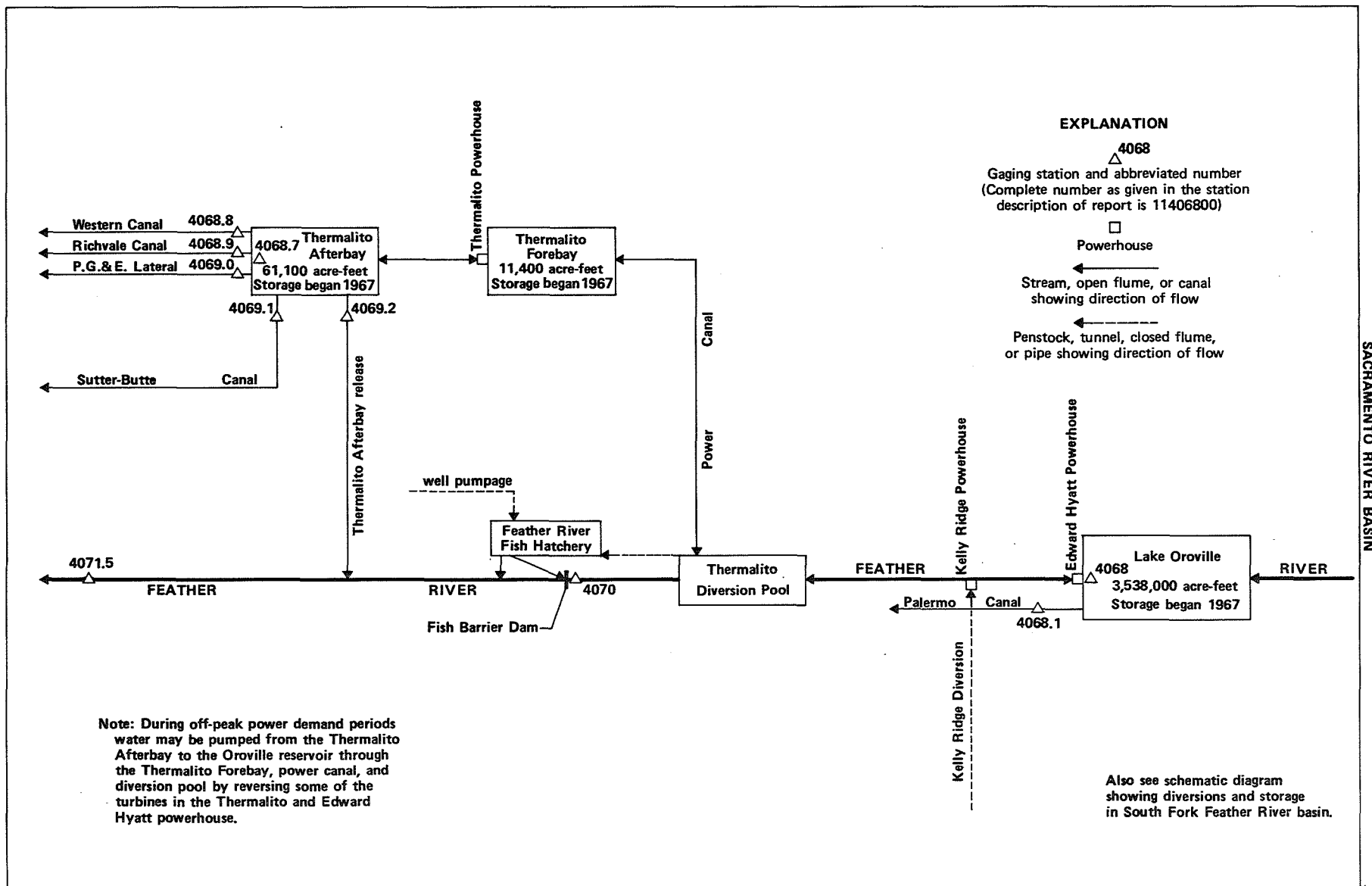


FIGURE 7. — Schematic diagram showing diversions and storage from Feather River at Lake Oroville.

11406800 LAKE OROVILLE NEAR OROVILLE, CA

LOCATION.--Lat 39°32'06", long 121°28'25", in NE 1/4 SW 1/4 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 downstream from North Fork Feather River, and 4.2 mi east of Oroville.

DRAINAGE AREA.--3,607 mi².

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.47 ft 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 between elevations 640.0 ft minimum power pool, and 900.0 ft normal maximum pool. Dead storage, 852,192 acre-ft. Total capacity at normal maximum pool, 3,537,577 acre-ft; temporary detention storage occurred at times during construction; maximum was 155,200 acre-ft 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 June 4, 1973, gage height, 899.88 ft; minimum since initial storage began, 882,395 acre-ft Sept. 7, 1977, gage height, 645.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,512,983 acre-ft June 19, gage height 898.44 ft; minimum, 2,680,859 acre-ft Oct. 22, gage height, 840.34 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2767779	2742370	2829327	2807141	2797364	2899956	2850687	2943497	3329379	3483351	3280304	3024403
2	2760483	2748442	2825419	2810763	2792284	2901288	2867258	2947658	3342564	3479757	3268789	3011844
3	2754657	2750689	2821783	2806202	2790815	2878843	2880481	2950851	3358070	3478976	3257452	3004664
4	2745273	2749764	2815866	2800040	2790414	2851229	2889913	2953213	3383415	3480850	3243320	2998901
5	2737492	2748046	2805130	2796561	2793487	2831485	2896488	2957245	3401822	3472889	3234121	2991462
6	2727623	2750028	2799300	2793620	2804728	2816000	2901839	2960167	3414595	3469926	3227460	2977322
7	2718828	2751218	2789346	2792418	2823937	2821205	2904446	2961141	3427248	3464162	3219772	2965599
8	2712408	2750557	2779613	2791883	2833509	2806336	2907193	2963230	3437302	3457938	3208412	2950990
9	2707699	2755318	2769639	2796027	2831215	2794422	2910081	2963927	3449549	3454892	3195316	2938786
10	2700515	2758496	2765655	2794823	2842833	2790281	2912282	2962255	3461672	3484862	3184457	2933388
11	2693604	2760616	2763665	2794556	2832834	2795091	2919994	2959888	3472577	3437302	3172016	2940309
12	2684236	2763665	2766850	2793353	2834319	2815194	2919443	2957245	3474293	3430185	3156986	2927031
13	2682417	2770037	2764992	2792952	2850687	2909530	2918065	2952657	3481163	3419375	3148400	2916549
14	2681768	2772695	2763002	2793219	2842968	2914897	2915448	2951546	3484445	3406281	3147673	2905407
15	2683716	2770302	2759556	2794556	2831755	2891693	2910081	2954464	3490077	3390616	3138089	2895802
16	2686186	2770967	2757966	2795492	2818689	2846758	2899641	2956688	3493835	3384793	3129828	2887724
17	2686446	2776285	2764063	2795224	2812374	2804192	2889776	2964623	3497439	3391536	3119560	2880344
18	2685926	2800040	2764992	2799371	2813582	2795092	2884579	2972713	3505283	3388317	3113065	2885673
19	2685016	2808348	2765788	2804460	2816807	2794957	2884852	2982497	3512983	3384946	3111479	2876796
20	2682547	2808079	2775620	2805934	2822052	2796696	2883759	2995811	3510939	3380048	3110181	2871070
21	2681508	2808884	2828113	2807275	2824476	2798836	2882393	3011703	3507482	3373627	3114075	2863584
22	2680859	2806202	2858556	2807677	2824476	2801781	2882256	3030484	3506540	3367368	3113786	2861002
23	2686836	2803388	2867394	2798434	2823398	2803254	2884852	3050911	3505126	3362793	3098234	2857470
24	2693734	2797765	2852992	2824341	2821649	2808750	2890871	3081591	3505597	3356395	3087609	2850145
25	2696732	2795759	2837425	2833374	2824206	2810628	2894843	3115085	3507325	3348943	3078441	2847300
26	2717124	2790949	2832294	2847977	2831755	2807677	2898133	3147673	3511882	3336952	3069864	2843645
27	2719615	2790014	2824072	2877751	2850009	2808482	2900602	3180648	3508110	3328017	3059308	2865939
28	2726046	2802718	2816941	2858556	2868755	2804326	2909943	3216966	3503713	3318647	3057742	2829462
29	2729332	2818286	2809287	2831215	---	2803656	2925512	3254771	3496498	3307788	3050058	2821783
30	2738414	2829731	2808616	2809287	---	2810897	2935325	3285398	3491329	3297707	3042814	2818286
31	2743689	---	2808750	2804192	---	2834589	---	3309445	---	3289297	3036148	---
MAX	2767779	2829731	2867394	2877751	2868755	2914897	2935325	3309445	3512983	3483351	3280304	3024403
MIN	2680859	2742370	2757966	2791883	2790414	2790281	2850687	2943497	3329379	3289297	3036148	2818286
a	845.14	851.59	850.03	849.69	854.47	851.95	859.32	885.22	897.06	883.88	866.52	850.74
b	-31399	+86042	-20981	-4558	+64563	-34166	+100736	+374120	+181884	-202032	-253149	-217862
c	4530	1588	1284	685	993	1128	2974	6138	8682	10883	10525	8731

CAL YR 1982 b -52659

WTR YR 1983 b +43198

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet.

LOCATION.--Lat 39°31'59", long 121°28'54", in SW 1/4 SW 1/4 sec.1, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020106, on right bank 50 ft downstream from Oroville Dam, and 4.4 mi 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 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 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.--18 years, 11.4 ft³/s, 8,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 28 ft³/s on several days during July to September 1967; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	2.7	1.1	1.1	1.3	1.4	1.1	4.5	17	21	20	20
2	6.2	2.7	1.1	1.1	1.3	1.4	1.1	4.5	19	21	20	20
3	8.0	2.7	1.1	1.0	1.3	1.4	1.1	4.5	20	21	20	20
4	9.0	2.7	1.0	1.0	1.3	1.3	1.1	4.5	20	21	20	20
5	12	2.7	1.0	1.1	1.3	1.3	1.1	4.5	20	21	20	20
6	14	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	21	20	20
7	16	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	21	20	20
8	15	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	21	20	20
9	16	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	21	20	20
10	15	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	20	20	20
11	15	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	20	20	19
12	15	2.7	1.0	1.2	1.3	1.3	1.1	4.5	20	21	20	20
13	15	2.7	1.0	1.3	1.3	1.4	1.1	4.5	20	20	20	19
14	15	2.7	1.0	1.3	1.3	1.4	1.1	4.5	20	20	20	19
15	15	2.7	1.0	1.3	1.3	1.4	2.7	4.5	20	20	20	19
16	15	2.7	1.0	1.3	1.3	1.3	4.5	4.5	20	20	20	19
17	15	2.7	1.0	1.3	1.3	1.1	4.5	5.5	20	20	20	19
18	15	1.9	1.0	1.3	1.3	1.1	4.5	6.6	20	20	20	19
19	15	1.2	.99	1.3	1.3	1.1	4.4	6.6	20	20	20	19
20	15	1.2	1.0	1.3	1.3	1.1	4.4	6.3	20	20	20	19
21	15	1.1	1.0	1.3	1.3	1.1	4.4	6.3	20	20	20	19
22	12	1.1	1.1	1.3	1.3	1.1	4.4	6.3	20	20	20	20
23	9.2	1.1	1.1	1.3	1.3	1.1	4.4	7.3	20	20	20	20
24	6.5	1.1	1.1	1.3	1.3	1.1	4.5	9.2	21	20	20	20
25	6.5	1.1	1.1	1.3	1.3	1.1	4.5	10	20	20	20	20
26	4.1	1.1	1.1	1.3	1.3	1.1	4.5	13	20	20	20	20
27	2.7	1.1	1.1	1.3	1.3	1.1	4.5	15	20	20	20	20
28	2.7	1.1	1.1	1.3	1.3	1.1	4.5	15	21	20	20	19
29	2.7	1.1	1.1	1.3	---	1.1	4.5	15	21	20	20	18
30	2.7	1.1	1.1	1.3	---	1.1	4.5	15	21	20	20	18
31	2.7	---	1.1	1.3	---	1.1	---	16	---	20	20	---
TOTAL	333.2	61.2	32.29	38.4	36.4	37.9	85.1	225.1	600	630	620	585
MEAN	10.7	2.04	1.04	1.24	1.30	1.22	2.84	7.26	20.0	20.3	20.0	19.5
MAX	16	2.7	1.1	1.3	1.3	1.4	4.5	16	21	21	20	20
MIN	2.7	1.1	.99	1.0	1.3	1.1	1.1	4.5	17	20	20	18
AC-FT	661	121	64	76	72	75	169	446	1190	1250	1230	1160
CAL YR 1982	TOTAL	3259.79	MEAN 8.93	MAX 21	MIN 0	AC-FT	6470					
WTR YR 1983	TOTAL	3284.59	MEAN 9.00	MAX 21	MIN .99	AC-FT	6510					

11406870 THERMALITO AFTERBAY NEAR OROVILLE, CA

LOCATION.--Lat 39°27'30", long 121°38'17", in NE 1/4 SE 1/4 sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, at dam 195 ft northeast of centerline of outlet structure, and 5.7 mi southwest of Oroville.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). Auxiliary water-stage recorder 90 ft southwest of centerline of Western Canal outlet, and 7.2 mi 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 between gage heights 120.0 ft and 139.0 ft extreme operating levels. Normal operating range is 123 ft to 136.5 ft. 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. 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. Contents not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 57,300 acre-ft May 24, 1969, gage height, 136.56 ft; minimum since initial operation began, 5,590 acre-ft Mar. 1, 1968, gage height, 119.09 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,473 acre-ft Aug. 12, gage height, 135.66 ft; minimum, 14,969 acre-ft Nov. 14, gage height, 123.92 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22664	21387	24412	23717	25502	25831	26312	24529	44220	31820	28625	30316
2	21387	18086	21966	17959	25413	25532	25771	25205	50862	31820	30998	36010
3	20762	17431	20119	20252	25981	25205	25413	24470	50494	27534	33936	35208
4	22411	20066	18675	22805	25981	25562	25532	24266	41297	22946	38938	31986
5	22021	22272	20386	24266	25831	25562	24998	23803	39266	26737	39266	31986
6	23602	21579	17157	23861	25294	25621	24208	23602	37318	26889	35765	38575
7	24939	21772	17656	22021	24063	25711	23717	22551	31820	27689	35277	41559
8	23717	24412	17782	21579	25146	25502	23602	22021	31162	29705	36502	47751
9	21141	21827	21634	18264	25353	25562	23401	23316	24616	27380	41297	52098
10	19377	20199	22467	19038	25294	25562	23202	24792	18264	28688	43605	48872
11	19641	20439	23316	19641	25921	25562	17431	26464	16348	33325	47037	35521
12	23602	19641	19694	21060	25502	26131	17381	26615	16984	33868	53473	43337
13	22551	15628	19773	22467	25621	25413	17381	28031	18367	38938	53180	45736
14	21442	14969	20252	21250	26464	25205	16984	26676	21524	44568	41559	46760
15	18960	17581	21579	20439	26041	25205	18727	23458	22160	53348	43414	46011
16	16130	18727	22077	19694	25711	25502	22077	22748	25413	49558	43261	44028
17	15344	19377	21060	21060	25981	25205	25621	21827	28846	35277	44298	42274
18	15580	25413	19220	22021	25711	25831	23602	21966	25981	31688	41934	27473
19	16227	25353	18778	22946	24734	26041	24998	22748	20493	28187	35208	28688
20	17606	24412	19404	23602	24121	26041	28031	24734	24005	25921	28280	28406
21	19142	19641	24353	24529	23918	25831	30187	26737	27165	25205	18856	29705
22	22021	20493	24939	24939	23861	25771	29290	28406	29290	24792	15628	25532
23	20493	21827	25413	26041	23717	25981	28909	30770	30607	23060	28187	23659
24	17732	22160	26041	27104	23803	25294	28468	27534	29513	21634	33038	24266
25	25205	22467	26041	26191	23861	25146	28031	26041	24616	21387	34966	17656
26	19773	23861	25353	25831	24208	25562	26524	26312	18495	26252	35069	17731
27	23516	24324	24208	25711	24939	25771	24005	27257	21387	25921	38250	21387
28	20762	17959	23861	25921	25831	25831	23602	26737	23003	27751	30251	26041
29	21772	21387	26403	25621	---	25562	21966	24881	27104	30478	29577	31162
30	19090	24675	25146	25502	---	25413	23316	28031	28093	30090	29353	33325
31	18598	---	24266	25502	---	25235	---	36361	---	28972	27042	---
MAX	25205	25413	26403	27104	26464	26131	30187	36361	50862	53348	53473	52098
MIN	15344	14969	17157	17959	23717	25146	16984	21827	16348	21387	15628	17656
a	125.40	127.61	127.47	127.89	128.00	127.80	127.14	131.23	128.74	129.02	128.40	130.35
b	-4918	+6077	-409	+1236	+329	-596	-1919	+13045	-8268	+879	-1930	+6283
c	959	306	317	270	300	426	768	1512	1913	2277	2301	1845

CAL YR 1982 b -1236

WTR YR 1983 b +9809

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet.

11406880 WESTERN CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'19", long 121°41'06", in SW 1/4 NW 1/4 sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank 500 ft downstream from Thermalito Afterbay Dam, and 7.3 mi west of Oroville.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft 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.--15 years, 308 ft³/s, 223,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,200 ft³/s May 12, 1981; no flow for several months most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	248					0	23	560	505	643	473
2	120	250					0	24	543	502	644	453
3	121	250					0	24	540	504	645	451
4	121	250					0	24	541	531	644	433
5	121	248					0	24	519	548	645	408
6	122	251					0	24	493	548	643	377
7	201	251					0	24	506	547	645	338
8	248	249					0	24	476	546	645	324
9	248	249					0	24	456	545	646	327
10	249	215					0	24	457	546	646	310
11	247	201					0	69	457	564	644	288
12	247	199					0	98	457	586	645	254
13	247	199					0	98	459	594	646	229
14	248	201					0	96	455	600	645	211
15	248	200					0	132	457	606	646	198
16	247	199					0	175	454	604	648	197
17	246	199					0	269	456	604	642	187
18	247	50					0	413	456	604	605	179
19	242	0					0	620	456	616	594	147
20	243	0					0	697	453	624	596	118
21	242	0					0	693	453	626	595	94
22	244	0					0	692	452	625	595	95
23	241	0					0	693	452	625	595	74
24	241	0					0	706	453	636	577	51
25	243	0					0	707	452	645	558	52
26	248	0					0	708	454	645	546	53
27	248	0					28	709	454	645	546	52
28	249	0					32	682	477	647	546	97
29	248	0			---		18	631	505	645	548	123
30	248	0			---		18	606	503	644	515	124
31	248	---			---		---	593	---	645	491	---
TOTAL	6789	3909	0	0	0	0	96	10326	14306	18352	18869	6717
MEAN	219	130	0	0	0	0	3.20	333	477	592	609	224
MAX	249	251	0	0	0	0	32	709	560	647	648	473
MIN	76	0	0	0	0	0	0	23	452	502	491	51
AC-FT	13470	7750	0	0	0	0	190	20480	28380	36400	37430	13320
CAL YR 1982	TOTAL	114338.00	MEAN 313	MAX 1150	MIN 0	AC-FT 226800						
WTR YR 1983	TOTAL	79364.00	MEAN 217	MAX 709	MIN 0	AC-FT 157400						

SACRAMENTO RIVER BASIN

11406890 RICHVALE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'19", long 121°41'06", in SW 1/4 NW 1/4 sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on right bank 500 ft downstream from axis of Thermalito Afterbay Dam, and 7.3 mi west of Oroville.

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft 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.--15 years, 116 ft³/s, 84,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 511 ft³/s May 16, 1974; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0	295	277	284	204
2								0	295	279	281	206
3								0	257	277	282	205
4								0	215	276	282	204
5								0	216	279	282	204
6								0	217	278	281	198
7								0	202	278	282	127
8								0	191	281	282	93
9								0	191	278	284	92
10								0	191	279	283	93
11								0	191	277	282	91
12								0	192	300	282	92
13								0	193	310	282	100
14								0	193	309	282	75
15								28	192	309	282	61
16								62	192	309	285	43
17								118	193	308	284	34
18								175	193	311	284	34
19								191	195	309	284	34
20								204	196	309	285	42
21								207	226	309	284	14
22								267	227	310	285	0
23								337	261	310	286	0
24								370	276	308	285	0
25								389	275	310	286	0
26								422	276	311	287	0
27								432	276	310	286	0
28								416	280	292	286	0
29								366	280	285	286	0
30								335	278	285	231	0
31		---			---		---	302	---	285	209	---
TOTAL	0	0	0	0	0	0	0	4621	6855	9148	8666	2246
MEAN	0	0	0	0	0	0	0	149	229	295	280	74.9
MAX	0	0	0	0	0	0	0	432	295	311	287	206
MIN	0	0	0	0	0	0	0	0	191	276	209	0
AC-FT	0	0	0	0	0	0	0	9170	13600	18150	17190	4450
CAL YR 1982	TOTAL	40596.00	MEAN 111	MAX 450	MIN 0	AC-FT 80520						
WTR YR 1983	TOTAL	31536.00	MEAN 86.4	MAX 432	MIN 0	AC-FT 62550						

11406900 PACIFIC GAS AND ELECTRIC CO. LATERAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°29'22", long 121°41'12", in SE 1/4 NW 1/4 sec.19, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on right bank 82 ft downstream from axis of Thermalito Afterbay Dam, and 7.2 mi west of Oroville.

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 113.47 ft 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.

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.--15 years, 4.87 ft³/s, 3,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 46 ft³/s Apr. 24, 1977, May 16, 1978; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0						0	8.3	13	10	6.0
2		0						0	6.2	14	9.7	5.4
3		0						0	3.6	13	9.4	5.2
4		0						0	4.3	11	9.7	5.0
5		0						0	5.8	11	10	5.0
6		0						0	4.3	11	11	5.2
7		0						0	5.0	11	11	5.2
8		0						0	7.2	11	10	5.0
9		0						0	7.0	11	10	4.6
10		0						0	7.0	11	10	4.3
11		0						0	7.2	11	10	4.3
12		0						3.4	7.2	10	10	3.1
13		0						7.0	7.2	9.9	10	2.2
14		0						7.0	7.9	15	10	2.2
15		0						4.1	9.4	17	10	2.8
16		0						2.6	9.9	18	10	3.1
17		5.0						3.8	11	18	9.9	3.1
18		6.2						14	13	17	10	2.9
19		3.3						17	13	14	10	1.3
20		1.0						17	13	12	9.9	0
21		1.0						26	12	12	9.9	0
22		1.0						34	12	12	10	0
23		1.0						27	12	12	10	0
24		.40						23	11	12	10	0
25		0						25	11	12	10	0
26		0						19	11	12	9.5	0
27		0						13	11	11	9.2	0
28		0						13	11	10	9.2	0
29		0						12	12	10	9.0	0
30		0						9.9	12	10	8.1	0
31		---						8.8	---	10	7.7	---
TOTAL	0	18.90	0	0	0	0	0	286.6	272.5	381.9	303.2	75.9
MEAN	0	.63	0	0	0	0	0	9.25	9.08	12.3	9.78	2.53
MAX	0	6.2	0	0	0	0	0	34	13	18	11	6.0
MIN	0	0	0	0	0	0	0	0	3.6	9.9	7.7	0
AC-FT	0	37	0	0	0	0	0	568	541	757	601	151
CAL YR 1982	TOTAL	1718.80	MEAN 4.71	MAX 36	MIN 0	AC-FT 3410						
WTR YR 1983	TOTAL	1339.00	MEAN 3.67	MAX 34	MIN 0	AC-FT 2660						

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 downstream from Thermalito Afterbay Dam, and 6.8 mi southwest of Oroville.

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 109.97 ft National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 109.50 ft 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.--15 years, 644 ft³/s, 466,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,110 ft³/s Apr. 22-24, 1968; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325							0	1550	1380	1400	1270
2	332							0	1400	1340	1430	1230
3	331							0	1380	1330	1440	1200
4	364							0	1380	1330	1420	1160
5	369							0	1330	1370	1410	1130
6	375							0	1290	1390	1390	1130
7	380							0	1320	1380	1390	1110
8	375							0	1320	1350	1400	1100
9	364							208	1330	1360	1390	1070
10	364							247	1330	1360	1400	982
11	364							320	1280	1360	1390	930
12	379							418	1230	1410	1380	879
13	392							540	1220	1420	1350	804
14	392							677	1220	1430	1330	775
15	412							790	1250	1470	1340	737
16	417							950	1320	1470	1350	660
17	419							1070	1360	1480	1390	597
18	418							1250	1360	1470	1390	589
19	395							1290	1350	1460	1370	536
20	387							1440	1350	1440	1350	505
21	383							1570	1360	1460	1350	482
22	354							1710	1380	1460	1350	463
23	318							1750	1390	1440	1340	444
24	319							1780	1380	1440	1300	433
25	208							1800	1370	1420	1300	425
26	124							1780	1360	1390	1310	425
27	123							1730	1360	1370	1290	425
28	124							1690	1370	1390	1290	425
29	125							1670	1340	1390	1290	425
30	130							1590	1350	1410	1300	400
31	54	---			---		---	1530	---	1410	1300	---
TOTAL	9816	0	0	0	0	0	0	27800	40230	43580	42130	22741
MEAN	317	0	0	0	0	0	0	897	1341	1406	1359	758
MAX	419	0	0	0	0	0	0	1800	1550	1480	1440	1270
MIN	54	0	0	0	0	0	0	0	1220	1330	1290	400
AC-FT	19470	0	0	0	0	0	0	55140	79800	86440	83560	45110
CAL YR 1982	TOTAL	223259.00	MEAN 612	MAX 1950	MIN 0	AC-FT 442800						
HTR YR 1983	TOTAL	186297.00	MEAN 510	MAX 1800	MIN 0	AC-FT 369500						

11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER, NEAR OROVILLE, CA

LOCATION.--Lat 39°27'23", long 121°38'10", in NW 1/4 SE 1/4 sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on left bank of outlet channel 955 ft downstream from centerline of Thermalito Afterbay Dam, and 5.7 mi 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 National Geodetic Vertical Datum of 1929 (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 13.00 ft lower.

REMARKS.--Flow regulated by gates of Thermalito Afterbay outlet 955 ft 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.--15 years, 4,451 ft³/s, 3,225,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,600 ft³/s Jan. 28, 1970, gage height, 23.30 ft previous datum; no flow for many days in 1968.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 17,500 ft³/s May 4; minimum daily, 1960 ft³/s Nov. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5640	2030	9620	7650	14500	17100	14500	16900	5930	7600	6080	5580
2	5640	2000	9570	7580	12100	16800	14500	17100	9060	7580	6080	5580
3	5640	2020	9580	7630	9640	16900	14400	17400	11600	7300	6080	5560
4	5650	2020	9540	7610	9280	17100	14500	17500	11500	7040	6090	5570
5	5640	2020	9720	7620	7630	17300	14500	17400	11500	7120	6070	5570
6	5650	2020	9450	7600	7620	17300	14500	17400	12700	7070	6040	5590
7	5640	2020	9380	7610	11100	17300	14400	17400	13400	7060	6060	5580
8	5640	2010	9500	6580	15200	17100	14500	15500	13500	7060	6070	5580
9	5630	1980	9110	5580	17000	17200	14500	14900	13600	7040	6100	5580
10	5650	1960	6120	5610	17000	17300	14500	15000	13600	7050	6080	5570
11	5390	1980	5610	5580	17000	17200	14300	15000	13600	7060	6100	5530
12	4420	2000	5580	5600	16900	17200	14400	15500	13100	7050	5920	5590
13	3400	1980	5620	5600	16900	16900	14500	16000	9750	7060	6100	6220
14	2370	2000	5620	5590	17200	16800	14400	15900	9600	7070	5560	7110
15	2020	2010	5620	5600	17400	16900	14800	15800	9580	7080	5570	7110
16	2000	2010	5610	5600	17300	16800	15600	15400	8600	7060	5580	7090
17	2020	2000	5630	5620	17300	17000	15600	11500	8550	7010	5580	7080
18	2030	4250	5600	5610	17400	17200	15500	11500	8540	6800	5570	7020
19	2030	7110	4700	5600	16300	17200	15500	10900	8480	6050	5530	5750
20	2030	7130	4620	5610	14500	17200	16200	10300	8560	6070	5540	5570
21	2030	7070	9190	5960	14500	17100	16800	9880	8540	6080	4280	5560
22	2040	7110	15500	10200	14500	17100	16900	9760	7590	6080	3580	5530
23	2020	7080	14700	14600	14500	17100	16800	9740	7590	6070	3590	5560
24	2010	7010	16900	15000	14500	17100	16800	7440	7580	6050	4070	6070
25	2030	5700	16900	16000	14500	17100	16900	5910	7570	6070	5070	7010
26	1990	5620	13900	16000	14600	17100	16800	5910	7560	6080	5580	5100
27	2010	5610	13900	16900	15200	17200	16800	5910	7540	6080	5580	4100
28	2000	5560	12300	16900	17200	17200	15800	5900	7600	6080	5550	4090
29	2030	5760	10200	16900	---	15700	16100	5890	7600	6080	5570	4080
30	2000	7770	8040	16900	---	14500	16900	5910	7590	6070	5580	4560
31	2010	---	7610	15300	---	14500	---	5910	---	6060	5570	---
TOTAL	106300	116840	283940	287740	408770	523500	462200	382460	291510	207030	171820	171490
MEAN	3429	3895	9159	9282	14600	16890	15410	12340	9717	6678	5543	5716
MAX	5650	7770	16900	16900	17400	17300	16900	17500	13600	7600	6100	7110
MIN	1990	1960	4620	5580	7620	14500	14300	5890	5930	6050	3580	4080
AC-FT	210800	231800	563200	570700	810800	1038000	916800	758600	578200	410600	340800	340200
CAL YR 1982	TOTAL	2807750	MEAN	7692	MAX	17300	MIN	1960	AC-FT	5569000		
WTR YR 1983	TOTAL	3413600	MEAN	9352	MAX	17500	MIN	1960	AC-FT	6771000		

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, 21.5°C Aug. 15, 16; minimum recorded, 6.0°C Jan. 10-15.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

SACRAMENTO RIVER BASIN

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 upstream from fish barrier dam on Feather River, and 0.8 mi northeast of Oroville Post Office.

DRAINAGE AREA.--3,624 mi².

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 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 at Thermalito diversion dam 0.4 mi upstream from gage. Diverted flow returns to Feather River approximately 0.3 mi 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).--82 years, 6,002 ft³/s, 4,348,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge observed, 230,000 ft³/s Mar. 19, 1907, elevation, 167.5 ft above mean sea level; minimum daily, 89 ft³/s Sept. 19, 1972.

Combined flow (since construction of Oroville Dam): Maximum discharge, 69,600 ft³/s Jan. 15, 1980; minimum daily, 222 ft³/s Sept. 19, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1881 reached a stage of 25 ft from floodmarks, site and datum in use from Dec. 16, 1912, to Sept. 30, 1934.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 43,500 ft³/s Mar. 13, gage height, 12.93 ft; minimum daily, 229 ft³/s Apr. 21.

Combined flow: Maximum discharge, 43,600 ft³/s Mar. 13; minimum daily, 334 ft³/s Apr. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	399	408	412	413	415	29100	426	423	424	411	421	425		
2	403	415	406	408	429	40000	428	420	426	411	424	422		
3	401	398	405	412	429	42200	429	421	422	411	425	415		
4	407	400	407	414	420	31100	421	424	417	407	424	415		
5	408	399	405	411	417	22100	417	424	413	411	423	420		
6	410	400	408	412	422	17000	417	426	413	410	420	419		
7	412	400	410	411	431	13100	421	422	421	410	415	417		
8	404	399	409	410	9560	13000	424	424	427	409	415	423		
9	401	399	410	408	10700	13100	424	423	417	402	417	427		
10	400	396	407	412	8200	10200	425	418	421	401	409	428		
11	405	399	409	411	13700	8090	421	420	426	406	404	427		
12	403	395	409	414	18200	8150	425	419	423	415	401	420		
13	396	393	409	412	18100	28900	424	422	417	421	390	410		
14	408	392	410	410	15300	43100	420	423	416	422	390	408		
15	412	397	408	413	13100	39600	416	424	419	423	420	444		
16	412	399	410	414	8920	40000	419	426	421	420	416	426		
17	409	405	411	416	3080	34900	418	423	421	424	419	422		
18	410	422	414	424	3090	12800	422	425	423	426	417	412		
19	407	416	415	421	1450	5340	430	422	414	422	416	414		
20	412	405	417	422	470	3190	429	421	417	422	419	419		
21	414	403	435	419	441	3160	334	425	414	422	419	417		
22	414	405	4120	433	426	3140	337	424	410	420	419	419		
23	416	406	10600	427	422	3160	433	426	421	418	422	421		
24	412	411	8070	458	423	3170	432	423	408	415	411	424		
25	414	410	3900	447	424	3140	425	427	406	422	412	430		
26	413	409	446	2270	421	3120	420	425	414	421	418	426		
27	418	406	424	13000	429	3130	419	423	415	418	424	425		
28	414	408	419	18200	8990	3140	424	419	411	419	419	426		
29	409	419	412	18200	---	1580	421	421	414	415	421	427		
30	411	436	404	9820	---	440	425	426	416	414	418	428		
31	409	---	408	397	---	437	---	427	---	421	419	---		
TOTAL	12663	12150	37829	72339	138809	482587	12526	13116	12527	12889	12887	12656		
MEAN	408	405	1220	2334	4957	15570	418	423	418	416	416	422		
MAX	418	436	10600	18200	18200	43100	433	427	427	426	425	444		
MIN	396	392	404	397	415	437	334	418	406	401	390	408		
AC-FT	25120	24100	75030	143500	275300	957200	24850	26020	24850	25570	25560	25100		
MEAN a	3887	6032	10070	11590	20720	31920	17560	20590	15350	6418	4321	3879		
AC-FT a	239000	358900	619100	712500	1151000	1963000	1045000	1266000	913400	394600	265700	230800		
CAL YR 1982	TOTAL	506150	MEAN	1387	MAX	38000	MIN	352	AC-FT	1004000	MEAN a	10170	AC-FT a	7364000
HTR YR 1983	TOTAL	832978	MEAN	2282	MAX	43100	MIN	334	AC-FT	1652000	MEAN a	12650	AC-FT a	9159000

a 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 1957-79.

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.

REVISED RECORDS.--WDR CA-74-2: 1966, sediment.

INSTRUMENTATION.--Temperature recorder October 1953 to September 1954, and since November 1956.

REMARKS.--Extremes affected by construction of Oroville Dam in 1967, and are given for two separate periods--water years 1954, 1957-67, and 1969 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 TEMPERATURES (Water years 1954, 1957-67): Maximum, 27.0°C Sept. 10, 12, 1959; minimum, 1.5°C Dec. '27, 1959, Jan. 23-25, 1962.

WATER TEMPERATURES (Water years 1969-83): Maximum recorded, 20.0°C on several days in 1977; minimum recorded, 6.5°C on many days in 1971-73, 1974-75, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 17.0°C Aug. 6-8; minimum recorded, 7.0°C on several days during January and February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

SACRAMENTO RIVER BASIN

11407000 FEATHER RIVER AT OROVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11407150 FEATHER RIVER NEAR GRIDLEY, CA

LOCATION.--Lat 39°22'00", long 121°38'46", in Boga Fernandez Grant, T.18 N., R.3 E., Butte County, Hydrologic Unit 18020106, on right bank 300 ft upstream from highway bridge, and 2.7 mi east of Gridley.

DRAINAGE AREA.--3,676 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. January 1944 to September 1964 are published in reports by California Department of Water Resources.

REVISED RECORDS.--WDR CA-66-2: 1965. WDR CA-80-4: 1967 (M), 1968 (M).

GAGE.--Water-stage recorder. Datum of gage is 2.91 ft below National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1966, water-stage recorder on left bank. Mar. 14, 1966, to Sept. 30, 1973, on right bank, at datum 47.09 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Lake Oroville since November 1967 (station 11406800) and Thermalito Afterbay release to the Feather River since December 1968 (station 11406920). See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

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

AVERAGE DISCHARGE.--19 years, 5,386 ft³/s, 3,902,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 151,000 ft³/s Dec. 23, 1964, gage height, 100.43 ft, present datum, minimum daily, 117 ft³/s June 27, 1966. Maximum discharge since construction of Oroville Dam in 1967, 90,100 ft³/s Jan. 15, 1980, gage height, 94.45 ft; minimum daily, 366 ft³/s July 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 102.25 ft present datum, discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,000 ft³/s Mar. 17, gage height 91.47 ft; minimum daily, 2,340 ft³/s Nov. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6340	2410	11000	8400	15800	40400	15400	16900	6330	7990	6620	6050
2	6340	2380	10900	8340	13800	53400	15300	17000	8900	7980	6610	6060
3	6330	2390	10900	8400	10800	56900	15200	17300	11700	7740	6620	6050
4	6340	2390	10800	8370	10400	55600	15100	17300	11700	7430	6640	6070
5	6310	2390	11000	8350	8740	41600	15000	17300	11700	7550	6630	6080
6	6340	2380	10700	8320	8620	36000	14900	17300	12700	7510	6600	6120
7	6280	2390	10600	8330	11400	33500	14800	17300	13600	7480	6600	6140
8	6250	2410	10800	7400	21900	32300	14900	15900	13700	7470	6610	6140
9	6250	2350	9690	6370	29900	31900	14900	15100	13700	7440	6640	6130
10	6280	2370	7410	6280	26400	30100	14800	15100	13700	7430	6620	6110
11	6050	2340	6510	6240	27100	26600	14700	15200	13700	7490	6630	6090
12	5070	2380	6450	6210	35900	26800	14700	15600	13300	7510	6470	6100
13	3990	2350	6450	6210	37100	37900	14800	16000	10300	7550	6600	6660
14	2930	2350	6440	6190	36700	56700	14800	16000	9970	7580	6080	7570
15	2430	2350	6460	6180	32800	57600	15000	15900	9910	7550	6060	7670
16	2400	2360	6470	6200	30800	56700	15800	15700	9090	7530	6110	7660
17	2390	2410	6490	6240	23600	57500	15900	12100	8970	7470	6090	7630
18	2400	4270	6420	6290	21300	38000	15700	12000	8870	7320	6090	7590
19	2390	8020	5580	6300	19900	27500	15700	11400	8800	6560	6030	6400
20	2390	8080	5370	6240	15600	22700	16300	10800	8900	6520	6050	6090
21	2410	8020	8970	6440	15200	21900	16700	10400	8900	6540	4980	6090
22	2420	8090	18500	10100	15200	21500	16800	10200	8000	6530	4070	6110
23	2410	8080	27200	15100	15100	21200	16800	10200	7930	6510	4060	6120
24	2390	8070	26500	16000	15000	21300	16800	8210	7900	6510	4450	6550
25	2500	6720	23700	16700	15000	21000	16800	6400	7920	6590	5440	7540
26	2420	6450	15500	17100	15000	20800	16800	6350	7920	6600	6040	5920
27	2390	6440	14900	27900	15400	21000	16800	6350	7900	6590	6040	4640
28	2370	6460	13700	36100	21800	20900	16200	6330	7940	6640	6030	4610
29	2430	6650	11300	36700	---	18900	15900	6290	7960	6660	6040	4620
30	2430	8490	9210	32900	---	15700	16900	6300	7960	6620	6040	5050
31	2380	---	8470	17600	---	15500	---	6310	---	6590	6030	---
TOTAL	122050	134240	344390	373500	566260	1039400	470200	390540	299870	221480	187620	187660
MEAN	3937	4475	11110	12050	20220	33530	15670	12600	9996	7145	6052	6255
MAX	6340	8490	27200	36700	37100	57600	16900	17300	13700	7990	6640	7670
MIN	2370	2340	5370	6180	8620	15500	14700	6290	6330	6510	4060	4610
AC-FT	242100	266300	683100	740800	1123000	2062000	932600	774600	594800	439300	372100	372200
CAL YR 1982	TOTAL	3380990	MEAN	9263	MAX	59300	MIN	2340	AC-FT	6706000		
WTR YR 1983	TOTAL	4337210	MEAN	11880	MAX	57600	MIN	2340	AC-FT	8603000		

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980-81.

WATER TEMPERATURES: Water years 1965-81.

SEDIMENT RECORDS: Water years 1965 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to June 1978.

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, several days in 1982.

SEDIMENT DISCHARGE: Maximum, 527,000 tons Dec. 23, 1964; minimum daily, 1.4 tons Oct. 27, 1966.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 72 mg/L Dec. 23; minimum daily mean, 2 mg/L Oct. 1, Aug. 18.

SEDIMENT DISCHARGE: Maximum daily, 5,290 tons Dec. 23; minimum daily, 19 tons Nov. 7, 9.

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	6340	2	34	2410	5	33	11000	7	208
2	6340	4	68	2380	4	26	10900	7	206
3	6330	5	85	2390	4	26	10900	7	206
4	6340	5	86	2390	5	32	10800	7	204
5	6310	5	85	2390	5	32	11000	7	208
6	6340	5	86	2380	4	26	10700	7	202
7	6280	5	85	2390	3	19	10600	7	200
8	6250	5	84	2410	3	20	10800	7	204
9	6250	5	84	2350	3	19	9690	7	183
10	6280	5	85	2370	4	26	7410	6	120
11	6050	5	82	2340	4	25	6510	6	105
12	5070	4	55	2380	4	26	6450	6	104
13	3990	4	43	2350	4	25	6450	6	104
14	2930	4	32	2350	4	25	6440	6	104
15	2430	4	26	2350	4	25	6460	6	105
16	2400	4	26	2360	4	25	6470	6	105
17	2390	5	32	2410	5	33	6490	6	105
18	2400	8	52	4270	9	104	6420	6	104
19	2390	10	65	8020	9	195	5580	6	90
20	2390	8	52	8080	7	153	5370	6	87
21	2410	5	33	8020	7	152	8970	16	496
22	2420	5	33	8090	7	153	18500	40	2200
23	2410	5	33	8080	7	153	27200	72	5290
24	2390	5	32	8070	7	153	26500	52	3720
25	2500	7	47	6720	6	109	23700	20	1280
26	2420	6	39	6450	6	104	15500	8	335
27	2390	5	32	6440	6	104	14900	7	282
28	2370	5	32	6460	6	105	13700	6	259
29	2430	6	39	6650	6	108	11300	5	153
30	2430	7	46	8490	7	160	9210	4	99
31	2380	7	45	---	---	---	8470	4	91
TOTAL	122050	---	1658	134240	---	2196	344390	---	17159

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	8400	4	91	15800	6	256	40400	17	1850
2	8340	4	90	13800	5	186	53400	32	4610
3	8400	4	91	10800	6	175	56900	36	5530
4	8370	4	90	10400	8	225	55600	27	4050
5	8350	4	90	8740	8	189	41600	15	1680
6	8320	4	90	8620	8	186	36000	10	972
7	8330	4	90	11400	10	308	33500	8	724
8	7400	3	60	21900	13	769	32300	7	610
9	6370	3	52	29900	9	727	31900	6	517
10	6280	3	51	26400	7	499	30100	7	569
11	6240	3	51	27100	8	585	26600	8	575
12	6210	3	50	35900	17	1650	26800	9	651
13	6210	4	67	37100	10	1000	37900	22	2530
14	6190	4	67	36700	8	793	56700	28	4290
15	6180	4	67	32800	7	620	57600	31	4820
16	6200	4	67	30800	7	582	56700	24	3670
17	6240	4	67	23600	7	446	57500	19	2950
18	6290	4	68	21300	7	403	38000	15	1540
19	6300	3	51	19900	6	322	27500	11	817
20	6240	3	51	15600	6	253	22700	8	490
21	6440	4	70	15200	6	246	21900	7	414
22	10100	10	300	15200	5	205	21500	11	639
23	15100	13	530	15100	5	204	21200	15	859
24	16000	11	475	15000	6	203	21300	16	920
25	16700	16	721	15000	7	284	21000	13	737
26	17100	11	508	15000	6	243	20800	13	730
27	27900	13	979	15400	6	249	21000	12	680
28	36100	12	1170	21800	8	471	20900	11	621
29	36700	9	892	---	---	---	18900	11	561
30	32900	8	711	---	---	---	15700	13	551
31	17600	7	333	---	---	---	15500	11	460
TOTAL	373500	---	8090	566260	---	12279	1039400	---	50617

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	15400	10	416	16900	6	274	6330	11	188
2	15300	10	413	17000	6	275	8900	18	473
3	15200	11	451	17300	6	280	11700	19	600
4	15100	11	448	17300	7	327	11700	12	379
5	15000	10	405	17300	7	327	11700	11	347
6	14900	10	402	17300	7	327	12700	11	377
7	14800	10	400	17300	6	280	13600	10	367
8	14900	10	402	15900	6	258	13700	12	444
9	14900	10	402	15100	6	245	13700	14	518
10	14800	10	400	15100	6	245	13700	15	555
11	14700	10	397	15200	5	205	13700	16	592
12	14700	11	437	15600	4	168	13300	17	610
13	14800	11	440	16000	4	173	10300	15	417
14	14800	10	400	16000	4	173	9970	11	296
15	15000	9	365	15900	4	172	9910	11	294
16	15800	8	341	15700	4	170	9090	10	245
17	15900	8	343	12100	7	229	8970	10	242
18	15700	7	297	12000	9	292	8870	10	239
19	15700	7	297	11400	8	246	8800	10	238
20	16300	6	264	10800	7	204	8900	10	240
21	16700	5	225	10400	5	140	8900	9	216
22	16800	5	227	10200	4	110	8000	9	194
23	16800	5	227	10200	5	138	7930	9	193
24	16800	5	227	8210	5	111	7900	10	213
25	16800	5	227	6400	5	86	7920	12	257
26	16800	5	227	6350	5	86	7920	15	321
27	16800	5	227	6350	6	103	7900	16	341
28	16200	6	262	6330	7	120	7940	15	322
29	15900	6	258	6290	9	153	7960	12	258
30	16900	6	274	6300	11	187	7960	11	236
31	---	---	---	6310	11	187	---	---	---
TOTAL	470200	---	10101	390540	---	6291	299870	---	10212

SACRAMENTO RIVER BASIN

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	7990	12	259	6620	7	125	6050	4	65
2	7980	10	215	6610	7	125	6060	4	65
3	7740	9	188	6620	7	125	6050	4	65
4	7430	9	181	6640	6	108	6070	4	66
5	7550	10	204	6630	6	107	6080	4	66
6	7510	9	182	6600	5	89	6120	4	66
7	7480	9	182	6600	5	89	6140	4	66
8	7470	9	182	6610	6	107	6140	3	50
9	7440	10	201	6640	5	90	6130	3	50
10	7430	11	221	6620	4	71	6110	4	66
11	7490	10	202	6630	4	72	6090	4	66
12	7510	8	162	6470	4	70	6100	3	49
13	7550	7	143	6600	4	71	6660	3	54
14	7580	6	123	6080	3	49	7570	3	61
15	7550	5	102	6060	3	49	7670	3	62
16	7530	5	102	6110	4	66	7660	3	62
17	7470	6	121	6090	3	49	7630	3	62
18	7320	7	138	6090	2	33	7590	3	61
19	6560	8	142	6030	3	49	6400	3	52
20	6520	8	141	6050	4	65	6090	3	49
21	6540	8	141	4980	4	54	6090	3	49
22	6530	8	141	4070	4	44	6110	3	49
23	6510	7	123	4060	4	44	6120	4	66
24	6510	8	141	4450	5	60	6550	4	71
25	6590	10	178	5440	4	59	7540	4	81
26	6600	9	160	6040	4	65	5920	3	48
27	6590	7	125	6040	4	65	4640	3	38
28	6640	7	125	6030	5	81	4610	4	50
29	6660	6	108	6040	5	82	4620	4	50
30	6620	6	107	6040	5	82	5050	4	55
31	6590	6	107	6030	5	81	---	---	---
TOTAL	221480	---	4847	187620	---	2326	187660	---	1760
YEAR	4337210		127536.0						

11407500 SOUTH HONCUT CREEK NEAR BANGOR, CA

LOCATION.--Lat 39°22'04", long 121°22'16", in SE 1/4 SE 1/4 sec.35, T.18 N., R.5 E., Butte County, Hydrologic Unit 18020124, on right bank 2.3 mi southeast of Bangor, 3.3 mi upstream from Tennessee Creek, and 16.3 mi southeast of Oroville.

DRAINAGE AREA.--30.6 mi².

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

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 620 ft, from topographic map.

REMARKS.--Records fair. Some small diversions upstream for irrigation.

AVERAGE DISCHARGE.--33 years, 37.8 ft³/s, 27,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s Dec. 26, 1964, gage height, 19.25 ft, from rating curve extended above 2,200 ft³/s on basis of slope-area measurements at gage heights 11.15 ft and 19.25 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	1500	1,900	7.66	Feb. 7	1800	1,840	7.60
Nov. 29	1515	1,450	7.14	Mar. 1	0845	2,200	7.96
Dec. 20	2100	*2,810	8.51	Mar. 13	0545	2,330	8.08
Jan. 27	0400	2,070	7.83				

Minimum daily, 1.1 ft³/s Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	7.3	97	21	85	1280	99	171	27	7.2	3.8	2.7
2	3.7	5.5	48	20	72	650	106	118	28	9.4	3.5	2.7
3	3.3	4.1	31	19	62	348	87	96	26	8.2	2.7	2.5
4	3.1	3.7	23	19	52	217	78	87	25	7.4	2.9	2.2
5	3.1	3.4	19	19	60	199	71	128	22	6.8	3.0	2.0
6	3.3	3.5	16	16	344	153	65	125	18	6.3	3.0	2.2
7	3.8	3.4	14	15	635	399	59	82	16	6.4	2.9	1.8
8	3.7	3.6	12	15	651	221	54	72	15	6.3	2.3	1.8
9	3.0	4.5	11	16	260	156	51	65	15	6.0	2.1	1.9
10	2.8	5.3	10	16	283	159	49	57	16	6.1	1.9	1.8
11	2.7	5.0	10	13	145	153	47	54	23	5.1	1.8	1.7
12	2.6	4.0	11	13	630	720	44	52	18	4.5	1.9	1.4
13	2.5	3.6	15	12	379	1200	43	48	16	4.2	1.7	1.2
14	2.5	3.3	12	11	180	305	41	43	14	4.3	2.1	1.1
15	2.3	3.2	9.9	11	139	193	43	42	13	5.4	2.6	1.1
16	2.1	3.1	9.0	16	131	206	41	39	11	5.6	2.4	1.2
17	2.2	36	24	15	97	234	41	37	9.6	5.7	1.8	1.4
18	2.3	646	16	155	147	177	43	36	9.2	6.0	2.1	1.4
19	2.4	81	12	142	104	136	57	47	9.1	5.9	3.1	1.3
20	2.2	22	474	59	86	136	76	59	8.5	5.4	3.7	1.3
21	2.4	13	1560	42	77	255	49	42	8.2	5.2	3.7	1.5
22	3.8	18	787	254	70	354	42	40	7.1	4.7	3.5	2.0
23	4.6	37	300	137	64	281	74	39	6.8	4.5	3.8	3.1
24	4.5	19	114	780	58	453	159	37	7.3	4.5	3.2	3.8
25	20	13	75	177	207	238	172	37	7.2	4.6	3.1	3.4
26	48	11	57	295	241	171	79	25	6.8	4.6	3.0	3.0
27	13	10	45	759	487	305	71	23	6.6	4.3	2.8	2.8
28	8.5	135	36	180	486	179	349	23	6.5	4.2	2.7	3.0
29	7.6	417	31	320	---	147	292	24	6.6	4.2	2.5	3.2
30	32	636	27	156	---	126	249	24	6.7	4.0	2.1	18
31	14	---	24	107	---	118	---	26	---	4.1	2.2	---
TOTAL	215.5	2160.5	3929.9	3830	6232	9869	2731	1798	409.2	171.1	83.9	78.5
MEAN	6.95	72.0	127	124	223	318	91.0	58.0	13.6	5.52	2.71	2.62
MAX	48	646	1560	780	651	1280	349	171	28	9.4	3.8	18
MIN	2.1	3.1	9.0	11	52	118	41	23	6.5	4.0	1.7	1.1
AC-FT	427	4290	7790	7600	12360	19580	5420	3570	812	339	166	156
CAL YR 1982	TOTAL	27409.8	MEAN	75.1	MAX	1850	MIN	1.7	AC-FT	54370		
WTR YR 1983	TOTAL	31508.6	MEAN	86.3	MAX	1560	MIN	1.1	AC-FT	62500		

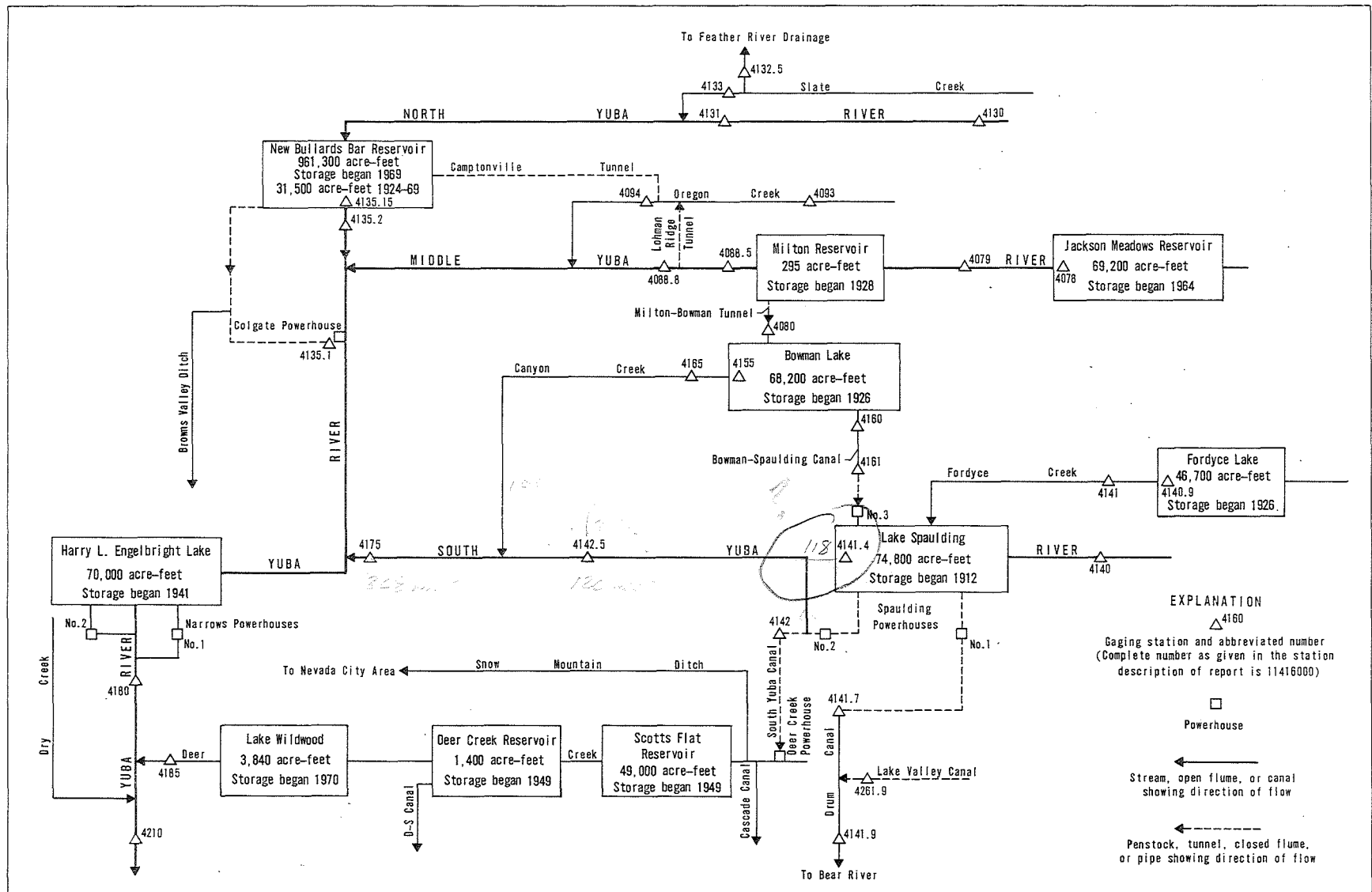


FIGURE 8. — Schematic diagram showing diversions and storage in Yuba River basin.

11407800 JACKSON MEADOWS RESERVOIR NEAR SIERRA CITY, CA

LOCATION.--Lat 39°30'40", long 120°33'15", in NW 1/4 SE 1/4 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 downstream from Pass Creek, and 5.7 mi southeast of Sierra City.

DRAINAGE AREA.--37.6 mi².

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 between elevations 5,933.0 ft, bottom of intake tower, and 6,036.0 ft, top of radial spillway gates. Dead storage, 2,500 acre-ft. 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 on several days in 1969-71, elevation, 6,037.7 ft; minimum since reservoir first filled, 2,500 acre-ft Sept. 27-29, 1976, elevation, 5,933.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 70,400 acre-ft July 14, elevation, 6,037.1 ft; minimum, 22,000 acre-ft May 3, elevation, 5,981.6 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52900	38900	33900	37800	41000	32200	28800	22200	55100	69200	69700	69300
2	52300	38400	34000	37900	40900	32000	28600	22100	55700	69800	69700	69400
3	51800	37900	34000	37900	40400	31700	28400	22000	56000	69900	69700	69400
4	51200	37400	34200	38000	40000	31300	28100	22200	56300	70200	69700	69400
5	50600	36900	34300	38100	39600	31000	27800	22400	56400	70300	69700	69400
6	50100	36400	34400	38200	39300	30700	27500	22600	56400	70300	69600	69200
7	49500	35900	34400	38300	39000	30400	27300	22800	56500	69900	69600	68700
8	48900	35400	34500	38400	38700	30100	27000	23000	56400	69800	69600	68300
9	48300	34900	34600	38400	38400	29800	26800	23300	56400	69600	69600	67800
10	47700	34400	34700	38400	38000	29600	26600	23500	56700	69400	69500	67300
11	47100	33900	34800	38500	37700	29400	26300	23600	56700	69400	69500	66900
12	46500	33400	34900	38600	37500	29300	26100	23900	56400	69600	69500	66500
13	45900	32900	35000	38700	37300	30500	25700	24200	56300	70200	69500	66000
14	45400	32400	35000	38700	37000	31300	25400	24700	56400	70400	69500	65600
15	44800	31900	35100	38800	36700	31600	25100	25400	56400	70300	69500	65000
16	44200	31400	35300	38900	36300	31700	24800	26100	56400	70300	69500	64600
17	43600	31200	35400	39000	35900	31700	24600	26700	56500	70200	69500	64200
18	43000	31800	35500	39100	35700	31700	24400	27500	56400	70000	69400	63700
19	42300	32000	35600	39200	35300	31500	24200	28700	56100	70000	69400	63200
20	41700	32200	35800	39300	34900	31300	24000	30100	56900	69900	69400	62800
21	41200	32400	36300	39400	34500	31100	23900	31600	58500	69900	69400	62400
22	40700	32500	36700	39600	34100	30900	23800	33200	60300	69900	69400	61900
23	40500	32600	36800	39700	33800	30700	23700	35100	61900	69900	69400	61500
24	40200	32800	37000	40000	33400	30500	23600	37100	63300	69900	69400	61000
25	40600	32800	37200	40100	33200	30200	23500	39000	64500	69800	69400	60600
26	41100	32900	37300	40300	32800	29900	23300	41400	65700	69800	69400	60200
27	40800	33000	37300	40500	32600	29700	23100	43900	66700	69800	69400	59700
28	40400	33200	37400	40600	32400	29400	22900	46500	67500	69800	69400	59400
29	40000	33600	37500	40800	---	29100	22700	49000	68200	69800	69400	59000
30	39700	33700	37600	40900	---	28900	22500	51400	68700	69800	69300	58600
31	39300	---	37700	40900	---	28900	---	53600	---	69800	69300	---
MAX	52900	38900	37700	40900	41000	32200	28800	53600	68700	70400	69700	69400
MIN	39300	31200	33900	37800	32400	28900	22500	22000	55100	69200	69300	58600
a	6004.7	5998.0	6002.8	6006.6	5996.3	5991.8	5982.4	6020.4	6035.5	6036.6	6036.1	6025.6
b	-14400	-5600	+4000	+3200	-8500	-3500	-6400	+31100	+15100	+1100	-500	-10700

CAL YR 1982 b -17300

WTR YR 1983 b +4900

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

b 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 SE 1/4 NW 1/4 sec.18, T.19 N., R.13 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 0.6 mi downstream from Jackson Meadows Dam, and 5.2 mi southeast of Sierra City.

DRAINAGE AREA.--38.3 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District). Prior to Aug. 12, 1982, at site 160 ft downstream at same datum.

REMARKS.--Records good. Flow regulated by Jackson Meadows Reservoir (station 11407800) since November 1964. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE (adjusted for change in contents in Jackson Meadows Reservoir).--19 years, 119 ft³/s, 86,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,660 ft³/s Dec. 20, 1981, gage height, 9.61 ft, from rating curve extended above 400 ft³/s on basis of computation of flow over Milton Dam, adjusted for diversion and inflow; no flow on many days in 1976-77.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since at least 1925, 10,000 ft³/s Jan. 31, 1963, gage height, 10.57 ft from floodmarks, by computation of flow over Milton Dam, adjusted for diversion and inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft³/s June 11, gage height, 15.23 ft; minimum daily, 6.0 ft³/s Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	285	8.7	7.4	7.5	236	243	220	165	328	93	16
2	304	285	7.8	7.2	100	235	243	217	485	380	87	15
3	305	283	7.7	7.2	235	234	241	161	704	465	81	15
4	304	282	7.8	7.2	236	234	240	77	889	502	74	14
5	302	281	7.9	7.2	233	233	239	77	1020	586	67	13
6	300	280	7.9	7.2	235	234	239	77	1070	609	61	84
7	304	274	7.4	7.2	237	236	239	77	1130	556	57	233
8	305	270	7.2	7.2	236	236	239	78	1130	464	54	233
9	304	269	7.2	7.2	236	236	236	78	1080	407	50	233
10	304	269	7.4	7.2	236	237	233	78	1170	362	45	233
11	304	269	7.4	7.2	235	238	229	79	1290	344	41	232
12	304	266	7.4	7.2	238	240	229	79	1190	194	37	232
13	303	267	7.4	7.2	236	292	229	80	1040	94	34	232
14	306	267	6.7	7.2	237	256	228	83	1030	207	31	232
15	307	265	6.0	7.2	233	252	227	87	1100	287	33	232
16	305	267	6.1	7.2	235	250	226	88	1070	273	37	231
17	304	145	9.1	7.2	235	250	227	88	1120	242	34	231
18	303	21	7.7	7.6	236	248	226	90	1130	224	31	230
19	303	13	7.4	8.1	235	244	227	96	923	208	31	229
20	303	9.6	10	7.3	234	243	227	100	369	181	32	229
21	302	8.8	15	7.0	235	243	227	103	21	166	29	229
22	301	8.6	14	8.5	235	241	227	104	21	158	28	229
23	300	8.5	14	8.8	234	241	227	106	121	153	25	229
24	299	8.2	11	14	233	240	225	107	199	145	23	228
25	306	7.4	9.4	10	233	240	224	109	199	137	21	229
26	303	7.2	9.3	9.8	230	240	224	111	199	126	18	227
27	298	7.3	8.9	9.9	233	241	224	112	199	116	17	227
28	294	9.9	8.8	8.8	234	242	224	112	199	108	16	228
29	291	11	8.2	8.8	---	241	222	114	276	104	14	228
30	292	9.7	7.9	8.5	---	242	222	113	328	102	15	228
31	287	---	7.7	8.0	---	246	---	113	---	99	16	---
TOTAL	9351	4654.2	266.4	247.7	6212.5	7521	6913	3214	20867	8327	1232	5681
MEAN	302	155	8.59	7.99	222	243	230	104	696	269	39.7	189
MAX	307	285	15	14	238	292	243	220	1290	609	93	233
MIN	287	7.2	6.0	7.0	7.5	233	222	77	21	94	14	13
AC-FT	18550	9230	528	491	12320	14920	13710	6370	41390	16520	2440	11270

CAL YR 1982 TOTAL 76644.5 MEAN 210 MAX 2360 MIN 5.2 AC-FT 152000 MEAN a 186 AC-FT a 134800
WTR YR 1983 TOTAL 74486.8 MEAN 204 MAX 1290 MIN 6.0 AC-FT 147700 MEAN a 211 AC-FT a 152600

a Adjusted for change in contents in Jackson Meadows Reservoir.

11408000 MILTON-BOWMAN TUNNEL OUTLET NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°27'36", long 102°36'40", in NW 1/4 NE 1/4 sec.3, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank 100 ft downstream from tunnel outlet near upper end of Bowman Lake, and 6.9 mi 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1964, at datum 0.56 ft higher.

REMARKS.--Records excellent. 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.--55 years, 73.4 ft³/s, 53,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 492 ft³/s Feb. 11, 1941; minimum daily, 0.4 ft³/s Oct. 7, 1944.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	298	17	13	13	100	24	23	31	25	103	15
2	297	296	16	13	39	99	23	22	31	26	95	15
3	296	295	15	12	100	99	23	23	31	24	88	14
4	295	294	15	12	99	98	23	23	32	24	80	13
5	295	292	15	12	99	98	23	23	32	24	73	12
6	294	291	14	12	99	98	22	23	32	24	67	38
7	296	290	14	12	98	99	22	23	33	23	62	217
8	295	289	13	12	98	63	23	23	32	22	58	232
9	295	288	13	12	97	23	23	23	32	21	54	232
10	295	287	13	11	97	24	22	23	33	21	49	231
11	294	285	12	11	97	25	22	23	33	21	45	233
12	293	284	12	11	99	25	22	24	31	21	40	233
13	293	283	13	11	100	46	22	24	31	39	36	232
14	294	282	12	11	98	32	22	25	31	62	33	233
15	298	280	12	11	98	28	22	26	31	63	33	238
16	298	279	11	11	97	27	22	26	31	70	39	237
17	297	203	16	12	97	26	22	27	31	97	36	232
18	296	60	13	12	97	25	22	27	30	134	33	232
19	295	36	13	14	97	25	23	29	29	157	32	232
20	295	22	16	12	97	24	24	31	28	156	33	231
21	295	18	36	12	97	24	24	32	27	159	31	232
22	296	17	28	14	97	23	24	33	27	163	30	234
23	306	17	30	15	97	23	24	34	28	162	27	235
24	302	16	22	26	97	23	23	34	27	159	24	233
25	323	14	20	20	97	23	23	35	27	154	22	231
26	341	14	18	18	97	22	23	36	26	147	20	231
27	309	14	17	20	97	22	23	34	26	130	17	230
28	305	19	16	16	97	22	23	33	25	117	16	231
29	301	25	15	16	---	22	23	34	25	114	15	234
30	305	20	14	14	---	22	23	33	25	110	14	236
31	301	---	14	14	---	26	---	32	---	108	16	---
TOTAL	9293	5108	505	422	2592	1336	684	861	888	2577	1321	5679
MEAN	300	170	16.3	13.6	92.6	43.1	22.8	27.8	29.6	83.1	42.6	189
MAX	341	298	36	26	100	100	24	36	33	163	103	238
MIN	293	14	11	11	13	22	22	22	25	21	14	12
AC-FT	18430	10130	1000	837	5140	2650	1360	1710	1760	5110	2620	11260
CAL YR 1982	TOTAL	38388.9	MEAN	105	MAX	341	MIN	4.3	AC-FT	76140		
WTR YR 1983	TOTAL	31266	MEAN	85.7	MAX	341	MIN	11	AC-FT	62020		

SACRAMENTO RIVER BASIN

11408850 MIDDLE YUBA RIVER NEAR CAMPTONVILLE, CA

LOCATION.--Lat 30°25'01", long 120°57'06", in SW 1/4 SE 1/4 sec.15, T.18 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 0.6 mi downstream from Kanaka Creek, and 5.8 mi southeast of Camptonville.

DRAINAGE AREA.--136 mi².

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,170 ft, from topographic map.

REMARKS.--Records good. 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.--16 years, 359 ft³/s, 260,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s Jan. 13, 1980, gage height, 16.00 ft; minimum daily, 11 ft³/s July 29, Aug. 17, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft³/s Mar. 13, gage height, 14.38 ft; minimum daily, 42 ft³/s several days during October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	124	565	417	748	2670	1230	1240	1450	888	118	66
2	48	108	396	395	682	2760	1230	1090	1550	981	113	65
3	48	96	328	381	623	2060	1110	1050	1750	992	109	61
4	47	88	322	371	565	1520	1020	944	2010	1010	103	59
5	46	83	314	365	541	1380	949	945	2140	1080	100	58
6	47	78	304	360	685	1240	893	928	2160	1100	96	57
7	59	75	290	357	1400	1390	857	897	2240	1020	93	56
8	51	77	264	357	1790	1420	845	885	2270	879	91	55
9	47	75	246	361	1490	1330	846	848	2160	789	88	54
10	46	75	236	351	1550	1390	819	826	2240	716	85	54
11	44	74	226	344	1210	1540	792	783	2560	678	84	54
12	43	70	225	342	1640	1630	764	799	2230	646	83	53
13	43	68	247	340	2320	6990	729	821	1980	338	79	52
14	43	66	226	334	1510	3680	707	863	1970	382	76	52
15	42	65	215	328	1210	2350	684	950	2030	513	76	51
16	42	63	207	329	1050	1700	678	1000	2000	492	75	51
17	42	90	313	337	944	1500	698	969	2060	411	74	50
18	42	1150	325	382	1070	1340	731	1020	2070	330	73	50
19	42	715	310	502	1020	1180	827	1190	1760	264	71	49
20	42	379	920	401	919	1100	970	1360	1350	226	73	49
21	42	283	3800	372	841	1070	935	1440	705	195	73	49
22	51	277	3300	670	795	1080	936	1500	704	174	74	50
23	137	294	2210	722	790	1070	1020	1470	777	163	74	57
24	124	259	1640	2240	768	1090	1020	1520	902	155	70	57
25	505	231	1170	1370	832	1030	1000	1620	871	150	67	54
26	1090	210	820	1200	958	941	927	1700	852	143	67	52
27	276	203	660	2010	1180	924	917	1790	820	138	64	51
28	175	374	565	1320	1490	868	1410	1840	778	133	62	56
29	138	891	510	1140	---	829	1590	1830	793	128	61	79
30	173	910	470	974	---	850	1430	1680	881	125	60	144
31	158	---	438	846	---	1530	---	1620	---	121	62	---
TOTAL	3782	7551	22062	20218	30621	51452	28564	37418	48063	15360	2494	1745
MEAN	122	252	712	652	1094	1660	952	1207	1602	495	80.5	58.2
MAX	1090	1150	3800	2240	2320	6990	1590	1840	2560	1100	118	144
MIN	42	63	207	328	541	829	678	783	704	121	60	49
AC-FT	7500	14980	43760	40100	60740	102100	56660	74220	95330	30470	4950	3460
CAL YR 1982	TOTAL	241968	MEAN	663	MAX	9240	MIN	39	AC-FT	479900		
WTR YR 1983	TOTAL	269330	MEAN	738	MAX	6990	MIN	42	AC-FT	534200		

11408880 MIDDLE YUBA RIVER BELOW OUR HOUSE DAM, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°24'42", long 120°59'49", in SW 1/4 NW 1/4 sec.20, T.18 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 400 ft downstream from Our House Dam, and 4.0 mi southeast of Camptonville.

DRAINAGE AREA.--145 mi².

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,957.51 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 4, 1970, at datum 10.0 ft higher.

REMARKS.--Records good. 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 400 ft upstream to Oregon Creek and then to New Bullards Bar Reservoir via Camptonville tunnel. Other small diversions above station. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--15 years, 150 ft³/s, 108,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s Jan. 13, 1980, gage height, 23.01 ft present datum; minimum daily, 2.1 ft³/s Jan. 10, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,390 ft³/s Mar. 13, gage height, 20.39 ft; minimum daily, 26 ft³/s several days during February and June to September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	38	45	37	27	2270	515	454	554	26	33	40
2	38	38	42	37	26	2340	529	300	620	73	33	40
3	38	38	40	37	26	1710	403	239	771	77	30	40
4	38	37	40	37	26	1010	292	123	974	91	27	36
5	38	37	40	34	28	824	193	128	1230	172	26	34
6	38	37	40	33	92	652	123	111	1310	214	34	34
7	38	37	39	33	886	823	82	77	1410	131	39	33
8	38	37	39	33	1400	865	63	71	1410	29	40	27
9	38	37	38	35	941	738	63	71	1260	29	40	27
10	38	37	38	36	1050	784	60	69	1360	30	40	27
11	38	37	38	36	602	974	60	69	1760	30	37	27
12	38	37	38	36	1030	1070	60	69	1430	30	35	27
13	38	37	39	35	1850	5880	59	69	1080	29	35	27
14	38	38	36	35	937	2740	59	69	1030	28	35	27
15	38	38	32	34	577	1640	58	87	1090	31	35	27
16	38	38	31	32	353	1020	58	145	1030	35	29	27
17	37	39	35	32	171	805	58	105	1100	35	28	26
18	37	659	34	32	377	642	58	153	1120	35	27	26
19	37	107	33	33	311	493	59	325	787	34	27	27
20	37	33	34	33	139	401	102	521	489	33	27	27
21	37	32	2140	32	50	377	80	611	67	32	27	27
22	38	32	1790	34	31	401	82	666	43	32	27	27
23	40	31	1360	35	30	386	184	736	30	32	27	27
24	40	31	289	1070	30	414	207	740	39	31	27	34
25	46	30	36	287	75	335	193	725	32	31	27	41
26	480	30	32	127	213	213	106	815	32	31	27	41
27	43	30	31	988	579	184	95	839	32	31	35	37
28	40	32	30	284	934	123	583	855	31	31	43	32
29	38	208	30	103	---	77	812	835	26	31	42	35
30	38	279	33	31	---	88	635	720	26	32	41	30
31	38	---	37	29	---	799	---	666	---	33	40	---
TOTAL	1634	2171	6559	3710	12791	31078	5931	11463	22173	1539	1020	937
MEAN	52.7	72.4	212	120	457	1003	198	370	739	49.6	32.9	31.2
MAX	480	659	2140	1070	1850	5880	812	855	1760	214	43	41
MIN	37	30	30	29	26	77	58	69	26	26	26	26
AC-FT	3240	4310	13010	7360	25370	61640	11760	22740	43980	3050	2020	1860
a	4960	12080	34860	36510	41080	50060	50230	58460	60320	30280	3400	1930

CAL YR 1982 TOTAL 112117.8 MEAN 307 MAX 9200 MIN 2.1 AC-FT 222400
WTR YR 1983 TOTAL 101006.0 MEAN 277 MAX 5880 MIN 26 AC-FT 200300

a Lohman Ridge tunnel diversion, in acre-feet, to Oregon Creek.

SACRAMENTO RIVER BASIN

11409300 OREGON CREEK AT CAMPTONVILLE, CA

LOCATION.--Lat 39°26'46", long 121°02'43", in SE 1/4 NE 1/4 sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 25 ft downstream from county bridge, 0.5 mi southeast of Camptonville, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--23.0 mi².

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,230 ft, from topographic map.

REMARKS.--Records good prior to June and fair thereafter. No regulation or diversion above station. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--16 years, 75.5 ft³/s, 54,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,830 ft³/s Jan. 13, 1980, gage height, 10.83 ft; minimum daily, 0.53 ft³/s Aug. 14-16, 1977.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	1345	634	6.01	Feb. 13	0230	892	6.62
Nov. 30	0330	630	6.00	Mar. 1	1945	1,090	7.04
Dec. 22	2115	1,250	7.37	Mar. 13	0700	*1,980	8.60
Jan. 27	0230	786	6.38	Mar. 31	0145	529	5.73
Feb. 7	2100	1,070	7.00	Apr. 28	2215	564	5.83

Minimum daily, 3.2 ft³/s Oct. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	16	204	84	191	836	340	347	113	18	6.8	12
2	3.7	13	125	75	168	895	357	281	103	20	6.6	11
3	3.6	12	91	69	150	676	313	239	93	17	6.4	9.8
4	3.5	11	79	64	133	495	267	219	86	16	6.1	8.3
5	3.4	10	73	60	125	476	229	228	81	15	6.0	7.8
6	3.9	9.6	68	57	215	434	199	226	76	15	5.9	7.8
7	7.1	9.3	62	55	730	480	177	203	70	14	5.8	7.8
8	4.9	10	54	53	805	473	161	187	65	14	5.7	7.8
9	4.0	9.7	47	51	714	411	152	171	61	14	5.5	7.8
10	3.6	10	42	49	726	387	142	158	57	13	5.5	7.8
11	3.6	9.8	37	47	498	399	135	144	54	12	5.7	7.8
12	3.4	9.2	36	45	561	443	125	136	50	12	5.5	7.5
13	3.4	8.9	42	43	732	1480	113	130	46	11	5.5	7.5
14	3.4	8.6	36	42	514	855	102	126	44	11	5.2	7.3
15	3.4	8.3	33	40	403	552	96	126	42	11	4.7	7.3
16	3.2	8.3	32	42	329	427	91	128	39	10	4.5	7.3
17	3.2	18	261	41	270	387	89	124	36	9.9	4.3	7.3
18	3.3	357	147	48	363	337	94	122	34	9.7	4.7	7.3
19	3.3	180	110	76	348	281	104	125	32	9.7	5.1	7.8
20	3.4	93	172	57	278	248	137	135	30	9.6	6.0	8.3
21	4.1	62	970	53	234	249	140	144	28	9.2	6.1	8.1
22	6.3	68	907	168	206	261	143	149	26	8.8	6.0	8.3
23	18	79	705	185	191	252	179	153	25	8.4	6.2	9.5
24	12	59	408	492	178	249	201	157	24	8.2	6.1	10
25	53	47	287	374	223	228	209	159	22	8.1	5.9	10
26	145	39	220	318	322	206	197	161	21	7.8	5.8	10
27	30	36	179	589	423	219	190	158	20	7.8	5.8	9.5
28	20	112	149	399	463	208	371	154	19	7.5	6.1	9.8
29	16	437	126	335	---	186	463	149	19	7.3	6.1	14
30	25	451	109	264	---	205	420	139	18	7.3	6.4	21
31	20	---	95	221	---	428	---	126	---	7.0	8.6	---
TOTAL	424.4	2201.7	5906	4496	10493	13663	5936	5204	1434	349.3	180.6	273.5
MEAN	13.7	73.4	191	145	375	441	198	168	47.8	11.3	5.83	9.12
MAX	145	451	970	589	805	1480	463	347	113	20	8.6	21
MIN	3.2	8.3	32	40	125	186	89	122	18	7.0	4.3	7.3
AC-FT	842	4370	11710	8920	20810	27100	11770	10320	2840	693	358	542
CAL YR 1982	TOTAL	44413.2	MEAN	122	MAX	1910	MIN	1.1	AC-FT	88090		
WTR YR 1983	TOTAL	50561.5	MEAN	139	MAX	1480	MIN	3.2	AC-FT	100300		

11409400 OREGON CREEK BELOW LOG CABIN DAM, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°26'22", long 121°03'29", in SW 1/4 SW 1/4 sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 500 ft downstream from Log Cabin Dam, 670 ft upstream from High Point Ravine, and 1.1 mi southwest of Camptonville.

DRAINAGE AREA.--29.1 mi².

PERIOD OF RECORD.--August 1968 to current year.

REVISED RECORDS.--WDR CA-81-4: 1980(M).

GAGE.--Water-stage recorder. Datum of gage is 1,919.96 ft National Geodetic Vertical Datum of 1929 (levels by Yuba County Water Agency). Prior to July 24, 1973, at site 470 ft downstream at datum 8.40 ft lower.

REMARKS.--Records good. Camptonville tunnel, maximum capacity, about 1,000 ft³/s, 520 ft 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.--15 years, 35.8 ft³/s, 25,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,860 ft³/s Jan. 12, 1980, gage height, 9.80 ft; minimum daily, 0.34 ft³/s Sept. 18, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,370 ft³/s Mar. 13, gage height, 7.42 ft; minimum daily, 0.36 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	19	14	8.6	11	598	23	23	20	19	14	13
2	6.4	19	10	8.3	11	652	23	22	20	19	14	13
3	6.2	18	8.8	7.8	11	360	23	22	20	19	14	13
4	6.2	18	7.9	7.6	11	136	22	21	20	19	14	13
5	6.2	17	7.9	7.6	11	118	22	21	20	19	13	13
6	6.3	18	7.7	6.7	27	64	22	21	20	19	13	13
7	6.2	17	7.6	6.3	482	133	22	21	20	19	13	13
8	5.8	17	7.6	6.5	554	123	21	21	20	19	13	13
9	5.6	17	7.6	6.5	400	32	21	20	20	18	13	13
10	5.6	17	7.6	6.5	420	21	21	20	20	17	13	13
11	5.6	17	7.4	7.6	119	25	21	20	20	17	13	13
12	5.6	17	7.3	9.1	196	129	20	20	20	17	13	13
13	5.6	17	7.5	9.1	431	1560	20	20	20	15	13	13
14	3.2	17	7.2	9.1	148	467	20	20	20	15	13	13
15	4.8	17	7.2	9.1	24	163	20	20	20	16	13	12
16	5.2	17	7.4	9.1	12	84	20	20	20	16	13	12
17	3.3	18	11	9.4	11	36	20	20	20	15	13	12
18	4.8	71	9.7	9.7	31	24	20	20	20	15	13	12
19	11	16	8.4	10	13	23	20	20	20	14	13	12
20	4.7	8.8	9.0	9.8	12	23	20	20	20	13	13	12
21	7.2	11	755	9.3	11	22	20	21	19	9.8	13	12
22	12	10	649	11	11	22	20	21	19	9.1	13	12
23	15	10	375	11	11	22	21	21	19	8.7	13	12
24	16	9.1	31	136	11	22	21	20	20	8.4	13	12
25	18	7.6	.36	18	11	22	21	20	19	12	13	11
26	23	7.6	1.2	29	12	22	21	20	19	14	13	8.2
27	20	7.6	2.0	274	50	22	21	20	19	14	13	6.4
28	9.4	9.4	6.3	23	87	22	76	20	19	14	12	7.9
29	1.5	67	11	13	---	22	109	20	19	14	13	10
30	19	93	8.8	12	---	22	45	20	19	14	12	12
31	19	---	8.7	11	---	53	---	20	---	14	13	---
TOTAL	274.9	625.1	2017.16	711.7	3139	5044	796	635	591	472.0	405	357.5
MEAN	8.87	20.8	65.1	23.0	112	163	26.5	20.5	19.7	15.2	13.1	11.9
MAX	23	93	755	274	554	1560	109	23	20	19	14	13
MIN	1.5	7.6	.36	6.3	11	21	20	20	19	8.4	12	6.4
AC-FT	545	1240	4000	1410	6230	10000	1580	1260	1170	936	803	709
a	5480	16370	45670	46380	61170	74340	63540	70250	62740	30220	3050	1910

CAL YR 1982 TOTAL 17732.66 MEAN 48.6 MAX 2280 MIN .36 AC-FT 35170
WTR YR 1983 TOTAL 15068.36 MEAN 41.3 MAX 1560 MIN .36 AC-FT 29890

a Camptonville tunnel diversion, in acre-feet, to New Bullards Bar Reservoir.

SACRAMENTO RIVER BASIN

11413000 NORTH YUBA RIVER BELOW GOODYEARS BAR, CA

LOCATION.--Lat 39°31'30", long 120°56'13", in NE 1/4 SW 1/4 sec.11, T.19 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 200 ft downstream from St. Catherine Creek, 3.1 mi southwest of Goodyears Bar, and 6.4 mi southwest of Downieville.

DRAINAGE AREA.--250 mi².

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 National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records good. Several small diversions above station for irrigation and mining. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--53 years, 772 ft³/s, 559,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s Feb. 1, 1963, gage height, 25.8 ft from floodmarks, from rating curve extended above 8,500 ft³/s on basis of one float measurement at 17,900 ft³/s and slope-area measurements at gage heights 19.15 ft and 23.8 ft; minimum daily, 60 ft³/s Sept. 7-14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0200	5,860	9.97	Feb. 13	0245	4,470	8.92
Nov. 18	1500	4,250	8.74	Mar. 1	1900	4,100	8.71
Dec. 21	0530	5,690	9.94	Mar. 13	0930	*13,700	14.30
Jan. 24	0700	3,450	8.02	May. 28	2145	6,350	10.40

Minimum daily, 207 ft³/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	422	1250	695	1100	3790	2110	1810	4450	2490	624	335
2	245	374	1030	655	1000	3700	2050	1640	3800	2810	599	305
3	237	343	838	624	919	2850	1820	1610	3690	2380	575	291
4	232	323	791	602	850	2200	1650	1740	4030	2330	550	281
5	229	309	753	593	834	2040	1520	1700	4160	2460	525	273
6	230	300	726	584	930	1990	1420	1590	4200	2410	504	267
7	259	290	685	576	1780	2110	1350	1570	4370	2080	492	261
8	241	301	622	584	2540	2220	1330	1620	4260	1760	485	257
9	230	286	583	580	2380	2020	1350	1550	4100	1580	466	253
10	223	298	555	562	2580	2250	1290	1510	4380	1460	454	250
11	218	282	524	553	2010	2640	1250	1430	5090	1440	444	246
12	216	269	520	549	2640	2710	1190	1500	4020	1470	424	242
13	213	261	574	544	3540	10600	1130	1590	3740	1480	407	239
14	212	255	497	537	2410	5970	1080	1720	3900	1480	399	236
15	218	254	475	532	1830	3890	1040	2010	3880	1400	410	233
16	214	248	464	544	1570	3070	1040	2220	3810	1270	404	230
17	211	375	1280	547	1390	2750	1100	2150	4090	1160	377	226
18	210	2480	1050	637	1570	2410	1150	2340	3790	1070	368	225
19	207	1560	890	772	1530	2130	1340	2830	3230	1020	387	223
20	209	961	1180	617	1370	1930	1600	3410	3000	955	385	220
21	220	679	4680	578	1230	1820	1560	3820	2960	909	364	220
22	294	704	3720	973	1140	1770	1620	4220	3120	892	411	231
23	735	675	3180	1140	1140	1730	1700	4600	3340	857	369	270
24	520	566	1930	2670	1110	1750	1650	4680	3120	817	348	262
25	1380	509	1490	1830	1200	1660	1600	4760	2990	793	334	240
26	2670	470	1250	1580	1420	1520	1490	5140	2940	752	322	233
27	843	458	1090	2470	1700	1510	1460	5310	2830	717	311	229
28	583	917	962	1760	2170	1440	1900	5560	2590	693	304	238
29	480	1920	878	1540	---	1360	2150	5600	2500	674	297	264
30	609	1620	806	1350	---	1370	2010	5270	2420	661	291	405
31	515	---	747	1220	---	2630	---	5150	---	643	299	---
TOTAL	13351	18709	36020	28998	45883	81830	44950	91650	108800	42913	12929	7685
MEAN	431	624	1162	935	1639	2640	1498	2956	3627	1384	417	256
MAX	2670	2480	4680	2670	3540	10600	2150	5600	5090	2810	624	405
MIN	207	248	464	532	834	1360	1040	1430	2420	643	291	220
AC-FT	26480	37110	71450	57520	91010	162300	89160	181800	215800	85120	25640	15240

CAL YR 1982	TOTAL	487162	MEAN	1335	MAX	12800	MIN	207	AC-FT	966300
WTR YR 1983	TOTAL	533718	MEAN	1462	MAX	10600	MIN	207	AC-FT	1059000

11413100 NORTH YUBA RIVER ABOVE SLATE CREEK, NEAR STRAWBERRY VALLEY, CA.

LOCATION.--Lat 39°31'29", long 121°05'26", in NE 1/4 SW 1/4 sec.9, T.19 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 500 ft upstream from Slate Creek, and 2.8 mi southeast of Strawberry Valley.

DRAINAGE AREA.--351 mi².

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,953.44 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Several small diversions above station for irrigation and mining. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--15 years, 1,291 ft³/s, 935,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,600 ft³/s Jan. 13, 1980, gage height, 22.12 ft; minimum daily, 71 ft³/s Sept. 7-15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 29.8 ft from floodmarks, discharge, 63,400 ft³/s from slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0300	7,820	11.73	Feb. 13	Unknown	Unknown	Unknown
Nov. 18	1430	8,320	11.93	Mar. 1	Unknown	Unknown	Unknown
Nov. 29	1415	4,820	10.33	Mar. 13	Unknown	*Unknown	Unknown
Dec. 21	Unknown	Unknown	Unknown	May 28	Unknown	Unknown	Unknown
Jan. 24	Unknown	Unknown	Unknown				

Minimum daily, 209 ft³/s Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	580	2010	1020	1720	6500	3500	2960	6410	3100	799	428
2	269	517	1470	970	1570	6220	3250	2690	5750	3540	769	398
3	263	475	1230	918	1440	4850	2880	2640	5040	3020	742	378
4	258	448	1210	880	1350	3540	2590	2800	5250	2920	707	367
5	254	423	1170	840	1410	3230	2410	2720	5440	3080	675	358
6	248	406	1130	818	1660	3140	2250	2620	5580	3050	645	349
7	284	395	1070	801	2700	3410	2150	2530	5750	2660	624	343
8	254	404	976	802	4080	3540	2140	2710	5420	2250	618	335
9	238	389	914	803	3880	3200	2140	2640	5260	2050	594	329
10	231	394	864	790	4090	3610	2010	2510	5640	1880	578	326
11	227	384	814	775	3500	4100	1930	2470	6380	1860	568	322
12	223	366	804	755	4500	4350	1840	2590	5200	1890	545	318
13	216	357	845	750	6850	17100	1750	2860	4600	1910	523	311
14	214	346	763	743	5650	10200	1660	3140	4450	1920	506	308
15	217	342	730	745	4400	8160	1560	3330	4680	1810	513	303
16	219	332	714	770	3200	6420	1590	3510	4700	1630	521	298
17	213	448	2520	900	2300	5280	1700	3390	5000	1500	484	295
18	212	5000	1670	1020	2380	4340	1790	3770	4830	1370	470	291
19	210	2690	1280	1160	2450	3700	2240	4500	4300	1300	479	290
20	209	1460	2240	950	2230	3320	2800	5270	3820	1230	500	285
21	218	1050	9400	910	2080	3060	2680	5750	3590	1170	466	284
22	316	1000	7500	1200	1960	2860	2660	6230	3900	1150	509	291
23	871	1030	4200	2050	1900	2710	2650	6550	4100	1110	470	340
24	642	896	3500	4100	2000	2760	2570	6700	3990	1050	445	337
25	1890	795	3050	3120	2500	2720	2490	6890	3800	1020	427	311
26	4050	719	2510	2450	2870	2490	2380	7440	3750	966	415	299
27	1190	692	2050	3750	3490	2480	2310	7540	3590	920	401	292
28	792	1510	1740	3500	4850	2310	3190	7660	3300	886	391	304
29	644	3950	1450	2400	---	2190	3500	7780	3170	868	380	353
30	773	3220	1270	2070	---	2210	3240	7400	3070	847	374	550
31	710	---	1130	1890	---	4400	---	7180	---	829	379	---
TOTAL	16830	31018	62224	44650	83010	138400	71850	138770	139760	54786	16517	9993
MEAN	543	1034	2007	1440	2965	4465	2395	4476	4659	1767	533	333
MAX	4050	5000	9400	4100	6850	17100	3500	7780	6410	3540	799	550
MIN	209	332	714	743	1350	2190	1560	2470	3070	829	374	284
AC-FT	33380	61520	123400	88560	164700	274500	142500	275300	277200	108700	32760	19820

CAL YR 1982 TOTAL 713569 MEAN 1955 MAX 21500 MIN 209 AC-FT 1415300
WTR YR 1983 TOTAL 807808 MEAN 2213 MAX 17100 MIN 209 AC-FT 1602000

NOTE.--No gage-height record Dec. 21 to Apr. 7, Apr. 23 to June 23.

SACRAMENTO RIVER BASIN

11413250 SLATE CREEK TUNNEL NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°36'57", long 121°03'03", in SE 1/4 SW 1/4 sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 30 ft upstream from diversion dam on Slate Creek, 0.3 mi upstream from Feney Ravine, and 4.5 mi 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.--17 years, 93.9 ft³/s, 68,030 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 863 ft³/s Apr. 6, 1963; no flow many days in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	46	403	189					0	321	48	13
2	0	36	298	171					0	383	45	10
3	0	29	249	159					0	282	43	8.6
4	0	34	251	150					0	281	41	7.2
5	0	39	237	147					0	296	38	6.3
6	0	36	228	146					0	278	35	5.4
7	0	34	211	142					0	226	34	4.6
8	0	30	187	148					0	183	33	13
9	0	18	168	148					0	161	31	7.4
10	0	19	153	140					0	148	31	0
11	0	18	140	138					0	151	29	0
12	0	16	136	138					0	153	26	0
13	0	15	133	135					0	154	24	0
14	0	13	119	133					0	158	24	0
15	0	13	111	131					0	141	23	2.4
16	0	12	111	141					0	120	22	3.8
17	0	69	505	150					502	108	21	2.9
18	0	410	323	248					845	95	20	2.9
19	0	528	249	293					779	89	20	2.8
20	0	326	445	226					690	81	21	2.4
21	0	218	604	199					601	75	20	2.1
22	0	202	616	341					631	72	19	4.3
23	142	214	361	418					704	68	18	7.1
24	43	178	311	830					603	64	18	7.0
25	397	146	300	827					558	61	17	5.9
26	332	123	293	785					315	60	12	4.5
27	141	127	292	841					.26	57	7.2	4.1
28	75	489	286	501					.26	54	5.9	8.0
29	52	837	261	0					.26	53	6.9	11
30	98	671	226	0					195	52	8.1	39
31	68	---	210	0					---	50	9.5	---
TOTAL	1348	4946	8417	8015	0	0	0	0	6423.78	4475	750.6	185.7
MEAN	43.5	165	272	259	0	0	0	0	214	144	24.2	6.19
MAX	397	837	616	841	0	0	0	0	845	383	48	39
MIN	0	12	111	0	0	0	0	0	0	50	5.9	0
AC-FT	2670	9810	16700	15900	0	0	0	0	12740	8880	1490	368
CAL YR 1982	TOTAL	29689.50	MEAN	81.3	MAX	837	MIN	0	AC-FT	58890		
WTR YR 1983	TOTAL	34561.08	MEAN	94.7	MAX	845	MIN	0	AC-FT	68550		

11413300 SLATE CREEK BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°36'52", long 121°03'04", in SE 1/4 SW 1/4 sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 300 ft downstream from diversion dam, 0.2 mi upstream from Fenev Ravine, and 4.5 mi northeast of town of Strawberry Valley.

DRAINAGE AREA.--49.4 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 3,570 ft, from topographic map.

REMARKS.--Records good. Slate Creek tunnel (station 11413250) diverts at diversion dam, 300 ft upstream, up to 900 ft³/s from Slate Creek Reservoir, capacity, 223 acre-ft 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).--23 years, 220 ft³/s, 159,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 13,100 ft³/s Dec. 22, 1964, gage height, 16.42 ft, from rating curve extended above 5,500 ft³/s on basis of computed flow over dam at gage heights 12.75 ft and 15.90 ft; minimum, 0.3 ft³/s Mar. 4, 5, 1962.
Combined flow: Maximum discharge, 13,900 ft³/s Dec. 22, 1964; minimum daily, 2.3 ft³/s Nov. 23, 1961.

EXTREMES FOR CURRENT YEAR.--Creek only: Maximum discharge, 6,970 ft³/s Mar. 13, gage height, 14.10 ft; minimum daily, 7.8 ft³/s Aug. 10.

Combined flow: Maximum discharge, 6,970 ft³/s Mar. 13; minimum daily, 14 ft³/s several days in October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	92	19	18	372	2010	636	580	984	19	10	16
2	14	84	18	18	327	1550	667	513	852	17	10	17
3	14	80	18	18	282	1200	557	524	807	17	11	17
4	14	70	18	18	246	856	461	550	844	17	11	18
5	14	60	18	18	223	788	407	523	842	17	11	18
6	14	60	18	18	230	766	364	483	847	17	11	19
7	15	59	18	18	470	960	345	490	867	17	11	20
8	17	70	18	18	998	1080	356	490	836	17	11	19
9	15	75	18	18	890	903	363	457	801	17	11	19
10	14	77	18	18	909	1030	333	440	832	16	7.8	20
11	14	75	18	18	715	1050	311	422	916	16	9.3	20
12	14	73	18	18	1260	1170	281	443	709	16	15	21
13	14	71	18	18	1690	4720	256	471	642	16	15	22
14	14	70	18	18	937	1850	242	516	658	16	15	19
15	14	69	18	18	690	1110	240	614	620	16	15	14
16	14	68	18	18	690	822	255	652	599	16	15	12
17	14	54	18	18	501	668	286	640	315	16	15	12
18	14	989	18	19	619	548	329	695	78	16	15	12
19	14	150	18	19	565	463	503	839	26	16	15	12
20	14	20	231	19	473	430	675	998	22	9.6	15	12
21	14	19	1690	19	421	397	611	1080	22	9.3	15	12
22	90	19	1320	19	391	366	579	1160	22	18	15	12
23	208	19	1160	19	399	328	606	1220	22	18	15	12
24	227	19	480	778	390	310	556	1190	22	18	15	12
25	103	19	258	118	426	277	479	1190	22	18	15	12
26	668	19	158	137	473	252	437	1240	157	13	15	12
27	459	19	96	600	630	249	448	1270	347	11	15	12
28	245	66	46	317	1160	228	604	1320	308	11	15	12
29	148	260	22	617	---	218	655	1320	286	11	15	12
30	202	37	20	494	---	360	654	1190	126	11	15	12
31	92	---	19	411	---	959	---	1110	---	10	15	---
TOTAL	2741	2862	5843	3892	17377	27918	13496	24630	14431	472.9	414.1	459
MEAN	88.4	95.4	188	126	621	901	450	795	481	15.3	13.4	15.3
MAX	668	989	1690	778	1690	4720	675	1320	984	19	15	22
MIN	14	19	18	18	223	218	240	422	22	9.3	7.8	12
AC-FT	5440	5680	11590	7720	34470	55380	26770	48850	28620	938	821	910
MEAN a	132	260	460	384	621	901	450	794	695	160	37.6	21.5
AC-FT a	8110	15490	28280	23620	34470	55370	26770	48850	41360	9820	2310	1280
CAL YR 1982	TOTAL	93887.0	MEAN	257	MAX	5350	MIN	7.4	AC-FT	186200	MEAN a	339
WTR YR 1983	TOTAL	114536.0	MEAN	314	MAX	4720	MIN	7.8	AC-FT	227200	MEAN a	408
											AC-FT a	245100
												295700

a Adjusted for diversion to Slate Creek Tunnel.

NOTE.--No stage-discharge relation Oct. 1 to Nov. 18.

SACRAMENTO RIVER BASIN

11413510 NEW COLGATE POWERPLANT NEAR FRENCH CORRAL, CA

LOCATION.--Lat 39°19'51", long 121°11'23", in NE 1/4 SE 1/4 sec.16, T.17 N., R.7 E., Yuba County, Hydrologic Unit 18020125, at powerplant on right bank of Yuba River, 0.3 mi upstream from Dobbins Creek, and 2.3 mi northwest of French Corral.

PERIOD OF RECORD.--October 1966 to current year. 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 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 Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--17 years, 1,445 ft³/s, 1,047,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,200 ft³/s June 2, 1971; no flow for several days in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2430	1950	1060	1830	2490	3460	3510	0	3610	3660	2610	1850
2	2900	1470	2380	2190	2870	3460	3510	0	3620	3650	2800	1840
3	2360	1980	3160	2530	3000	3500	3510	0	3630	3650	2770	2790
4	964	2260	3060	2460	3270	3500	3500	0	3620	3660	2630	2600
5	1470	2870	2890	3130	3260	3490	3500	1510	3620	3660	2710	2970
6	1170	1810	2780	3210	2970	3510	3500	3590	3630	3660	2780	2640
7	1460	2570	2940	3140	1590	3510	3500	3560	3620	3660	2510	2810
8	1820	1680	2800	2760	2400	3550	3500	3580	3630	3650	2920	2630
9	2350	1670	3140	2300	2830	3500	3500	3570	3630	3650	2810	2740
10	2490	1660	3100	2390	2740	3510	3510	3570	3640	3140	2710	2030
11	1590	1660	3110	2210	2680	3510	3510	3560	3640	3000	2780	1450
12	2320	1660	3050	2360	2940	3520	3510	3560	3650	3230	2040	414
13	1830	2990	3050	2670	2630	2560	3510	3550	3650	3620	2470	688
14	1880	3050	2920	2370	2830	2560	3510	3560	3660	3620	2900	603
15	2170	1660	2880	2170	3390	2690	3510	3560	3650	2850	2770	622
16	3230	1660	2660	2090	3390	3010	3500	3560	3650	2440	2500	1380
17	3230	1660	2330	2340	3400	2900	3510	3560	3650	2740	2800	1010
18	2620	1110	2230	2290	3400	3120	3510	3560	3650	2400	2720	3120
19	2720	866	2410	1370	3400	3500	3500	3550	3650	2730	2880	2810
20	3180	2810	2430	2280	3410	3510	3510	3480	3650	3450	2710	2740
21	2760	1710	261	2200	3400	3500	3510	3570	3650	2810	2660	2480
22	2440	2170	395	925	3410	3500	2630	3570	3650	2660	2980	2670
23	3140	2850	349	942	3410	3500	3510	3570	3650	2740	2560	1950
24	2720	2980	1040	242	3410	3500	3300	3580	3370	2830	2730	3190
25	2840	3130	577	230	3420	3500	2300	3580	3650	2850	2780	2510
26	650	3100	1290	1320	3420	3500	0	3550	3510	2570	2710	2890
27	634	3120	1050	327	3420	3500	0	3630	3660	2770	2660	2550
28	1530	2870	1790	571	3440	3500	0	3620	3650	2270	2700	2640
29	1820	643	2840	1250	---	3500	0	3890	3660	2420	2810	2730
30	1270	163	2800	1950	---	3490	0	3610	3670	2360	2730	2400
31	1670	---	2040	2640	---	3500	---	3620	---	2380	2130	---
TOTAL	65658	61782	68812	60687	86220	104360	85370	94670	108870	94780	83270	65747
MEAN	2118	2059	2220	1958	3079	3366	2846	3054	3629	3057	2686	2192
MAX	3230	3130	3160	3210	3440	3550	3510	3890	3670	3660	2980	3190
MIN	634	163	261	230	1590	2560	0	0	3370	2270	2040	414
AC-FT	130200	122500	136500	120400	171000	207000	169300	187800	215900	188000	165200	130400
CAL YR 1982	TOTAL	1054948.00	MEAN	2890	MAX	3650	MIN	0	AC-FT	2092000		
WTR YR 1993	TOTAL	980226.00	MEAN	2686	MAX	3890	MIN	0	AC-FT	1944000		

11413515 NEW BULLARDS BAR RESERVOIR NEAR NORTH SAN JUAN, CA

LOCATION.--Lat 39°23'34", long 121°08'25", in SE 1/4 NW 1/4 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 upstream from Middle Yuba River, and 2.4 mi northwest of North San Juan.

DRAINAGE AREA.--489 mi².

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 by 53-ft radial gates. Storage began in January 1969. Usable capacity, 727,380 acre-ft between elevations 1,732.0 ft minimum power pool, and 1,955.0 ft normal gross pool. Dead storage, 233,920 acre-ft. Total capacity at normal gross pool, 961,300 acre-ft, elevation, 1,955.0 ft. 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. Contents not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 966,103 acre-ft June 12, 1982, elevation, 1,956.00 ft; minimum since reservoir first filled, 178,230 acre-ft Dec. 29, 1980, elevation, 1,700.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 965,718 acre-ft June 30, July 1, elevation, 1,955.92 ft; minimum, 413,593 acre-ft Dec. 16, elevation, 1,808.60.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	569509	486668	460942	514121	558712	743470	795722	856657	925720	965718	911876	791421
2	564196	484968	460583	513736	558881	760579	794794	862479	925114	965237	908184	788898
3	560300	481854	457716	511116	559117	772456	793444	866894	924180	964469	904502	784704
4	559185	478569	454978	508696	557970	783742	792516	873120	924180	964661	900831	780107
5	556757	473774	451750	505078	556757	791463	792390	876311	924413	965430	897400	775528
6	555243	471129	449801	501350	558442	798598	793317	874513	927683	965382	893521	771380
7	553295	466923	447093	497639	569987	805391	794794	872357	933307	964661	890334	766833
8	550315	464603	444073	494757	585839	807477	795976	870474	938955	963700	886248	762510
9	546379	462350	440133	492883	597732	807947	797160	868907	944626	962261	882174	758201
10	542096	460194	435782	490703	611381	808075	797964	865108	950321	961302	878113	754930
11	539748	457805	431459	488838	619987	810209	798598	861988	958907	960104	874063	752809
12	535565	455573	428018	486668	634133	812647	798810	859320	961446	959147	871550	752767
13	532547	450981	424368	483579	651999	852231	798598	855771	961542	956517	868102	752197
14	529246	445684	420342	481116	662834	851992	797752	853557	961302	954130	863770	751789
15	525601	442465	416678	479121	669541	840400	797118	852231	962021	953034	859542	751382
16	519840	440337	413593	477130	674734	823915	796060	851789	961877	952653	856037	749226
17	513736	438835	415273	473774	678350	805177	795427	851082	961877	951177	851833	748008
18	508590	453169	415273	473774	683319	791000	795216	850906	961302	949845	847644	742743
19	504192	459297	413872	474993	687926	786673	796906	852143	958668	947945	843424	738306
20	498361	457745	416396	473460	691317	788058	799234	855328	958429	944295	839043	733486
21	493507	456971	446271	471949	693712	791000	801566	859898	960296	941693	835287	729086
22	489646	455781	471342	475298	695029	791842	805391	865778	962165	939191	830935	725101
23	485555	452903	489770	479581	696230	790159	808373	872043	964180	936599	826857	722122
24	481669	449211	501035	494757	697355	789108	811791	877888	964660	933777	822880	716974
25	482039	445391	507361	505997	700309	787554	816077	883801	965478	930492	818612	712833
26	491325	441007	512777	513161	705380	786380	819775	891017	965285	928151	814361	707807
27	493507	436361	516301	530225	712046	786757	822793	898085	965141	924880	810252	703739
28	492324	434915	517586	540079	722717	786380	830761	905882	964901	922688	805816	699414
29	490548	446271	514793	549045	---	786212	840400	913587	965622	920128	801311	695455
30	490143	456465	514697	554403	---	786799	848701	920407	965718	917433	796906	692553
31	488528	---	514441	556824	---	794667	---	924880	---	914790	793739	---
MAX	569509	486668	517586	556824	722717	852231	848701	924880	965718	965718	911876	791421
MIN	481669	434915	413593	471949	556757	743470	792390	850906	924180	914790	793739	692553
a	1834.00	1823.45	1842.22	1855.12	1900.40	1917.97	1930.50	1947.30	1955.92	1945.13	1917.75	1892.66
b	-84986	-32063	+57976	+42383	+165893	+71950	+54034	+76179	+40838	-50928	-121051	-101186
CAL YR	1982	b	-316320									
WTR YR	1983	b	+119039									

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

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CA

LOCATION.--Lat 39°22'48", long 121°08'19", in SW 1/4 NE 1/4 sec.36, T.18 N., R.7 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 1.1 mi downstream from New Bullards Bar Dam, and 2 mi northwest of North San Juan.

DRAINAGE AREA.--490 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 1,280 ft, 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 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 New Bullards Bar Dam, unadjusted).--14 years (water years 1970-83), 242 ft³/s, 175,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,200 ft³/s Jan. 22, 1970, gage height, 35.29 ft, from rating curve extended above 40,000 ft³/s on basis of computation of flow over old Colgate Dam; minimum daily, 0.42 ft³/s Nov. 5, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 49.8 ft from floodmarks, discharge, 91,600 ft³/s, from computation of flow over old Colgate Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,700 ft³/s Mar. 16, gage height, 21.65 ft; minimum daily, 3.3 ft³/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.0	7.3	7.8	7.7	12	2010	1890	4440	443	5.6	4.4
2	4.1	4.0	5.8	7.8	7.4	13	3160	1960	4020	1210	5.4	4.4
3	4.0	4.0	5.5	7.8	7.2	11	2690	1990	3820	773	5.4	4.3
4	4.1	4.0	5.2	7.6	7.3	9.9	1960	2040	3810	146	5.4	4.2
5	4.1	4.0	5.1	7.1	7.6	9.7	1260	2080	3860	8.3	5.4	4.2
6	4.1	4.0	5.0	6.7	10	9.4	390	2080	2600	519	5.4	4.2
7	3.8	4.0	4.8	5.6	21	1620	8.4	2080	1040	476	5.4	4.2
8	3.5	4.0	4.7	5.1	19	3790	7.0	2080	1050	9.8	5.2	4.2
9	3.4	4.0	5.9	4.9	14	3670	6.6	2070	1050	7.2	5.2	4.0
10	3.3	4.0	6.5	4.8	13	3700	6.4	2070	1060	6.8	5.2	4.0
11	3.4	4.0	6.6	4.7	11	3710	6.6	2050	1070	6.5	5.2	4.0
12	3.6	4.2	6.8	4.1	12	3750	6.8	2030	1850	6.4	5.2	4.0
13	3.7	4.3	7.3	3.8	12	8910	6.6	2010	2830	6.4	5.2	4.0
14	3.7	4.4	7.2	3.7	11	16500	6.4	2000	2830	6.4	5.2	4.0
15	3.7	4.4	7.0	3.7	9.9	17300	6.4	2000	2790	6.1	5.1	3.9
16	3.7	4.4	7.0	3.7	9.2	18200	6.4	2000	2800	6.1	5.0	4.0
17	3.7	5.4	8.7	3.7	7.4	18400	6.4	2000	2800	6.1	5.0	4.0
18	3.5	11	7.6	5.3	8.8	13300	6.5	2000	2790	6.1	5.0	4.0
19	3.5	7.1	7.2	6.4	8.8	4880	7.1	1950	2750	6.1	5.0	3.7
20	3.8	5.3	8.9	6.0	8.6	1230	7.8	1860	1080	6.1	5.0	3.5
21	4.1	4.8	20	5.9	8.4	715	7.2	1890	9.3	6.1	4.9	3.5
22	4.2	5.1	16	7.5	8.1	1790	6.6	1930	7.6	6.1	4.8	3.6
23	4.6	5.2	12	7.4	7.9	2620	7.2	2080	268	6.1	4.8	3.7
24	4.7	5.0	9.3	9.8	6.5	2570	9.1	2230	1370	5.9	4.8	3.7
25	6.4	4.8	8.9	8.2	7.1	2300	525	2270	699	5.9	4.7	3.6
26	6.4	4.8	8.6	8.1	8.0	1610	2250	2280	1050	5.9	4.6	3.5
27	5.1	4.6	8.4	12	8.6	1380	2690	2300	1150	5.9	4.6	3.5
28	4.7	6.3	8.1	9.2	8.3	1290	1960	2310	884	5.9	4.6	3.5
29	4.2	8.9	8.0	10	---	840	1760	2380	368	5.8	4.6	3.9
30	4.6	12	7.8	9.6	---	642	1810	2420	571	5.7	4.5	5.3
31	4.2	---	7.8	8.4	---	666	---	3490	---	5.7	4.4	---
TOTAL	127.9	156.0	245.0	206.4	275.8	135448.0	22590.5	65820	56716.9	3726.4	155.8	119.0
MEAN	4.13	5.20	7.90	6.66	9.85	4369	753	2123	1891	120	5.03	3.97
MAX	6.4	12	20	12	21	18400	3160	3490	4440	1210	5.6	5.3
MIN	3.3	4.0	4.7	3.7	6.5	9.4	6.4	1860	7.6	5.7	4.4	3.5
AC-FT	254	309	486	409	547	268700	44810	130600	112500	7390	309	236
CAL YR 1982	TOTAL	293989.6	MEAN	805	MAX	18800	MIN	2.9	AC-FT	583100		
WTR YR 1983	TOTAL	285587.7	MEAN	782	MAX	18400	MIN	3.3	AC-FT	566500		

11414000 SOUTH YUBA RIVER NEAR CISCO, CA

LOCATION.--Lat 39°19'12", long 120°33'38", in SE 1/4 SW 1/4 sec.19, T.17 N., R.13 E., Nevada County, Hydrologic Unit 18020125, on right bank 0.7 mi downstream from Rattlesnake Creek, 1.3 mi west of Cisco Grove, and 1.5 mi northwest of Cisco.

DRAINAGE AREA.--51.8 mi².

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, from river-profile map. Prior to October 1945, water-stage recorder at site 200 ft upstream at same datum.

REMARKS.--Records good. Low flow regulated by several small lakes operated by Pacific Gas and Electric Co.

AVERAGE DISCHARGE.--41 years, 204 ft³/s, 147,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s Jan. 31, 1963, gage height, 19.6 ft from floodmarks in gage house, 20.6 ft from outside floodmarks, from rating curve extended above 4,600 ft³/s on basis of slope-area measurement at gage height 15.8 ft; minimum daily, 0.1 ft³/s Nov. 5-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0045	*4,500	10.30	May 29	2100	3,040	8.35
Mar. 13	1000	2,530	7.95	June 11	0115	3,150	8.50

Minimum daily, 3.6 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	197	138	72	66	198	360	162	1510	1160	191	58
2	77	154	120	71	65	166	276	163	1170	1670	205	37
3	72	140	110	71	63	138	204	229	1530	1220	188	30
4	73	156	117	71	60	117	175	347	1790	1360	167	26
5	80	157	124	77	59	110	157	283	1820	1490	140	24
6	67	147	119	82	59	110	148	219	1850	1320	106	22
7	67	127	105	85	89	149	152	247	1750	973	100	21
8	66	118	93	91	130	164	180	321	1620	723	86	21
9	61	112	93	88	93	171	215	301	1700	617	78	21
10	58	100	94	83	82	223	201	304	1920	637	70	21
11	55	77	101	86	80	274	174	278	2270	750	63	19
12	53	70	102	90	141	275	154	379	1590	835	55	16
13	52	61	100	93	226	1830	141	492	1590	804	48	12
14	50	57	87	93	152	937	134	602	1760	814	43	7.1
15	49	54	82	89	127	533	133	809	1760	700	99	5.8
16	47	51	79	92	111	372	150	824	1710	567	93	5.1
17	43	64	117	87	103	304	193	767	1930	510	53	4.6
18	29	534	93	89	106	242	212	916	1610	451	45	4.3
19	17	287	86	91	96	201	275	1230	1310	408	52	4.0
20	15	172	133	81	91	188	333	1490	1320	365	66	3.6
21	14	137	239	76	87	172	295	1620	1410	367	46	3.7
22	20	138	190	97	90	158	321	1740	1630	384	131	4.5
23	356	140	185	100	108	145	340	1870	1780	343	65	6.7
24	509	120	131	145	114	135	250	1840	1580	319	45	9.9
25	1940	113	113	106	110	128	204	2030	1530	305	40	7.6
26	1860	107	105	92	102	118	180	2100	1500	260	44	6.2
27	379	104	95	85	95	117	172	2180	1420	242	40	17
28	234	181	88	83	104	109	190	2260	1290	236	37	13
29	184	209	82	78	---	106	188	2320	1280	227	31	42
30	643	146	78	72	---	118	180	2040	1230	223	26	82
31	324	---	75	68	---	561	---	2080	---	205	26	---
TOTAL	7577	4230	3474	2684	2809	8569	6287	32443	48160	20485	2479	555.1
MEAN	244	141	112	86.6	100	276	210	1047	1605	661	80.0	18.5
MAX	1940	534	239	145	226	1830	360	2320	2270	1670	205	82
MIN	14	51	75	68	59	106	133	162	1170	205	26	3.6
AC-FT	15030	8390	6890	5320	5570	17000	12470	64350	95530	40630	4920	1100
CAL YR 1982	TOTAL	115902.9	MEAN	318	MAX	3770	MIN	4.7	AC-FT	229900		
WTR YR 1983	TOTAL	139752.1	MEAN	383	MAX	2320	MIN	3.6	AC-FT	277200		

11414090 FORDYCE LAKE NEAR CISCO, CA

LOCATION.--Lat 39°22'43", long 120°29'39", in NE 1/4 SE 1/4 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 northeast of Cisco.

DRAINAGE AREA.--31.7 mi².

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 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. In 1980 the capacity of Fordyce Lake was increased by the addition of 3 ft of flashboards. Capacity, 49,903 acre-ft between gage heights 0.85 ft, bottom of outlet valve and 114.6 ft, 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 PERIOD OF RECORD.--Maximum contents, 49,903 acre-ft June 27, July 4, 6, 1982, gage height, 114.60 ft; minimum, 250 acre-ft Oct. 31 to Nov. 7, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,803 acre-ft July 30, 31, gage height, 114.47 ft; minimum, 2,871 acre-ft Jan. 28, gage height, 21.13 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

4	219	40	8,183
5	278	50	11,797
10	774	60	16,174
15	1,570	70	21,196
20	2,608	80	26,770
25	3,827	90	32,820
30	5,170	100	39,342
35	6,628	114.6	49,903

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3135	11753	5005	7410	3118	5292	3963	3430	21356	42721	49772	32788
2	3152	11837	5097	7460	3172	5372	3916	3250	21697	43718	49066	31983
3	3155	11929	5179	7510	3218	5440	3766	3350	22343	44019	48488	31167
4	3145	11737	5264	7544	3265	5503	3599	3665	23366	44567	48245	30366
5	3123	11390	5352	7560	3320	5569	3405	3901	24375	45492	47365	29530
6	3089	11003	5352	7551	3407	5627	3250	4079	25470	46294	47283	28720
7	3123	10582	5512	7535	3500	5708	3223	4282	26461	46194	46813	27875
8	3201	10184	5590	7737	3569	5668	3211	4525	27291	46194	46294	27132
9	3265	9755	5659	7787	3652	5552	3233	4525	28356	46575	45587	26380
10	3325	9315	5729	7787	3712	5489	3238	4631	29729	46925	44930	25625
11	3380	8839	5729	7429	3786	5374	3216	4631	31327	47500	44293	25071
12	3430	8343	5881	7157	3896	5221	3177	4631	32226	48260	44387	24465
13	3495	7803	5966	6753	3994	5769	3177	4351	33475	48784	44459	23860
14	3552	7274	6037	6194	4074	6170	3322	4439	34607	49250	44553	23250
15	3614	6741	6096	5645	4150	6279	3425	4444	35744	49349	44235	21922
16	3677	6241	6170	5125	4224	6317	3534	4444	36272	48906	43367	21207
17	3725	5758	6259	4574	4290	6276	3677	4447	37650	48298	42516	20549
18	3766	5466	6326	4963	4391	6167	3837	5889	38532	48087	41666	19868
19	3763	5078	6382	4100	4452	6037	4022	6385	39057	48079	40840	19167
20	3738	4658	6509	3919	4514	5889	4127	7019	39579	48208	40050	18507
21	3717	4218	6684	3753	4568	5732	4090	7784	40180	48678	39247	17836
22	3717	4048	6702	3617	4625	5572	4074	8664	40813	48830	38465	17183
23	4568	4155	6913	3467	4688	5495	4100	9823	41228	49273	37657	16555
24	5289	4234	6967	3347	4756	5196	4100	10976	41325	49158	36843	15900
25	8076	4319	7034	3177	4869	4997	4056	12220	41263	49303	35992	15294
26	10130	4399	7102	3055	4966	4797	3898	12220	41270	49365	35634	14845
27	10525	4482	7102	2916	5061	4590	3801	14982	41131	49510	35660	14677
28	10740	4617	7212	2871	5215	4303	3712	16483	41131	49672	35679	14520
29	10915	4756	7267	2954	---	4056	3594	18063	41311	49710	35679	14389
30	11379	4905	7317	2954	---	3860	3512	19412	42023	49803	34327	14313
31	11618	---	7367	3067	---	3934	---	20680	---	49803	33545	---
MAX	11618	11929	7367	7787	5215	6317	4127	20680	42023	49803	49772	32788
MIN	3089	4048	5005	2871	3118	3860	3177	3250	21356	42721	33545	14313
a	49.55	29.05	37.43	21.95	30.16	25.42	23.75	69.02	103.89	114.47	91.15	55.96
b	+8343	-6713	+2462	-4300	+2148	-1281	-422	+17168	+21343	+7780	-16258	-19232

CAL YR 1982 b -32437
WTR YR 1983 b +11038

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11414100 FORDYCE CREEK BELOW FORDYCE DAM, NEAR CISCO, CA

LOCATION.--Lat 39°22'45", long 102°29'52", in NW 1/4 SE 1/4 sec.34, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 850 ft downstream from Fordyce Dam, and 5.3 mi northeast of Cisco.

DRAINAGE AREA.--31.7 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 6,250 ft, from topographic map.

REMARKS.--Flow regulated by Fordyce Lake (station 11414090). 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.--17 years, 139 ft³/s, 100,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,660 ft³/s July 9, 1974, gage height, 7.90 ft in gage well, 6.82 ft from high-water marks, from rating curve extended above 1,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 3.5 ft³/s Jan. 2-9, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft³/s June 24, gage height, 4.88 ft; minimum daily, 5.4 ft³/s several days in November, January, and February.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	40	6.0	8.3	5.4	7	142	95	425	603	358	462
2	87	40	6.0	8.3	5.4	7	142	95	432	811	509	458
3	87	40	6.0	8.3	5.4	7	139	30	438	837	508	455
4	87	139	6.0	8.3	5.4	7	139	12	444	851	508	453
5	87	316	6.0	8.3	5.4	7	137	12	444	815	408	447
6	87	310	6.0	8.3	5.4	7	109	12	450	781	297	446
7	69	310	6.0	8.3	5.6	7	68	12	457	817	293	444
8	59	304	6.3	8.3	5.8	39	68	12	460	630	346	437
9	59	304	6.3	8.3	5.8	89	68	71	464	430	462	435
10	56	299	6.3	41	5.8	89	68	156	475	335	519	432
11	55	293	6.3	158	5.8	111	68	156	478	342	400	425
12	51	304	6.3	158	6.5	148	68	154	483	354	203	424
13	45	304	6.5	212	7.0	163	30	154	489	502	202	417
14	42	304	6.5	316	6.5	153	8.9	156	492	587	201	416
15	38	299	6.5	304	6.5	156	8.6	158	495	776	381	411
16	36	287	6.5	293	6.5	153	8.6	160	497	862	507	408
17	34	281	7.0	287	6.3	156	8.9	163	501	748	505	408
18	33	287	7.0	176	6.5	156	8.9	218	505	571	503	401
19	33	276	7.0	103	6.5	153	9.9	310	506	417	497	400
20	33	270	7.2	103	6.5	153	48	310	549	311	492	396
21	32	270	8.3	103	6.5	153	105	322	661	281	494	389
22	30	60	8.3	103	6.5	153	103	334	871	180	490	386
23	34	5.4	8.6	101	6.5	151	103	340	1070	189	489	380
24	34	5.4	8.3	100	6.5	151	103	352	1160	368	487	381
25	45	5.4	8.3	100	6.5	148	103	364	1160	301	483	377
26	45	5.4	8.3	98	6.5	146	103	382	1170	251	311	461
27	43	5.4	8.3	98	6.5	144	101	388	1140	206	181	597
28	39	5.6	8.3	28	6.7	144	101	401	1060	238	181	594
29	39	6.0	8.3	5.4	---	144	101	407	762	257	343	595
30	40	6.0	8.3	5.4	---	142	98	419	495	258	468	596
31	40	---	8.3	5.4	---	144	---	419	---	263	467	---
TOTAL	1645	5381.6	219.3	2972.9	172.2	3388	2368.8	6574	19033	15172	12493	13331
MEAN	53.1	179	7.07	95.9	6.15	109	79.0	212	634	489	403	444
MAX	146	316	8.6	316	7.0	163	142	419	1170	862	519	597
MIN	30	5.4	6.0	5.4	5.4	7.0	8.6	12	425	180	181	377
AC-FT	3260	10670	435	5900	342	6720	4700	13040	37750	30090	24780	26440
CAL YR 1982	TOTAL	93552.9	MEAN	256	MAX	1150	MIN	5.4	AC-FT	185600		
WTR YR 1983	TOTAL	82750.8	MEAN	227	MAX	1170	MIN	5.4	AC-FT	164100		

11414140 LAKE SPAULDING NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'35", long 120°38'32", in SE 1/4 NE 1/4 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 northeast of Emigrant Gap.

DRAINAGE AREA.--118 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 4,809.6 ft 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 between gage heights 0.6 ft, bottom of outlet and 205.0 ft, 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 diagram 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 July 13, 1967, gage height, 205.5 ft; minimum, 914 acre-ft Feb. 28, 1976, gage height, 25.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,829 acre-ft July 12, gage height, 205.08 ft; minimum, 5,606 acre-ft Feb. 27, 28, gage height, 54.76 ft.

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 1982 TO SEPTEMBER 1983
 INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56294	50550	47560	33896	17633	6910	22486	20002	64958	73764	73459	63572
2	55572	49961	47005	33005	16732	7400	22695	19641	64655	73660	73819	63521
3	54795	49257	46430	32089	15853	7410	22506	19604	65164	73729	74132	63356
4	54041	48809	45864	31163	15002	7149	22205	19906	65462	74145	74368	63190
5	53281	48731	45340	30278	14068	6912	21868	19950	65384	74215	74445	63000
6	52538	48592	44748	29364	13261	6664	21529	19641	65449	74285	74215	62797
7	51783	48397	44134	28486	12956	6825	21048	19450	65164	74006	73958	62588
8	50976	48219	43481	27667	12943	7025	20691	19516	65042	73715	73694	62360
9	50108	47969	42854	26887	12396	7339	20496	19578	65767	73618	73639	62108
10	49212	47726	42236	26051	11724	8118	20206	19839	66764	73798	73667	61919
11	48336	47395	41597	25610	11192	9053	19725	19983	67480	74424	73507	61674
12	47483	47070	41029	25023	10242	10170	19140	20552	67013	74829	72598	62139
13	46796	46714	40465	24579	10862	19439	18488	21441	67066	74773	71723	61825
14	45523	46370	39803	24294	11739	21849	17732	22707	67341	74773	70659	61511
15	44646	45989	39070	23971	11140	22936	16983	24732	67651	74661	69738	61160
16	43772	45648	38339	23701	10513	23492	16411	26634	68140	74591	69203	60854
17	43932	45377	38260	23378	10008	23784	16027	28322	69684	74487	68597	60469
18	41955	48988	37759	23084	9632	23856	15798	30603	69698	74347	67915	60097
19	40978	49972	37158	22591	9114	23765	15894	34113	69237	74529	67328	61179
20	39975	50124	37305	21948	8532	23654	16442	38384	69745	74347	67190	62360
21	38970	50130	39121	21316	7924	23488	16729	42822	71118	74111	67144	63540
22	38011	50136	40317	21237	7389	23296	17049	47334	72351	74201	67184	64751
23	38324	49707	40700	20995	7028	23026	18733	52042	72598	74006	67157	65910
24	38900	49167	40337	22037	6704	22761	19571	57191	72378	74187	67033	67098
25	44438	48531	39656	21754	6391	22382	20676	62518	73369	74187	66934	68266
26	50669	47848	39101	21426	6023	21975	20597	64835	73404	74813	66503	69290
27	50834	47500	38315	21218	5606	21590	20399	65949	73231	73750	65721	69986
28	50504	47340	37418	20691	5606	21127	20399	65988	73183	73584	64603	70483
29	50011	48047	36829	20054	---	20601	20489	66014	73452	73514	64007	66974
30	50936	47997	35747	19267	---	20165	20351	65708	73833	73514	63789	69678
31	51028	---	34814	18474	---	21971	---	65598	---	73494	63630	---
MAX	56294	50550	47560	33896	17633	23856	22695	66014	73833	74829	74445	70483
MIN	38011	45377	34814	18474	5606	6664	15798	19450	64655	73494	63630	60097
a	167.43	162.04	136.45	97.06	54.76	106.48	102.19	191.36	203.66	203.16	188.30	197.55
b	-5759	-3031	-13183	-16340	-12868	+16365	-1620	+45247	+8235	-339	-9864	+6048

CAL YR 1982 b -27565

WTR YR 1983 b +12891

a Gage height, in feet, at end of month.

b 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 SE 1/4 SW 1/4 sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, 100 ft downstream from tunnel outlet, 1.0 mi downstream from Spaulding No. 1 powerhouse, and 1.7 mi 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, from topographic map. Prior to Oct. 1, 1968, in powerhouse 0.7 mi 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.--19 years, 539 ft³/s, 390,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 858 ft³/s July 4, 1978; no flow for several days in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	832	813	785	790	760	713	829	827	827	818	802	807
2	835	812	791	783	773	737	818	830	828	817	800	806
3	838	812	790	776	766	739	827	830	830	817	800	808
4	833	807	788	783	733	734	823	827	823	821	801	808
5	828	807	785	796	780	726	783	824	827	818	804	809
6	832	804	796	799	764	725	767	819	828	818	802	808
7	823	803	792	795	750	712	803	829	828	822	801	807
8	817	794	786	797	756	731	831	829	828	821	802	807
9	823	803	785	794	769	739	827	830	827	826	803	806
10	829	803	780	784	735	745	829	831	825	827	800	807
11	825	801	783	797	772	758	832	830	821	826	801	811
12	819	803	798	798	743	749	837	828	828	825	800	815
13	824	809	759	795	734	599	836	830	828	827	797	825
14	827	808	795	795	754	713	831	827	824	825	799	825
15	821	806	799	792	771	761	829	827	827	823	803	835
16	814	790	793	787	780	763	830	826	827	823	799	837
17	814	812	759	792	774	746	835	823	825	823	801	842
18	811	748	765	790	758	754	832	825	823	823	806	840
19	819	781	783	783	766	756	834	828	823	824	807	40
20	820	807	771	758	785	752	825	830	819	822	805	0
21	817	804	694	765	777	747	827	830	711	824	804	0
22	809	799	642	749	758	746	832	828	817	824	802	0
23	802	798	715	744	742	741	198	823	827	825	805	0
24	811	796	747	708	727	741	426	829	825	825	808	0
25	790	803	755	740	712	743	160	828	827	825	809	0
26	774	805	768	732	697	746	696	826	825	825	810	0
27	808	802	785	720	679	746	737	827	823	824	808	0
28	814	779	779	736	659	743	796	826	821	811	808	242
29	810	766	773	730	---	767	829	823	817	799	808	720
30	797	764	770	733	---	811	829	823	824	800	806	800
31	811	---	783	736	---	816	---	828	---	801	808	---
TOTAL	25327	23939	23894	23877	20974	22999	22788	25641	24633	25429	24909	16505
MEAN	817	798	771	770	749	742	760	827	821	820	804	550
MAX	838	813	799	799	785	816	837	831	830	827	810	842
MIN	774	748	642	708	659	599	160	819	711	799	797	0
AC-FT	50240	47480	47390	47360	41600	45620	45200	50860	48860	50440	49410	32740
CAL YR 1982	TOTAL	282567.9	MEAN	774	MAX	851	MIN	0	AC-FT	560500		
WTR YR 1983	TOTAL	280915	MEAN	770	MAX	842	MIN	0	AC-FT	557200		

11414190 DRUM CANAL ABOVE DRUM FOREBAY, NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'50", long 120°43'47", in NE 1/4 SW 1/4 sec.10, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on right bank 1.2 mi west of Blue Canyon, and 1.5 mi upstream from Drum Forebay.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft, 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 Afterbay. 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.--19 years, 544 ft³/s, 394,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 856 ft³/s May 8, 1982; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	842	826	824	839	800	799	787	789	838	846	844	829
2	841	823	829	831	823	814	781	804	836	846	842	828
3	843	823	826	824	813	803	794	819	838	847	842	828
4	844	836	825	829	781	791	811	820	841	849	842	830
5	840	835	822	839	824	785	800	813	841	849	844	829
6	838	830	834	842	812	782	805	814	842	850	844	828
7	836	827	835	839	816	783	816	831	842	845	843	828
8	832	821	826	841	818	793	819	832	842	834	842	827
9	833	832	825	839	826	796	833	831	841	837	841	826
10	838	832	823	831	813	809	833	829	841	837	840	825
11	836	830	827	841	819	818	835	831	838	838	838	819
12	835	828	838	842	823	830	838	833	841	837	836	423
13	836	831	805	839	809	789	839	837	842	836	834	807
14	838	829	835	838	810	789	835	834	841	835	832	805
15	834	828	836	836	819	816	833	834	843	836	834	811
16	830	813	832	826	826	814	833	834	843	837	832	812
17	828	839	818	824	821	795	838	830	842	837	832	815
18	827	826	813	828	812	798	836	835	842	836	837	813
19	825	816	824	822	812	798	832	832	844	837	837	113
20	814	838	836	814	827	795	832	836	842	837	834	13
21	813	836	806	813	820	789	817	834	744	837	833	12
22	808	834	749	813	804	789	810	839	837	837	832	12
23	810	833	786	795	790	786	115	838	840	835	833	11
24	812	828	800	798	782	784	226	833	837	825	835	11
25	819	831	803	796	775	782	136	831	839	836	835	11
26	802	827	813	790	761	785	750	828	837	828	834	9.0
27	820	830	832	778	748	786	791	837	841	835	831	7.8
28	822	833	826	786	740	784	804	840	843	838	829	115
29	818	823	815	781	---	783	796	841	845	844	828	748
30	828	814	819	780	---	781	794	839	846	844	828	826
31	828	---	827	780	---	788	---	838	---	844	831	---
TOTAL	25670	24852	25409	25374	22524	24634	22469	25716	25129	26009	25919	16271.8
MEAN	828	828	820	819	804	795	749	830	838	839	836	542
MAX	844	839	838	842	827	830	839	841	846	850	844	830
MIN	802	813	749	778	740	781	115	789	744	825	828	7.8
AC-FT	50920	49290	50400	50330	44680	48860	44570	51010	49840	51590	51410	32280
CAL YR 1982	TOTAL	285756.0	MEAN	783	MAX	856	MIN	0	AC-FT	566800		
WTR YR 1983	TOTAL	289976.8	MEAN	794	MAX	850	MIN	7.8	AC-FT	575200		

11414200 SOUTH YUBA CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°18'45", long 120°39'45", in SE 1/4 NE 1/4 sec.30, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank of concrete flume 400 ft downstream from Bowman Lake Road, and 2.5 mi 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, from topographic map.

REMARKS.--Canal diverts from Spaulding No. 2 powerhouse at Lake Spaulding Dam. Downstream from the gage some flow is diverted to Boardman Canal (station 11421720) via the Bear River. The remainder of the water enters Deer Creek at Deer Creek powerhouse. 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.--19 years, 95.0 ft³/s, 68,830 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 165 ft³/s Aug. 3, 1965; no flow Apr. 20-22, 1966 and Apr. 6-11, 1971.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	60	46	130	127	40	131	129	122	133	85	89
2	40	61	41	129	125	39	130	128	129	132	85	89
3	40	60	39	128	125	38	131	130	129	134	85	89
4	40	60	39	127	123	38	131	132	129	135	85	87
5	40	60	38	126	120	38	130	133	129	135	85	85
6	40	60	38	134	121	36	130	132	129	136	85	88
7	40	60	37	140	125	36	130	132	129	135	85	89
8	43	60	37	139	123	35	132	131	132	135	85	89
9	55	61	37	136	124	35	133	132	133	135	85	89
10	55	61	37	135	121	37	134	136	134	136	87	89
11	55	61	36	134	119	37	133	138	134	136	89	89
12	55	61	38	136	122	35	132	136	134	135	89	89
13	55	60	43	140	119	72	131	139	134	135	89	89
14	56	60	37	141	122	57	129	139	133	134	88	90
15	55	59	37	141	120	58	130	140	133	134	89	91
16	55	55	40	135	89	130	134	138	134	134	91	91
17	55	54	43	136	33	129	130	138	130	134	90	90
18	55	45	40	140	58	127	129	138	130	134	92	90
19	55	40	39	135	51	129	129	139	134	134	94	89
20	55	39	40	141	37	129	132	138	133	134	94	92
21	55	36	58	141	36	131	132	138	134	134	95	99
22	55	39	58	130	36	130	125	137	134	134	95	101
23	52	41	56	127	36	130	87	137	134	134	95	97
24	55	43	74	127	34	130	124	138	134	126	94	101
25	54	43	97	128	47	130	130	138	134	135	91	102
26	47	42	96	128	55	130	126	138	133	135	90	101
27	51	42	113	127	55	131	128	138	135	135	90	99
28	62	44	129	126	50	130	130	138	130	135	90	97
29	62	45	128	125	---	129	130	137	131	112	91	80
30	56	49	139	130	---	130	130	134	133	85	90	86
31	55	---	131	129	---	124	---	130	---	85	90	---
TOTAL	1588	1561	1861	4121	2453	2700	3863	4201	3956	4040	2768	2746
MEAN	51.2	52.0	60.0	133	87.6	87.1	129	136	132	130	89.3	91.5
MAX	62	61	139	141	127	131	134	140	135	136	95	102
MIN	40	36	36	125	33	35	87	128	122	85	85	80
AC-FT	3150	3100	3690	8170	4870	5360	7660	8330	7850	8010	5490	5450
CAL YR 1982	TOTAL	37375	MEAN	102	MAX	143	MIN	18	AC-FT	74130		
WTR YR 1983	TOTAL	35858	MEAN	98.2	MAX	141	MIN	33	AC-FT	71120		

11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'07", long 120°39'27", in SW 1/4 SW 1/4 sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank 150 ft downstream from road bridge, 0.8 mi downstream from Spaulding Nos. 1 and 2 powerplants, and 1.6 mi northeast of Emigrant Gap.

DRAINAGE AREA.--120 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 4,432.44 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow regulated by Lake Spaulding (station 11414140). See schematic diagram 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.--17 years (water years 1967-83), 102 ft³/s, 73,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s Jan. 13, 1980, gage height, 19.6 ft, from floodmarks; minimum daily, 2.1 ft³/s on several days during July and September 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,870 ft³/s May 29, gage height, 11.11 ft; minimum daily, 4.9 ft³/s Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	9.3	22	8.9	12	110	47	33	3160	1980	5.8	7.0
2	5.6	6.8	17	8.4	11	91	49	27	2270	3170	5.6	7.6
3	5.3	6.1	16	8.0	9.8	45	37	25	2290	2000	5.8	7.5
4	5.1	6.2	16	8.0	9.3	30	31	26	2910	1380	6.3	5.9
5	5.1	6.0	16	8.2	8.8	33	28	31	3160	1390	6.4	5.4
6	5.3	5.7	16	8.6	10	29	26	30	3090	1490	6.5	5.7
7	5.6	5.5	14	8.6	60	53	24	24	3170	2050	6.3	7.6
8	5.7	5.3	11	8.6	54	46	21	22	2790	1370	5.9	14
9	5.3	5.3	11	8.7	39	35	20	21	2410	849	5.8	14
10	5.1	5.3	11	8.4	33	51	19	19	2600	418	5.9	14
11	5.1	5.3	11	8.4	24	61	19	14	3460	389	5.9	14
12	5.1	5.3	11	8.3	90	78	15	13	2890	658	5.8	13
13	5.1	5.2	11	8.0	87	282	14	13	2510	1140	5.7	13
14	6.0	5.0	11	7.8	37	139	13	13	2680	1300	5.5	13
15	6.0	4.9	9.8	7.5	21	119	11	20	2840	1370	5.6	13
16	6.0	5.9	9.3	7.7	19	41	12	29	2360	1310	5.9	5.4
17	5.9	9.0	39	8.0	17	38	15	34	2150	965	5.7	5.6
18	6.0	123	19	11	24	37	21	27	2650	763	5.9	5.6
19	6.9	49	14	14	21	31	24	25	2380	325	6.1	12
20	5.9	22	52	11	17	29	34	39	1660	282	6.0	15
21	5.9	15	161	9.4	15	30	27	50	1590	233	6.2	11
22	6.7	19	128	44	17	30	28	50	2090	148	5.8	9.2
23	14	18	70	28	17	29	69	57	3200	106	6.0	9.2
24	11	13	29	110	17	28	48	61	3370	96	5.4	9.2
25	77	11	21	33	19	26	40	62	2370	116	5.6	9.2
26	65	9.6	17	28	22	19	30	1730	3040	109	6.4	7.3
27	16	8.8	15	36	32	20	35	3760	3040	50	6.0	5.1
28	11	35	14	21	68	19	73	4150	2630	12	5.9	5.6
29	9.2	74	12	18	---	18	56	4230	2080	5.8	5.9	8.6
30	17	37	11	15	---	27	45	3850	1560	5.6	5.9	12
31	12	---	9.5	13	---	76	---	3660	---	5.6	6.6	---
TOTAL	356.6	536.5	824.6	531.5	810.9	1700	931	22145	78400	25486.0	184.1	284.7
MEAN	11.5	17.9	26.6	17.1	29.0	54.8	31.0	714	2613	822	5.94	9.49
MAX	77	123	161	110	90	282	73	4230	3460	3170	6.6	15
MIN	5.1	4.9	9.3	7.5	8.8	18	11	13	1560	5.6	5.4	5.1
AC-FT	707	1060	1640	1050	1610	3370	1850	43920	155500	50550	365	565

CAL YR 1982 TOTAL 102338.3 MEAN 280 MAX 2980 MIN 4.9 AC-FT 203000
WTR YR 1983 TOTAL 132190.9 MEAN 362 MAX 4230 MIN 4.9 AC-FT 262200

11415500 BOWMAN LAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°27'01", long 120°39'10", in SE 1/4 SW 1/4 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 east of Graniteville, and 8 mi south of Sierra City.

DRAINAGE AREA.--27.1 mi².

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 between elevations 5,400 ft, bottom of outlet tunnel and 5,563 ft, crest of concrete-arch dam. Flashboards are occasionally added, increasing elevation to 5,565.8 ft and capacity to 70,400 acre-ft, 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-Spaulding 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, Sept. 21-30, 1981.

COOPERATION.--Selected gage-height readings furnished by Nevada Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,000 acre-ft May 30, 1965, elevation 5,566.5 ft; minimum observed under normal operating conditions since reservoir first filled, 1,000 acre-ft Mar. 4, 1931, elevation, 5,430.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 68,000 acre-ft July 24-29, elevation, 5,562.8 ft; minimum, 34,400 acre-ft, elevation, 5517.4 ft May 10-12.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48200	55200	54800	46200	36100	35100	39400	35000	62300	66800	67600	57200
2	48300	55300	54500	45800	35800	35300	39500	34800	63500	67200	67500	56800
3	48300	55500	54300	45400	35500	35300	39400	34700	64800	67000	67300	56200
4	48400	55600	53900	45000	35300	35200	39200	34700	65600	66800	67100	55600
5	48500	55700	53500	44600	35000	35200	39000	34700	66000	66800	66800	55100
6	48500	55800	53100	44100	34900	35100	38700	34700	66000	66800	66600	54600
7	48600	55800	52600	43700	35000	35100	38300	34600	66000	66500	66200	54400
8	48600	55900	52200	43300	35200	35000	38100	34600	66000	66100	65800	54300
9	48600	55900	51800	42900	35200	34900	37900	34500	66000	65800	65600	54100
10	48600	56000	51300	42400	35200	34900	37600	34400	66200	65600	65200	54000
11	48600	56000	50800	42000	35200	35000	37400	34400	66300	65500	64800	53900
12	48700	56000	50400	41500	35200	35300	37100	34400	66000	65600	64400	53800
13	48700	56100	50000	41100	35200	38500	36900	34600	65900	66000	63900	53600
14	48700	56200	49400	40700	35300	39700	36600	34900	66000	66300	63900	53500
15	48700	56200	49100	40200	35300	40300	36300	35300	66000	66500	63900	53300
16	48700	56200	48700	39800	35300	40600	36000	35800	65900	66700	64000	53200
17	48700	56100	48500	39400	35300	40800	35800	36400	66000	66800	64100	53100
18	48700	57100	48100	39100	35300	40800	35600	37000	65900	67000	64200	53000
19	48700	57300	47700	38800	35300	40800	35500	38200	65700	67200	64000	52800
20	48700	57200	47600	38400	35300	40600	35600	39600	65500	67400	63600	52700
21	48800	56800	48300	38000	35200	40500	35600	41200	65700	67600	63100	52500
22	48800	56700	48800	37800	35000	40400	35600	42900	66400	67700	62600	52400
23	49000	56400	49000	37700	34900	40300	35700	44600	66800	67900	62100	52300
24	49200	56000	48900	38000	34800	40100	35800	46300	67100	68000	61600	52100
25	50800	55700	48700	37800	34700	40000	35600	48000	67200	68000	61200	52000
26	52900	55300	48400	37600	34700	39900	35500	50000	67200	68000	60600	51900
27	53600	54800	48100	37500	34700	39600	35300	52300	67200	68000	60100	51700
28	53800	54800	47800	37200	34700	39300	35300	54600	67200	68000	59600	51600
29	54000	54900	47400	37000	---	39000	35300	56900	67100	68000	58900	51600
30	54600	55000	47000	36800	---	38700	35200	59000	66900	67900	58400	51700
31	55000	---	46600	36500	---	39200	---	60800	---	67700	57800	---
MAX	55000	57300	54800	46200	36100	40800	39500	60800	67200	68000	67600	57200
MIN	48200	54800	46600	36500	34700	34900	35200	34400	62300	65500	57800	51600
a	5546.5	5546.5	5535.4	5520.8	5517.9	5524.9	5518.6	5553.8	5561.4	5562.4	5550.0	5542.0
b	+6800	0	-8400	-10100	-1800	+4500	-4000	+25600	+6100	+800	-9900	-6100
CAL YR 1982	b	-17700										
WTR YR 1983	b	+35500										

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

11416000 BOWMAN-SPAULDING CANAL INTAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°26'26", long 102°39'30", in NW 1/4 SW 1/4 sec.8, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 0.6 mi downstream from Bowman Dam, 4.5 mi east of Graniteville, and 8.5 mi 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 National Geodetic Vertical Datum of 1929. Prior to July 1965 at site 0.3 mi upstream at different datum.

REMARKS.--Records good. Canal diverts from left bank of Canyon Creek at diversion dam 500 ft 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 schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--56 years, 160 ft³/s, 115,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 339 ft³/s July 24, 1973; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	276	249	262	254	250	184	218	54	154	288	300
2	282	285	258	263	263	229	214	233	55	174	288	296
3	282	290	261	262	279	227	238	233	56	174	288	299
4	282	291	261	265	284	246	237	229	56	173	287	299
5	282	292	260	266	283	246	242	229	55	173	291	298
6	280	293	269	268	275	246	245	227	55	172	295	301
7	280	293	275	280	229	248	245	227	54	172	298	304
8	280	295	276	279	197	247	245	227	54	193	300	310
9	281	296	276	278	235	247	245	227	53	210	299	306
10	280	297	276	277	238	221	244	227	54	209	298	297
11	281	298	275	276	238	202	244	219	54	231	297	300
12	286	299	277	275	219	196	250	205	53	234	300	300
13	291	300	279	274	207	147	254	193	52	227	304	300
14	292	301	279	274	239	178	254	193	52	229	100	300
15	292	301	281	274	239	206	260	193	52	233	22	301
16	293	301	283	273	239	188	266	180	51	233	9.7	301
17	294	298	286	273	243	201	266	150	51	233	0	301
18	294	254	282	268	248	216	251	122	51	242	0	301
19	295	233	281	251	247	216	230	103	53	248	170	301
20	296	248	261	268	247	216	199	99	99	248	305	307
21	301	262	131	287	247	216	193	92	109	248	303	312
22	306	251	141	238	248	222	220	58	109	249	301	309
23	304	247	157	211	247	226	232	46	110	255	299	308
24	291	260	229	167	247	226	231	38	110	263	297	308
25	244	259	230	212	247	234	231	41	110	264	300	308
26	169	259	235	252	247	240	230	42	110	264	300	307
27	263	274	245	247	247	240	245	43	110	264	300	307
28	299	276	255	236	248	249	217	45	75	270	302	295
29	291	221	255	236	---	257	210	48	130	276	300	289
30	279	228	259	243	---	249	219	49	138	282	285	281
31	271	---	263	249	---	169	---	52	---	289	302	---
TOTAL	8743	8278	7845	7984	6881	6901	7041	4488	2225	7086	7728.7	9046
MEAN	282	276	253	258	246	223	235	145	74.2	229	249	302
MAX	306	301	286	287	284	257	266	233	138	289	305	312
MIN	169	221	131	167	197	147	184	38	51	154	0	281
AC-FT	17340	16420	15560	15840	13650	13690	13970	8900	4410	14060	15330	17940
CAL YR 1982	TOTAL	82639.0	MEAN	226	MAX	319	MIN	.10	AC-FT	163900		
WTR YR 1983	TOTAL	84246.7	MEAN	231	MAX	312	MIN	0	AC-FT	167100		

11416100 BOWMAN-SPAULDING CANAL AT JORDAN CREEK SIPHON VENTURI, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°20'32", long 120°38'26", in SW 1/4 NW 1/4 sec. 16, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, at outlet of Jordan Creek siphon 0.6 mi downstream from Fuller Lake, and 3.5 mi northeast of Emigrant Gap.

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

GAGE.--Water-stage recorder and Venturi section. Altitude of gage is 5,440 ft, 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.--19 years, 227 ft³/s, 164,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 331 ft³/s Dec. 30, 1981; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	307	304	307	302	325	314	311	322	300	305	318
2	305	304	299	305	297	325	297	300	321	312	304	317
3	305	304	297	303	298	313	300	312	317	315	307	316
4	303	304	303	302	301	313	303	318	320	312	301	315
5	303	304	302	303	304	313	303	320	321	315	302	313
6	304	305	300	303	306	312	313	317	320	315	302	312
7	304	305	303	307	309	316	307	317	319	307	302	313
8	305	306	304	310	296	323	307	318	319	302	303	314
9	304	307	306	306	297	322	307	318	319	305	304	315
10	301	307	304	303	296	319	307	318	319	305	304	313
11	300	309	304	302	298	325	307	312	320	303	303	313
12	300	308	305	301	308	324	307	315	319	306	300	311
13	303	304	307	301	325	320	307	312	318	310	301	311
14	304	305	307	301	321	273	310	316	318	305	239	310
15	304	304	305	300	313	314	310	320	318	306	110	310
16	305	303	304	299	305	319	310	317	317	306	59	309
17	304	304	316	299	304	303	307	320	316	311	11	309
18	301	320	320	300	313	304	307	320	318	305	0	309
19	306	317	316	298	311	300	310	323	312	302	40	308
20	304	303	317	288	311	306	307	325	308	302	232	308
21	305	305	330	298	308	310	310	325	315	304	285	308
22	309	309	306	306	305	307	307	324	317	304	310	309
23	318	301	310	275	303	308	310	324	318	301	308	311
24	316	305	311	309	303	307	290	324	318	295	307	311
25	317	307	309	282	306	303	290	325	317	301	303	309
26	315	302	305	297	311	301	310	325	315	300	306	308
27	288	298	299	310	309	301	310	325	313	302	308	308
28	312	317	303	301	310	300	310	325	287	300	310	308
29	315	325	306	297	---	301	303	324	297	297	311	304
30	319	311	305	298	---	305	315	324	303	298	309	319
31	316	---	306	300	---	317	---	324	---	301	308	---
TOTAL	9500	9210	9513	9311	8570	9629	9195	9898	9461	9447	7994	9339
MEAN	306	307	307	300	306	311	306	319	315	305	258	311
MAX	319	325	330	310	325	325	315	325	322	315	311	319
MIN	288	298	297	275	296	273	290	300	287	295	0	304
AC-FT	18840	18270	18870	18470	17000	19100	18240	19630	18770	18740	15860	18520
CAL YR 1982	TOTAL	106019.9	MEAN	290	MAX	330	MIN	0	AC-FT	210300		
WTR YR 1983	TOTAL	110067	MEAN	304	MAX	330	MIN	0	AC-FT	220300		

11416500 CANYON CREEK BELOW BOWMAN LAKE, CA

LOCATION.--Lat 39°26'23", long 120°39'39", in NE 1/4 SE 1/4 sec.7, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank 1 mi downstream from Bowman Dam, 3 mi upstream from Texas Creek, and 9 mi south of Sierra City.

DRAINAGE AREA.--28.3 mi².

PERIOD OF RECORD.--January 1927 to current year.

REVISED RECORDS.--WSP 1315-A: 1930(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,100 ft, from topographic map.

REMARKS.--Records good. Flow regulated by French Lake, usable capacity, 13,840 acre-ft, Bowman Lake (station 11415500), several smaller reservoirs, and diversion into Bowman-Spaulding Canal (station 11416000). See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--56 years, 35.9 ft³/s, 26,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,740 ft³/s Jan. 22, 1970, gage height, 9.42 ft in gage well, 10.32 ft from floodmarks, from rating curve extended above 1,500 ft³/s on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 887 ft³/s June 11, gage height, 6.44 ft; minimum daily, 1.6 ft³/s Jan. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.8	3.9	1.7	2.4	13	4.9	5.1	5.4	401	3.8	4.5
2	3.0	2.5	3.4	1.6	2.3	8.3	4.7	5.6	5.0	452	3.8	4.3
3	2.9	2.4	3.4	1.6	2.2	5.6	3.5	7.3	28	449	3.6	4.3
4	2.7	2.3	3.4	1.6	2.2	4.3	3.3	7.3	342	406	3.7	4.2
5	2.5	2.2	3.4	1.7	2.1	4.0	3.7	6.2	582	394	3.8	3.9
6	3.8	2.2	3.5	2.3	2.2	4.1	3.7	5.7	646	397	3.8	4.0
7	4.8	2.1	2.8	2.9	8.4	7.9	4.0	6.4	673	378	3.8	4.0
8	4.5	2.2	2.5	3.1	7.8	7.2	4.6	6.6	662	316	3.8	4.0
9	4.5	2.2	2.4	2.9	4.0	6.5	4.8	6.3	620	251	3.8	3.9
10	4.4	2.2	2.6	2.7	3.7	11	4.4	6.0	643	198	3.7	3.7
11	4.4	2.1	2.5	2.8	3.4	7.9	4.1	6.2	846	94	3.7	3.8
12	4.3	2.1	2.4	2.8	15	13	3.7	7.1	734	4.1	3.9	3.7
13	3.9	2.1	2.5	2.6	9.2	46	3.5	7.7	612	5.7	4.5	3.6
14	3.8	2.1	2.3	2.5	4.3	6.5	3.4	8.0	592	8.1	4.9	3.6
15	3.7	2.1	2.1	2.5	3.3	4.4	3.5	9.7	634	6.8	7.4	3.0
16	3.7	2.0	2.0	2.7	3.0	3.5	4.1	8.1	611	6.7	8.1	2.8
17	3.7	3.4	6.1	2.9	3.0	3.2	4.9	8.4	615	6.4	17	2.8
18	3.7	24	3.1	3.4	4.3	2.9	5.9	9.0	651	5.2	17	2.8
19	3.7	6.2	2.5	3.5	3.4	2.6	7.8	11	549	5.1	11	2.7
20	3.4	4.1	10	2.9	2.9	2.5	7.9	12	469	5.2	5.2	2.8
21	3.5	3.4	17	2.7	2.7	2.5	6.2	11	318	5.0	5.0	2.8
22	3.6	3.9	14	6.0	3.0	2.6	6.5	10	231	4.4	4.9	2.8
23	6.4	4.5	7.0	5.1	3.7	2.4	6.5	10	335	4.3	4.9	2.8
24	6.4	3.7	3.9	17	3.6	2.5	5.2	8.9	418	4.3	4.8	2.7
25	23	3.2	3.0	4.8	3.3	2.2	4.4	9.0	439	4.3	4.7	2.7
26	12	2.9	2.6	4.1	2.9	2.1	4.1	8.6	432	4.2	4.5	2.7
27	4.5	3.1	2.4	4.3	2.9	2.1	4.5	8.0	438	4.2	4.5	2.7
28	3.5	11	2.3	3.2	5.3	2.0	5.6	7.4	436	4.2	4.5	3.1
29	3.1	9.6	2.1	3.0	---	2.0	5.6	6.9	422	4.2	4.5	3.2
30	6.3	5.2	1.9	2.6	---	3.5	5.7	6.2	406	3.8	4.3	4.5
31	3.5	---	1.8	2.5	---	13	---	5.6	---	3.8	4.5	---
TOTAL	150.4	123.8	124.8	106.0	116.5	201.3	144.7	241.3	14394.4	3836.0	171.4	102.4
MEAN	4.85	4.13	4.03	3.42	4.16	6.49	4.82	7.78	480	124	5.53	3.41
MAX	23	24	17	17	15	46	7.9	12	846	452	17	4.5
MIN	2.5	2.0	1.8	1.6	2.1	2.0	3.3	5.1	5.0	3.8	3.6	2.7
AC-FT	298	246	248	210	231	399	287	479	28550	7610	340	203
CAL YR 1982	TOTAL	29964.7	MEAN	82.1	MAX	1150	MIN	1.8	AC-FT	59430		
WTR YR 1983	TOTAL	19713.0	MEAN	54.0	MAX	846	MIN	1.6	AC-FT	39100		

11417500 SOUTH YUBA RIVER AT JONES BAR, NEAR GRASS VALLEY, CA

LOCATION.--Lat 39°17'32", long 121°06'13", in NW 1/4 SE 1/4 sec.32, T.17 N., R.8 E., Nevada County, Hydrologic Unit 18020125, on left bank at Jones Bar, 100 ft upstream from Rush Creek, 0.9 mi downstream from bridge on State Highway 49, and 5 mi northwest of Grass Valley.

DRAINAGE AREA.--308 mi².

PERIOD OF RECORD.--October 1940 to September 1948, April 1959 to current year. Published as South Fork Yuba River at Jones Bar 1940-48, and as South Yuba River at Jones Bar 1959-63.

REVISED RECORDS.--WSP 1315-A: 1942-43(M), drainage area at former site. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,060 ft, from river-profile map. Oct. 1, 1940, to Sept. 30, 1948, at site 150 ft upstream at datum 2.00 ft higher.

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 by the Nevada Irrigation District. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--32 years, 476 ft³/s, 344,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,600 ft³/s Dec. 22, 1964, gage height, 25.0 ft from floodmarks, from rating curve extended above 23,000 ft³/s on basis of slope-area measurement of maximum flow; minimum, 1.0 ft³/s Sept. 10-13, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 30.7 ft from floodmarks, present datum, at site 100 ft upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,400 ft³/s Mar. 13, gage height, 14.14 ft; minimum daily, 57 ft³/s Sept. 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	196	892	393	852	5210	1330	1500	3610	2070	99	78
2	65	133	554	368	756	4740	1320	1220	2570	3270	96	79
3	64	117	433	348	682	3200	1170	1090	2350	2560	94	75
4	63	109	406	331	619	2370	1050	1050	3150	2200	92	72
5	62	104	381	319	607	2070	959	1100	3990	2780	90	68
6	63	101	349	312	846	1870	881	1180	4090	2410	89	66
7	79	98	332	303	2360	2030	822	1010	4280	2120	87	66
8	80	102	297	297	3490	1970	788	948	3860	1640	86	64
9	69	106	269	295	2250	1640	760	880	3440	1240	84	64
10	64	107	253	280	2220	1560	735	828	3520	733	82	64
11	64	105	239	269	1620	1810	698	768	4700	661	82	63
12	62	101	232	266	2340	1920	666	753	4120	604	82	62
13	62	98	290	260	3620	8110	636	739	3340	997	80	61
14	62	96	247	251	2090	4160	601	736	3310	1030	79	60
15	61	95	226	246	1620	2710	581	767	3660	1160	87	59
16	61	93	213	247	1350	2100	558	837	3170	1110	109	58
17	60	124	590	256	1130	1980	551	756	2800	825	101	57
18	61	1920	498	297	1430	1830	568	758	3310	793	93	57
19	61	1030	372	534	1320	1540	657	803	2950	436	95	57
20	61	459	634	371	1080	1330	851	945	2320	351	101	73
21	65	319	6080	319	942	1460	776	1070	1920	340	82	83
22	74	320	4790	861	857	1620	686	1060	2000	238	79	59
23	136	389	3250	908	826	1510	882	1090	2830	210	79	66
24	155	300	1450	3150	784	1760	1070	1110	3810	165	77	70
25	567	246	998	1420	1020	1560	1110	1060	2530	159	76	67
26	1280	213	796	1330	1550	1320	890	1870	3150	172	75	66
27	308	197	671	3230	2270	1340	820	3980	3120	160	74	64
28	190	359	579	1610	2740	1190	1930	4610	2830	136	72	64
29	151	1700	515	1640	---	1070	2310	4700	2520	107	70	107
30	242	2210	466	1250	---	1000	1850	4340	1790	104	69	181
31	217	---	427	1010	---	1710	---	4060	---	101	70	---
TOTAL	4675	11547	27729	22971	43271	69690	28506	47618	95040	30882	2631	2130
MEAN	151	385	894	741	1545	2248	950	1536	3168	996	84.9	71.0
MAX	1280	2210	6080	3230	3620	8110	2310	4700	4700	3270	109	181
MIN	60	93	213	246	607	1000	551	736	1790	101	69	57
AC-FT	9270	22900	55000	45560	85830	138200	56540	94450	188500	61250	5220	4220
CAL YR 1982	TOTAL	351886	MEAN	964	MAX	10100	MIN	50	AC-FT	698000		
WTR YR 1983	TOTAL	386690	MEAN	1059	MAX	8110	MIN	57	AC-FT	767000		

11418000 YUBA RIVER BELOW ENGLEBRIGHT DAM, NEAR SMARTVILLE, CA

LOCATION.--Lat 39°14'07", long 121°16'23", in NW 1/4 NW 1/4 sec.23, T.16 N., R.6 E., Yuba County, Hydrologic Unit 18020125, on right bank 2,000 ft downstream from Englebright Dam, 0.5 mi upstream from Deer Creek, and 2.3 mi northeast of Smartville.

DRAINAGE AREA.--1,108 mi².

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 National Geodetic Vertical Datum of 1929 (levels by International Engineering Co.). Prior to Sept. 19, 1958, at site 2,000 ft upstream at datum 248.31 ft higher and Sept. 19, 1958, to Sept. 30, 1969, at datum 278.68 ft lower. Supplementary gage 2,000 ft upstream since Oct. 1, 1969, at Englebright Dam at datum 248.31 ft higher.

REMARKS.--Records good. Diversions out of basin for power and irrigation above station up to 1,800 ft³/s, see stations 11413250, 11414190, 11414200. Flow regulation by Lake Spaulding (station 11414140), Jackson Meadows and New Bullards Bar Reservoirs (stations 11407800, 11413515), Englebright Reservoir beginning in 1941, capacity, 70,000 acre-ft, Bowman and Fordyce Lakes (stations 11415500, 11414090), and many smaller reservoirs. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--42 years, 2,572 ft³/s, 1,863,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 171,000 ft³/s Dec. 22, 1964, gage height, 546.14 ft site and datum then in use, no flow through powerplant, from rating curve extended above 25,000 ft³/s on basis of computation of peak flow over spillway of dam at gage heights 544.72 ft and 546.14 ft; no flow at times in 1942, 1949, 1956, 1958-61, 1968-69.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,900 ft³/s Mar. 13, gage height, 22.34 ft; minimum daily, 686 ft³/s Sept. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2910	1990	4100	3130	4100	13500	7460	5030	11800	5740	2580	1880
2	2520	2210	4040	3170	4090	13500	9140	4400	10600	7410	2710	1840
3	2490	2230	3670	3200	4080	10100	8400	4150	10100	7060	2700	2560
4	1470	2240	3510	3190	4080	8270	7320	4130	10900	5910	2700	2700
5	1570	2240	3510	3250	4080	7280	6410	4390	11900	6190	2690	2690
6	1530	2220	3510	3220	4080	6980	5420	7350	11300	6230	2690	2690
7	1560	2220	3500	2930	5740	8350	4650	7130	9580	6250	2700	2680
8	1580	2240	3500	2700	10900	11100	4530	6980	9330	5290	2720	2690
9	2510	2200	3520	2690	7520	10300	4470	6880	8900	4830	2720	2690
10	2510	2220	3400	2680	7690	10000	4430	6780	8890	4270	2730	2680
11	2070	2230	3200	2670	5980	10700	4380	6680	10200	4150	2740	1500
12	1870	2250	3210	2670	6930	11400	4360	6610	10300	4120	2660	686
13	1870	2280	3190	2690	9500	30500	4310	6570	10600	4130	2040	686
14	1870	2250	3160	2670	6990	24900	4220	6520	10400	3740	2670	686
15	1530	2220	3160	2660	6220	21900	4260	6510	10800	3570	2730	686
16	1170	2230	3170	2660	5640	21000	4190	6630	10300	3510	2730	723
17	1350	2250	3150	2660	5160	21300	4170	6520	9980	3540	2730	1360
18	2010	2800	3160	2670	5470	18100	4170	6510	10500	3270	2730	2720
19	1980	3500	3160	2670	5660	11500	4250	6610	10000	3510	2720	2700
20	1960	3410	3170	2680	5070	7450	4560	6740	8200	3160	2720	2690
21	1910	3410	9960	2690	4780	6890	4500	7040	5550	2850	2700	2700
22	1910	3370	9610	2690	4600	8070	4130	7190	5430	2850	2700	2690
23	1880	3370	7900	2680	4510	9240	4120	7390	5980	2840	2700	2150
24	1860	3370	3920	4030	4450	9590	4830	7590	7850	2830	2700	2710
25	2010	3380	2390	4180	4590	9080	5250	7490	7050	2810	2710	2710
26	1830	3380	2380	4080	5700	7750	4140	8120	7210	2700	2720	2690
27	1830	3360	2400	5000	6960	7380	4070	10200	7610	2580	2700	2690
28	1830	3370	2900	4210	7520	6990	4960	10900	7330	2390	2690	2690
29	1840	3270	3170	4110	---	6270	7060	11000	6230	2440	2690	2690
30	1840	3850	3140	4110	---	5700	5900	10800	5690	2440	2690	2690
31	1810	---	3120	4100	---	6910	---	11100	---	2430	2650	---
TOTAL	58880	81560	118880	98740	162090	362000	154060	221940	270510	125040	83060	65947
MEAN	1899	2719	3835	3185	5789	11680	5135	7159	9017	4034	2679	2198
MAX	2910	3850	9960	5000	10900	30500	9140	11100	11900	7410	2740	2720
MIN	1170	1990	2380	2660	4080	5700	4070	4130	5430	2390	2040	686
AC-FT	116800	161800	235800	195900	321500	718000	305600	440200	536600	248000	164700	130800
CAL YR 1982	TOTAL	1849233	MEAN	5066	MAX	32500	MIN	676	AC-FT	3668000		
WTR YR 1983	TOTAL	1802707	MEAN	4952	MAX	30500	MIN	686	AC-FT	3576000		

11418500 DEER CREEK NEAR SMARTVILLE, CA

LOCATION.--Lat 39°13'28", long 121°16'03", in SW 1/4 SE 1/4 sec.23, T.16 N., R.6 E., Nevada County, Hydrologic Unit 18020125, on left bank 400 ft upstream from county road bridge, 0.9 mi upstream from mouth, and 2 mi northeast of Smartville.

DRAINAGE AREA.--84.6 mi².

PERIOD OF RECORD.--June 1935 to current year.

REVISED RECORDS.--WSP 1395: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 630 ft, 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, increased to 49,000 acre-ft in July 1964, Deer Creek Reservoir, capacity, 1,400 acre-ft, Lake Wildwood, capacity, 3,840 acre-ft 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.--48 years, 133 ft³/s, 96,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s Oct. 13, 1962, gage height, 13.77 ft, from rating curve extended above 5,200 ft³/s; minimum daily, 0.06 ft³/s Aug. 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1928 reached a stage of 14.5 ft from floodmarks, discharge, 14,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,730 ft³/s Mar. 13, gage height, 11.49 ft; minimum daily, 2.2 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	122	287	185	434	3370	547	673	64	11	4.1	6.3
2	3.2	12	133	173	374	2210	574	493	66	15	3.7	6.2
3	3.2	8.2	89	162	334	1540	506	409	63	15	3.5	6.1
4	2.9	6.9	69	152	301	1270	466	362	58	12	3.5	5.0
5	3.0	5.5	59	145	332	1020	433	410	44	6.9	3.5	4.4
6	3.1	5.2	52	137	801	872	403	553	39	5.5	4.2	5.0
7	8.0	6.3	46	131	2550	1190	377	412	32	3.9	4.4	5.1
8	5.9	113	40	128	2770	875	359	368	29	4.4	3.7	5.1
9	4.6	8.1	37	123	1340	699	342	343	28	5.2	3.9	4.9
10	3.3	140	36	121	1290	653	323	329	28	5.5	3.8	4.1
11	2.2	9.0	33	118	889	709	306	321	39	4.3	3.7	4.1
12	2.3	76	35	116	1460	1350	295	290	31	4.6	3.9	3.4
13	3.0	7.5	61	114	1620	4580	284	279	23	5.7	4.5	3.4
14	3.3	7.5	43	113	1020	1710	255	271	21	5.4	4.3	3.6
15	3.7	7.2	39	112	805	1050	226	242	17	5.2	3.8	3.4
16	14	6.6	35	134	681	942	212	221	13	5.4	4.0	3.2
17	19	22	78	121	564	980	199	207	12	4.5	3.8	3.7
18	56	990	67	118	798	853	195	183	10	3.7	3.7	3.9
19	126	491	46	330	649	653	199	155	9.4	3.4	3.9	3.3
20	126	219	294	150	516	626	257	136	7.9	3.7	7.9	4.0
21	249	23	4370	126	447	944	204	119	7.1	4.1	7.9	2.5
22	264	266	1970	640	399	1240	170	143	7.1	4.1	12	2.9
23	6.3	301	786	2940	368	888	267	153	5.5	4.7	8.6	3.9
24	4.1	27	284	3120	343	1120	448	141	4.3	4.3	6.0	5.0
25	136	18	189	1120	510	851	512	123	4.5	3.6	8.0	5.4
26	321	15	168	1010	880	635	285	113	4.4	3.7	5.6	4.6
27	200	14	283	2980	1450	782	254	107	3.3	4.2	5.5	5.0
28	14	140	280	1500	1290	613	1140	96	3.0	4.2	4.9	6.3
29	109	488	254	1730	---	536	1150	74	4.7	4.6	3.9	7.0
30	61	1450	226	970	---	489	1070	61	8.9	5.6	4.3	64
31	22	---	203	550	---	661	---	57	---	5.0	4.5	---
TOTAL	1783.2	5005.0	10592	19569	25215	35911	12258	7844	687.1	178.4	153.0	194.8
MEAN	57.5	167	342	631	901	1158	409	253	22.9	5.75	4.94	6.49
MAX	321	1450	4370	3120	2770	4580	1150	673	66	15	12	64
MIN	2.2	5.2	33	112	301	489	170	57	3.0	3.4	3.5	2.5
AC-FT	3540	9930	21010	38820	50010	71230	24310	15560	1360	354	303	386
a	33424	38094	48706	48858	49097	48909	48873	48475	47228	44650	40882	37026

CAL YR 1982 TOTAL 99630.8 MEAN 273 MAX 4370 MIN 2.0 AC-FT 197600
WTR YR 1983 TOTAL 119390.5 MEAN 327 MAX 4580 MIN 2.2 AC-FT 236800

a Contents, in acre-feet, at end of month for Scotts Flat Reservoir, furnished by Nevada Irrigation District.

11421000 YUBA RIVER NEAR MARYSVILLE, CA

LOCATION.--39°10'33", long 121°31'26", in New Helvetia Grant, Yuba County, Hydrologic Unit 18020107, on left bank 4.2 mi northeast of Marysville, and 5 mi downstream from Dry Creek.

DRAINAGE AREA.--1,339 mi².

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 below 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 downstream at same datum. Sept. 3, 1963, to Sept. 23, 1968, auxiliary water-stage recorder at Simpson Lane Bridge in Marysville 4.2 mi 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 between stations below Englebright Dam and near Marysville. See schematic diagram of Yuba River basin.

AVERAGE DISCHARGE.--40 years (water years 1944-83), 2,619 ft³/s, 1,890,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1944, 1947-83), 180,000 ft³/s Dec. 22, 1964, gage height, 90.15 ft from floodmarks, from rating curve extended above 91,000 ft³/s on basis of Corps of Engineers flood routing study; minimum recorded, 10 ft³/s July 2, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49,700 ft³/s Mar. 13, gage height, 76.03 ft; minimum daily, 535 ft³/s Sept. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3240	1820	4450	3460	5070	18700	8870	6940	11200	5370	2260	1930
2	2700	1990	3110	3460	4900	20600	10600	5640	10300	6790	2420	1750
3	2650	1980	3620	3490	4800	14700	9920	5120	9680	7020	2410	2250
4	1810	2000	3460	3480	4700	12000	8680	4850	10300	5650	2420	2600
5	1680	2020	3450	3510	4710	9860	7740	4850	11400	5780	2410	2590
6	1670	2010	3430	3500	5250	9530	6340	7940	11200	5840	2420	2590
7	1660	2000	3410	3310	9520	10900	5550	7940	9250	6020	2430	2610
8	1670	2100	3390	2970	17500	13800	5430	7690	9020	5070	2440	2640
9	2420	2000	3390	2940	10900	12300	5300	7380	8790	4540	2440	2620
10	2510	2090	3410	2910	10300	11800	5230	7250	8640	4050	2450	2620
11	2190	2030	3310	2880	8220	12600	5070	7170	9760	3790	2460	2000
12	1820	2070	3200	2860	9940	14000	5020	7050	9870	3740	2450	535
13	1810	2050	3170	2860	13100	38000	5010	6860	10300	3740	1770	535
14	1790	2030	3100	2850	9590	31100	4810	6760	9970	3510	2420	535
15	1550	2000	3090	2850	8180	26500	4780	6630	10300	3270	2380	535
16	1040	1980	3080	2860	7440	24600	4730	6630	9930	3220	2440	560
17	1020	2070	3080	2860	6670	25700	4660	6510	9590	3210	2440	1220
18	1740	3410	3090	2980	6670	23000	4630	6380	9850	2680	2450	2680
19	1820	4190	3080	3830	6870	15400	4800	6430	9610	3180	2450	2740
20	1790	3540	3120	3330	6200	10400	5130	6420	8200	2990	2460	2730
21	1780	3290	13900	3120	5770	9920	5030	6560	5130	2580	2440	2760
22	1950	3430	13800	4090	5480	11300	4580	6730	4950	2580	2450	2800
23	1650	3690	12700	4230	5310	12600	4530	6900	5370	2560	2460	2310
24	1610	3290	5690	7600	5190	12700	5310	7180	7320	2570	2480	2850
25	1880	3200	3360	6260	5370	12200	6890	7090	6830	2540	2500	2860
26	1890	3160	3030	5390	7650	10300	5040	7500	6620	2430	2500	2870
27	1840	3120	2980	10400	9520	9900	4690	9550	7180	2370	2510	2880
28	1640	3260	3280	6550	9960	9300	6350	10400	7090	2140	2500	2870
29	1720	4140	3620	6620	---	8360	9980	10500	5950	2180	2500	2870
30	1820	5650	3560	6120	---	7410	8250	10400	5400	2180	2490	2920
31	1720	---	3490	5370	---	8700	---	10300	---	2180	2510	---
TOTAL	58080	81610	135850	128940	214780	468180	182950	225550	259000	115770	75160	66260
MEAN	1874	2720	4382	4159	7671	15100	6098	7276	8633	3735	2425	2209
MAX	3240	5650	13900	10400	17500	38000	10600	10500	11400	7020	2510	2920
MIN	1020	1820	2980	2850	4700	7410	4530	4850	4950	2140	1770	535
AC-FT	115200	161900	269500	255800	426000	928600	362900	447400	513700	229600	149100	131400
CAL YR 1982	TOTAL	1763465	MEAN	4831	MAX	43800	MIN	714	AC-FT	3498000		
WTR YR 1983	TOTAL	2012130	MEAN	5528	MAX	38000	MIN	535	AC-FT	3991000		

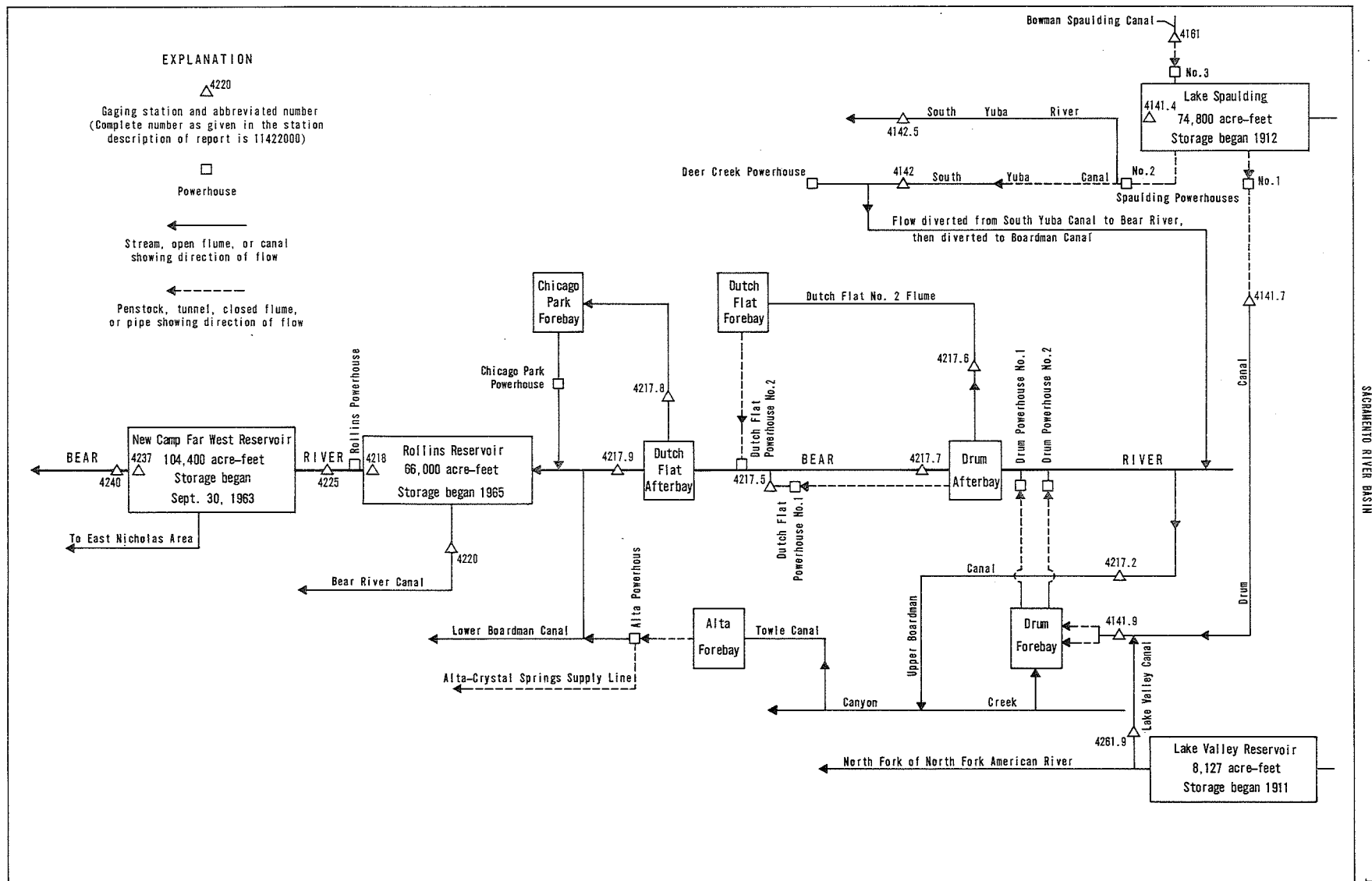


FIGURE 9. — Schematic diagram showing diversion and storage in Bear River basin.

SACRAMENTO RIVER BASIN

11421720 BOARDMAN CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°17'49", long 120°42'08", in SE 1/4 NE 1/4 sec.35, T.17 N., R.11 E., Placer County, Hydrologic Unit 18020126, on right bank 0.4 mi downstream from Boardman diversion dam, and 1.8 mi 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, from topographic map. Prior to June 14, 1967, water-stage recorder 0.2 mi 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.--19 years, 20.0 ft³/s, 14,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft³/s Dec. 21, 1964; no flow for several days in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	26	14						0	18	22	24
2	0	26	13						0	18	22	22
3	0	25	13						0	18	23	24
4	0	25	13						0	18	22	23
5	0	25	14						0	18	21	23
6	0	25	14						0	18	23	24
7	0	23	15						0	18	23	23
8	5.7	22	16						0	17	23	24
9	18	22	16						0	16	22	24
10	19	22	16						0	16	23	25
11	19	22	16						0	16	26	26
12	20	22	16						0	18	26	24
13	21	22	16						0	22	26	26
14	22	22	16						0	24	26	28
15	22	20	15						0	24	26	28
16	21	17	15						0	23	26	28
17	21	21	16						16	23	26	28
18	21	26	16						16	23	26	28
19	21	19	16						16	23	27	26
20	21	15	9.3						17	23	28	27
21	22	15	0						18	23	28	28
22	22	6.8	0						18	22	28	28
23	21	11	0						18	22	28	29
24	25	16	0						18	22	28	29
25	26	15	0						18	22	26	29
26	30	15	0						18	22	27	27
27	26	15	0						18	23	28	26
28	29	14	0						18	23	28	25
29	27	9.2	0						18	23	28	26
30	26	13	0						18	22	27	26
31	26	---	0						---	22	27	---
TOTAL	531.7	577.0	295.3	0	0	0	0	0	245	640	790	778
MEAN	17.2	19.2	9.53	0	0	0	0	0	8.17	20.6	25.5	25.9
MAX	30	26	16	0	0	0	0	0	18	24	28	29
MIN	0	6.8	0	0	0	0	0	0	0	16	21	22
AC-FT	1050	1140	586	0	0	0	0	0	486	1270	1570	1540
CAL YR 1982	TOTAL	4874.25	MEAN	13.4	MAX	30	MIN	0	AC-FT	9670		
WTR YR 1983	TOTAL	3857.0	MEAN	10.6	MAX	30	MIN	0	AC-FT	7650		

11421750 DUTCH FLAT NO. 1 POWERPLANT NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°13'02", long 120°50'04", in SW 1/4 SE 1/4 sec.27, T.16 N., R.10 E., Placer County, Hydrologic Unit 18020126, at powerplant 0.8 mi 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 of Bear River basin.

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

AVERAGE DISCHARGE.--19 years, 248 ft³/s, 179,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 571 ft³/s Apr. 13, May 9, 1982; no flow at times most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	212	359	330	388	418	368	398	368	330	339	330
2	236	253	388	339	448	438	359	408	368	295	339	330
3	212	205	398	368	448	515	368	543	359	320	312	388
4	220	286	359	320	428	378	349	529	378	303	359	408
5	212	236	418	408	418	349	398	438	378	428	359	398
6	189	220	359	312	461	368	529	461	359	378	339	339
7	261	261	339	339	398	330	501	501	339	330	303	339
8	228	245	359	320	438	378	368	378	359	359	408	312
9	150	253	378	339	501	330	349	388	349	286	359	330
10	286	286	408	312	388	253	368	418	320	303	339	368
11	253	261	398	295	461	359	349	378	278	428	312	270
12	253	303	303	368	448	349	529	378	270	428	312	236
13	205	368	349	378	501	557	330	359	295	398	359	253
14	270	330	461	312	398	474	189	330	270	418	408	388
15	261	359	339	330	428	55	418	359	278	398	303	388
16	330	388	359	330	398	0	349	339	320	438	320	339
17	286	408	303	349	359	103	388	388	320	418	339	359
18	261	359	398	339	320	378	388	398	286	408	330	212
19	270	330	359	368	320	448	428	398	312	428	359	79
20	253	418	349	312	368	461	418	398	359	428	378	0
21	261	339	515	320	312	330	438	368	368	428	368	9.9
22	303	418	349	398	303	330	378	368	398	418	368	0
23	270	368	501	349	320	349	150	359	320	428	303	0
24	220	418	428	438	312	368	158	368	312	408	349	0
25	320	408	388	408	303	278	111	330	303	461	286	0
26	359	388	438	438	312	295	330	303	286	428	359	0
27	295	378	408	474	339	303	312	312	320	398	303	0
28	253	388	461	359	368	312	418	408	428	408	438	0
29	245	529	448	359	---	312	448	474	312	378	339	205
30	278	448	428	378	---	330	408	474	312	339	339	295
31	270	---	474	461	---	474	---	408	---	339	349	---
TOTAL	7899	10063	12221	11150	10886	10622	10894	12359	9924	11955	10677	6575.9
MEAN	255	335	394	360	389	343	363	399	331	386	344	219
MAX	359	529	515	474	501	557	529	543	428	461	438	408
MIN	150	205	303	295	303	0	111	303	270	286	286	0
AC-FT	15670	19960	24240	22120	21590	21070	21610	24510	19680	23710	21180	13040
CAL YR 1982	TOTAL	134819	MEAN	369	MAX	571	MIN	0	AC-FT	267400		
WTR YR 1983	TOTAL	125225.9	MEAN	343	MAX	557	MIN	0	AC-FT	248400		

11421760 DUTCH FLAT NO. 2 FLUME NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'16", long 120°46'28", in SE 1/4 NE 1/4 sec.18, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on left bank 600 ft downstream from Drum Afterbay, and 3.6 mi west of Blue Canyon.

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

GAGE.--Water-stage recorder. Datum of gage is 3,348.09 ft National Geodetic Vertical Datum of 1929 (levels by Nevada Irrigation District).

REMARKS.--Records good except flows below 3 ft³/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.--17 years, 350 ft³/s, 253,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 626 ft³/s Sept. 29, 1983; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	576	539	425	558	412	586	582	581	558	559	460	467
2	574	545	323	567	416	571	576	556	557	562	451	429
3	571	540	337	543	402	556	578	584	575	557	400	357
4	574	543	341	540	356	512	580	583	563	518	416	368
5	576	540	334	458	364	546	140	584	547	461	438	410
6	574	541	345	562	369	573	.50	574	515	442	421	454
7	576	548	407	593	498	563	277	583	569	459	443	431
8	575	542	407	593	474	579	578	542	536	556	416	462
9	532	548	431	593	461	535	567	566	537	564	424	439
10	548	523	393	579	487	562	578	590	601	588	466	436
11	548	514	383	582	518	559	578	561	601	481	450	365
12	550	455	397	506	491	584	549	576	600	469	463	287
13	543	429	421	575	498	562	577	576	600	457	394	441
14	540	460	258	583	526	584	566	594	601	459	418	395
15	511	401	413	544	554	571	583	592	599	441	410	376
16	469	359	446	554	525	587	544	560	600	443	441	399
17	478	436	439	538	516	580	546	578	598	446	445	416
18	480	550	440	555	515	548	561	579	537	470	422	372
19	498	529	414	564	545	483	581	595	585	452	434	6.8
20	489	455	362	515	563	481	570	591	548	443	413	.56
21	527	399	499	499	521	523	582	577	465	430	373	.56
22	490	398	450	420	514	554	583	576	431	451	456	.56
23	533	431	485	475	504	536	176	538	559	456	440	.56
24	468	402	518	542	502	577	467	596	558	448	452	.56
25	547	404	468	541	517	514	305	597	561	455	459	.56
26	570	409	490	456	554	562	581	596	556	450	463	.56
27	434	423	492	462	558	562	585	577	553	461	427	.56
28	533	419	496	481	554	568	569	596	440	416	378	119
29	557	473	496	457	---	528	576	486	562	479	433	626
30	564	470	467	450	---	553	581	491	562	460	432	468
31	534	---	423	393	---	589	---	466	---	456	416	---
TOTAL	16539	14225	13000	16278	13714	17188	15116.50	17641	16674	14789	13354	8528.28
MEAN	534	474	419	525	490	554	504	569	556	477	431	284
MAX	576	550	518	593	563	589	585	597	601	588	466	626
MIN	434	359	258	393	356	481	.50	466	431	416	373	.56
AC-FT	32810	28220	25790	32290	27200	34090	29980	34990	33070	29330	26490	16920
CAL YR 1982	TOTAL	144629.47	MEAN	396	MAX	599	MIN	0	AC-FT	286900		
WTR YR 1983	TOTAL	177046.78	MEAN	485	MAX	626	MIN	.50	AC-FT	351200		

11421770 BEAR RIVER BELOW DRUM AFTERBAY, NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'16", long 120°46'26", in SW 1/4 NW 1/4 sec.17, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on left bank 60 ft downstream from Drum Afterbay Dam, and 3.5 mi west of Blue Canyon.

DRAINAGE AREA.--12.3 mi².

PERIOD OF RECORD.--April 1966 to current year, low flows only April to September 1966.

GAGE.--Water-stage recorder and 4-ft steel Cipolletti weir set in a concrete broad-crested weir. Altitude of gage is 3,300 ft, 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 downstream at different datum.

REMARKS.--Water for Dutch Flat No. 1 powerplant (station 11421750) and Dutch Flat No. 2 flume (station 11421760) is diverted from Drum Afterbay just upstream from station. 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.--17 years, 18.4 ft³/s, 13,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft³/s Apr. 11, 1982, gage height, 4.64 ft, from rating curve extended above 1,200 ft³/s; minimum daily, 1.0 ft³/s Dec. 9, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,760 ft³/s Apr. 5, gage height, 3.27 ft; minimum daily, 2.9 ft³/s Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	5.3	5.2	5.3	5.2	109	63	70	10	10	10	10
2	5.4	5.3	5.2	5.3	5.2	103	54	10	10	10	10	10
3	5.3	5.3	5.2	5.3	5.2	32	38	10	10	10	10	10
4	5.3	5.3	5.2	5.1	5.2	11	19	10	10	10	10	10
5	5.3	5.3	5.2	5.3	5.2	34	305	10	10	10	10	10
6	5.3	5.2	5.2	5.3	5.2	12	248	10	10	10	10	10
7	5.3	5.2	5.2	5.3	195	12	77	10	10	10	10	10
8	5.3	5.1	5.2	5.3	77	11	10	10	10	10	10	10
9	5.3	5.2	5.2	5.2	98	10	10	10	10	10	10	10
10	5.3	5.2	5.2	5.3	5.4	9.9	10	10	10	10	10	10
11	5.3	5.1	5.1	5.2	5.2	10	10	10	10	10	10	10
12	5.3	5.1	5.1	5.2	201	43	10	10	10	10	10	10
13	5.3	5.2	5.1	5.3	80	474	10	10	10	10	10	10
14	5.2	5.1	5.2	5.3	5.2	41	10	10	10	10	10	10
15	5.2	5.3	5.2	5.3	5.2	295	10	10	10	10	10	10
16	5.3	5.2	5.2	5.2	5.2	304	10	10	10	10	10	10
17	5.3	5.1	5.1	5.2	5.2	213	10	10	10	10	10	10
18	5.3	110	5.1	5.2	5.2	10	10	10	10	10	10	10
19	5.3	5.3	5.2	5.0	5.2	10	10	10	10	10	10	10
20	5.2	5.2	27	5.0	5.2	10	10	10	10	10	10	10
21	5.1	5.2	329	5.1	5.2	10	10	10	10	10	10	8.0
22	5.1	5.2	269	39	5.2	10	10	10	10	10	10	8.9
23	5.0	5.2	17	5.1	5.2	10	30	10	10	10	10	3.7
24	5.2	5.3	5.2	107	5.0	10	10	10	10	10	10	3.8
25	5.1	5.3	5.3	5.2	5.0	10	10	10	10	10	10	2.9
26	5.3	5.3	5.2	5.2	5.0	10	10	10	10	10	10	7.1
27	7.2	5.3	5.3	32	17	10	36	10	10	10	10	12
28	5.3	5.2	5.2	5.1	50	10	180	10	10	10	10	11
29	5.3	32	5.2	5.2	---	10	83	10	10	10	10	10
30	5.4	5.2	5.3	5.1	---	10	90	10	10	10	10	10
31	5.3	---	5.2	5.2	---	69	---	10	---	10	10	---
TOTAL	167.6	288.2	782.2	323.8	826.8	1922.9	1403	370	300	310	310	277.4
MEAN	5.41	9.61	25.2	10.4	29.5	62.0	46.8	11.9	10.0	10.0	10.0	9.25
MAX	7.8	110	329	107	201	474	305	70	10	10	10	12
MIN	5.0	5.1	5.1	5.0	5.0	9.9	10	10	10	10	10	2.9
AC-FT	332	572	1550	642	1640	3810	2780	734	595	615	615	550
CAL YR 1982	TOTAL	33346.7	MEAN	91.4	MAX	1750	MIN	4.5	AC-FT	66140		
WTR YR 1983	TOTAL	7281.9	MEAN	20.0	MAX	474	MIN	2.9	AC-FT	14440		

11421780 CHICAGO PARK FLUME NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°12'55", long 120°50'23", in NW 1/4 NE 1/4 sec.34, T.16 N., R.10 E., Nevada County, Hydrologic Unit 18020126, on left bank 670 ft downstream from Dutch Flat Afterbay, and 0.6 mi north of Dutch Flat.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,600 ft, from topographic map. Prior to Sept. 8, 1968, at site 420 ft upstream at same datum.

REMARKS.--Records good except flows below 70 ft³/s, which are poor. Flow regulated by Dutch Flat Afterbay. See schematic diagram of Bear River basin.

AVERAGE DISCHARGE.--17 years, 636 ft³/s, 460,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,110 ft³/s Jan. 15, 21, 1980; no flow several days in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	755	836	1080	917	1070	1080	1080	1080	916	963	889	859
2	825	815	1080	1020	1070	1080	1090	1080	1060	964	911	868
3	825	803	889	1030	1070	1080	1080	1090	1070	963	927	837
4	823	798	854	960	1070	1080	1080	1080	1070	963	907	838
5	826	822	919	925	847	1080	1070	1080	1060	961	843	838
6	824	836	920	930	1040	1080	1080	1080	984	957	858	839
7	774	840	885	994	1090	1080	1080	1080	991	959	862	864
8	771	853	920	1050	1080	1090	1080	1080	965	881	864	904
9	771	810	918	1050	1090	1080	1080	1080	939	969	918	916
10	772	822	919	1050	1080	1080	1080	1080	956	969	916	969
11	825	844	918	985	1090	1080	1080	1080	1040	1050	861	878
12	842	850	854	983	1090	1080	1080	1080	1070	1020	863	512
13	842	852	852	984	1080	1080	1080	1070	993	934	912	740
14	857	852	895	984	1090	1090	1080	1080	985	943	911	826
15	797	852	849	983	1090	1080	1080	1070	976	975	910	835
16	783	851	911	993	1090	1080	1070	1070	1010	975	886	816
17	770	868	967	1030	1080	1080	1070	1070	992	971	882	810
18	791	1050	1080	1080	1080	1080	1070	1070	884	970	861	911
19	833	1070	903	1100	1080	1080	1070	1080	1010	1010	876	167
20	837	1080	923	884	1080	1080	1080	1080	1030	1010	909	5
21	817	918	1090	927	1080	1080	1090	1080	896	1010	920	5
22	808	909	1080	1040	1080	1080	1080	1070	876	919	918	5
23	811	910	1080	1080	1050	1080	676	1070	948	943	907	5
24	774	910	1090	1080	915	1080	828	1050	947	967	861	5
25	920	913	1080	1090	999	1080	502	944	963	967	862	5
26	1050	920	1080	1080	1080	1080	938	1080	963	1000	874	5
27	937	900	1080	1090	1080	1080	1070	1070	963	1000	902	5
28	782	957	1080	1080	1080	1080	1070	1070	963	1000	903	5
29	859	1080	955	1080	---	1080	1080	1070	963	996	903	479
30	917	1080	1030	1080	---	1080	1090	1070	964	865	886	951
31	859	---	1080	1070	---	1090	---	1010	---	815	871	---
TOTAL	25677	26901	30261	31629	29721	33510	30984	33144	29447	29889	27573	16702
MEAN	828	897	976	1020	1061	1081	1033	1069	982	964	889	557
MAX	1050	1080	1090	1100	1090	1090	1090	1090	1070	1050	927	969
MIN	755	798	849	884	847	1080	502	944	876	815	843	5.0
AC-FT	50930	53360	60020	62740	58950	66470	61460	65740	58410	59280	54690	33130
CAL YR 1982	TOTAL	332810	MEAN	912	MAX	1090	MIN	5.0	AC-FT	660100		
WTR YR 1983	TOTAL	345438	MEAN	946	MAX	1100	MIN	5.0	AC-FT	685200		

11421790 BEAR RIVER BELOW DUTCH FLAT AFTERBAY, NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°12'55", long 120°50'23", in NE 1/4 NW 1/4 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 north of Dutch Flat.

DRAINAGE AREA.--21.5 mi².

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

REVISED RECORDS.--WDR CA-82-4: 1978, 1979(M), 1980.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,600 ft, from topographic map.

REMARKS.--Records excellent except those above 13 ft³/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.--17 years, 30.4 ft³/s, 22,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft³/s Feb. 16, 1982; minimum daily, 0.08 ft³/s Mar. 8-19, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,020 ft³/s Mar. 13; minimum daily, 6.5 ft³/s Jan. 12, 18-20, Feb. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 82 TO SEPTEMBER 83
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.6	39	6.6	6.7	525	144	297	11	11	11	11
2	12	6.7	6.7	6.7	6.7	544	199	104	11	11	11	11
3	12	6.7	6.6	6.6	6.7	304	131	193	11	11	11	11
4	12	6.7	6.7	6.6	6.6	125	52	193	11	11	11	11
5	12	6.7	6.7	6.6	6.5	139	91	116	11	11	11	11
6	12	6.8	6.7	6.7	6.7	108	9.7	140	11	11	11	11
7	12	6.7	6.6	6.7	421	96	6.8	127	11	11	11	11
8	12	6.7	6.7	6.7	454	154	6.9	32	11	11	11	11
9	12	6.7	6.7	6.7	428	34	6.9	11	11	11	11	11
10	12	6.7	6.6	6.6	200	50	6.9	63	11	11	11	11
11	12	6.8	6.6	6.6	171	78	6.9	19	11	11	11	11
12	12	6.8	6.6	6.5	420	151	6.9	11	11	11	11	11
13	12	6.8	6.6	6.6	560	1430	6.9	11	11	11	11	11
14	12	6.8	6.6	6.7	188	396	6.8	11	11	11	11	11
15	12	6.7	6.7	6.7	155	170	6.8	11	11	11	11	11
16	12	6.7	6.7	6.7	134	178	6.8	11	11	11	11	11
17	12	6.7	6.7	6.7	32	180	6.8	11	11	11	11	11
18	12	259	6.7	6.5	21	84	6.8	11	11	11	11	11
19	12	58	6.6	6.5	58	77	6.9	11	11	11	11	16
20	12	6.7	6.7	6.5	60	79	25	23	11	11	11	24
21	12	6.6	927	6.6	12	18	94	16	11	11	11	134
22	12	6.6	639	35	6.6	21	64	11	11	11	11	145
23	12	6.7	252	30	6.6	59	6.9	11	11	11	11	16
24	12	6.7	119	448	6.7	105	6.8	11	11	11	11	16
25	12	6.7	24	105	6.8	7.7	6.7	11	11	11	11	16
26	137	6.6	6.7	66	6.8	6.9	6.8	11	11	11	11	16
27	12	6.6	6.7	345	75	6.9	6.9	11	11	11	11	16
28	12	6.6	6.7	108	275	6.9	467	11	11	11	11	16
29	12	93	6.7	47	---	6.9	399	11	11	11	11	15
30	12	404	6.7	33	---	8.3	399	11	11	11	11	12
31	12	---	6.6	6.7	---	339	---	11	---	11	11	---
TOTAL	497	991.1	2166.6	1362.8	3737.4	5487.6	2197.9	1532	330	341	341	640
MEAN	16.0	33.0	69.9	44.0	133	177	73.3	49.4	11.0	11.0	11.0	21.3
MAX	137	404	927	448	560	1430	467	297	11	11	11	145
MIN	12	6.6	6.6	6.5	6.5	6.9	6.7	11	11	11	11	11
AC-FT	986	1970	4300	2700	7410	10880	4360	3040	655	676	676	1270

CAL YR 1982 TOTAL 24688.9 MEAN 67.6 MAX 2220 MIN 6.6 AC-FT 48970
WTR YR 1983 TOTAL 19624.4 MEAN 53.8 MAX 1430 MIN 6.5 AC-FT 38920

SACRAMENTO RIVER BASIN

11421800 ROLLINS RESERVOIR NEAR COLFAX, CA

LOCATION.--Lat 39°08'05", long 120°56'54", in NE 1/4 SE 1/4 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 north of Colfax.

DRAINAGE AREA.--104 mi².

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 between elevations 1,970.0 ft, invert of outlet tunnel and 2,171.0 ft, spillway crest. Dead storage, 270 acre-ft. 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, 70,200 acre-ft Feb. 15, 1982, elevation, 2,176.0 ft; minimum since reservoir first filled, 4,250 acre-ft Oct. 10, 1977, elevation, 2,022.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 68,700 acre-ft Dec. 21, elevation, 2,174.2 ft; minimum, 47,700 acre-ft Oct. 1, elevation 2,146.3 ft.

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

2,020	3,920	2,100	23,900
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
2,080	16,800		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47700	66900	66800	66500	66800	68300	67100	67200	66600	66400	66200	66200
2	48000	66800	66700	66500	66700	68000	67100	67100	66700	66500	66300	66200
3	48200	66900	66500	66600	66700	67600	67000	67100	66700	66500	66300	66200
4	48400	66900	66400	66500	66700	67300	66900	67000	66700	66500	66300	66100
5	48600	66800	66400	66500	66600	67400	66900	67100	66700	66500	66200	66100
6	48800	66400	66400	66400	67200	67200	66800	67000	66600	66400	66200	66000
7	49000	66200	66300	66500	68300	67300	66800	66900	66600	66400	66200	66100
8	49000	66200	66400	66500	67700	67200	66800	66800	66600	66300	66200	66100
9	49100	66200	66400	66500	67600	67100	66800	66800	66500	66400	66200	66200
10	49200	66200	66400	66500	67400	67100	66800	66800	66500	66500	66200	66200
11	49400	66200	66400	66500	67200	67100	66800	66800	66600	66500	66200	66200
12	49600	66200	66400	66500	67800	67600	66800	66700	66600	66500	66200	65500
13	49800	66200	66300	66400	67700	68500	66800	66700	66600	66400	66200	65300
14	50000	66200	66300	66400	67300	67700	66800	66700	66600	66400	66200	65300
15	50200	66300	66300	66400	67200	67300	66800	66700	66500	66400	66200	65300
16	50200	66200	66400	66400	67100	67300	66800	66700	66600	66400	66200	65300
17	50300	66300	66600	66500	66900	67300	66800	66700	66500	66400	66200	65300
18	50400	67300	66600	66600	67100	67100	66800	66700	66400	66400	66200	65400
19	50500	66700	66400	66700	67000	67100	66700	66700	66500	66400	66200	64400
20	50700	66600	66900	66400	66900	67100	66700	66700	66600	66500	66200	62800
21	50900	66400	68700	66400	66800	67000	66800	66700	66400	66500	66200	61300
22	51100	66400	68600	66800	66800	67200	66700	66700	66400	66400	66200	60100
23	51300	66400	67300	66800	66800	67200	66600	66700	66500	66400	66200	58400
24	52000	66400	67000	67400	66700	67300	66700	66700	66500	66400	66200	56800
25	54600	66400	66800	66900	67200	67100	66500	66700	66500	66400	66200	55200
26	57700	66400	66700	67200	67100	67100	66700	66700	66500	66400	66100	53500
27	59700	66300	66700	67500	67400	67100	66800	66700	66500	66400	66200	52000
28	61200	66700	66700	67100	67700	67000	67700	66700	66500	66400	66200	50400
29	63000	67200	66600	67200	---	66900	67600	66700	66500	66400	66200	49700
30	65100	67300	66600	67000	---	67100	67400	66700	66500	66300	66200	50000
31	66700	---	66600	66900	---	67200	---	66700	---	66200	66200	---
MAX	66700	67300	68700	67500	68300	68500	67700	67200	66700	66500	66300	66200
MIN	47700	66200	66300	66400	66600	66900	66500	66700	66400	66200	66100	49700
a	2171.8	2172.6	2171.7	2172.1	2173.0	2172.5	2172.7	2171.8	2171.6	2171.3	2171.2	2149.8
b	+19000	+600	-700	+300	+800	-500	+200	-700	-200	-300	0	-16200

CAL YR 1982 b -1400

WTR YR 1983 b +2600

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

b Change in contents, in acre-feet.

11422000 BEAR RIVER CANAL INTAKE NEAR COLFAX, CA

LOCATION.--Lat 39°07'58", long 120°57'12", in SW 1/4 SE 1/4 sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on right bank 600 ft downstream from canal inlet, 0.2 mi below Rollins Dam, and 2.2 mi 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, from topographic map. Prior to Mar. 25, 1946, water-stage recorder at site 1.5 mi 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.--60 years (water years 1913-53, 1965-83), 302 ft³/s, 218,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 531 ft³/s Oct. 5, 6, 1980; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	474	7.4	433	484	474	374	452	451	475	463	471	482
2	474	112	453	483	474	377	453	482	475	462	469	482
3	475	36	466	482	475	377	452	483	474	461	474	482
4	475	7.6	473	482	475	377	452	483	474	461	475	482
5	475	110	471	481	475	407	421	483	473	461	467	482
6	475	203	471	480	440	424	452	482	465	461	469	482
7	475	202	471	478	403	424	452	482	459	461	470	481
8	475	203	471	474	336	424	453	481	459	460	288	481
9	475	203	478	473	399	440	453	480	459	459	480	481
10	475	298	483	472	465	447	453	479	460	462	489	481
11	475	472	483	472	464	448	452	480	460	465	491	484
12	475	489	483	471	394	438	454	479	460	465	491	481
13	476	486	483	471	386	215	110	478	396	465	489	484
14	476	486	483	471	431	311	485	477	456	465	489	484
15	476	486	483	471	454	382	489	477	458	465	489	485
16	476	486	482	471	463	392	489	477	459	465	489	485
17	476	458	443	471	477	407	489	476	459	465	490	485
18	477	436	474	471	477	425	490	476	460	465	490	485
19	477	435	474	471	477	425	487	475	461	461	490	485
20	477	443	475	471	477	402	485	475	461	457	490	485
21	477	450	404	471	477	397	483	474	462	458	490	329
22	477	430	356	439	477	398	482	474	463	458	490	93
23	477	175	404	443	478	379	457	473	463	458	489	273
24	309	455	486	393	478	379	421	476	464	459	485	337
25	25	449	486	461	452	379	459	479	464	460	485	484
26	27	449	486	434	391	405	477	479	464	461	486	484
27	26	449	486	347	419	426	476	479	464	462	486	483
28	15	450	486	392	405	425	428	478	465	463	486	447
29	7.6	416	486	392	---	440	413	478	465	464	486	484
30	7.6	397	484	411	---	452	412	477	464	465	486	484
31	7.5	---	484	460	---	453	---	476	---	468	484	---
TOTAL	11364.7	10179.0	14481	14143	12493	12449	13431	14799	13841	14325	14803	13557
MEAN	367	339	467	456	446	402	448	477	461	462	478	452
MAX	477	489	486	484	478	453	490	483	475	468	491	485
MIN	7.5	7.4	356	347	336	215	110	451	396	457	288	93
AC-FT	22540	20190	28720	28050	24780	24690	26640	29350	27450	28410	29360	26890
CAL YR 1982	TOTAL	155405.7	MEAN	426	MAX	495	MIN	7.4	AC-FT	308200		
WTR YR 1983	TOTAL	159865.7	MEAN	438	MAX	491	MIN	7.4	AC-FT	317100		

11422500 BEAR RIVER BELOW ROLLINS DAM, NEAR COLFAX, CA

LOCATION.--Lat 39°07'53", long 120°57'29", in SE 1/4 SW 1/4 sec.22, T.15 N., R.9 E., Nevada County, Hydrologic Unit 18020126, on right bank 65 ft downstream from highway bridge, 0.5 mi downstream from Rollins Dam, and 2.2 mi north of Colfax.

DRAINAGE AREA.--105 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1915, nonrecording gages at several sites above diversion dam 0.3 mi upstream at different datums. Aug. 8, 1915, to June 30, 1917, nonrecording gage 0.7 mi downstream at different datum. Nov. 1, 1949, to Sept. 30, 1953, at site 0.2 mi 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).--24 years (water years 1913, 1916, 1951-53, 1965-83), 409 ft³/s, 296,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (prior to construction of Rollins Dam in 1964), 9,620 ft³/s Nov. 20, 1950, gage height, 21.40 ft site and datum then in use, from rating curve extended above 3,600 ft³/s on basis of slope-area measurement of maximum flow; no flow at times in 1912, 1952. Maximum discharge since construction of Rollins Dam, 15,400 ft³/s Feb. 16, 1982, gage height, 12.95 ft, from rating curve extended above 6,000 ft³/s; minimum daily, 0.5 ft³/s Nov. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s Mar. 13, gage height, 11.24 ft; minimum daily, 83 ft³/s Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	885	1600	748	1250	3830	1740	2100	670	575	397	390
2	291	888	1060	726	1160	4200	1690	1690	707	583	429	387
3	292	834	797	753	1090	3170	1560	1530	769	577	449	378
4	294	917	626	707	1030	2430	1420	1460	764	569	452	367
5	294	852	617	649	854	2160	1330	1410	752	562	428	362
6	295	898	619	625	1070	2090	1270	1480	690	550	401	351
7	296	794	580	651	3000	2080	1150	1350	673	545	399	352
8	297	748	573	710	4390	2020	1110	1220	657	495	577	359
9	297	720	568	721	3050	1750	1080	1100	617	527	392	373
10	298	596	557	711	2530	1570	1060	1080	610	544	401	410
11	298	409	548	671	2050	1640	1030	1080	681	578	390	405
12	299	404	518	642	2460	1760	1030	1010	732	618	374	367
13	299	404	518	634	3780	7810	1370	982	733	531	379	348
14	300	403	520	631	2460	4000	961	962	629	511	393	347
15	301	398	438	627	1940	2560	929	947	631	520	397	345
16	301	397	536	633	1680	2190	905	936	628	528	394	340
17	301	446	738	655	1450	2100	896	920	629	526	386	340
18	301	1510	839	735	1560	1990	902	910	587	521	374	340
19	302	1540	718	897	1580	1690	923	905	576	547	368	340
20	302	915	688	709	1390	1620	1030	892	642	569	379	350
21	303	702	4760	606	1280	1710	1080	912	592	572	396	525
22	304	659	4790	924	1180	1750	1050	883	519	524	403	753
23	307	953	3530	1230	1100	1910	881	872	550	502	407	552
24	244	599	1820	2330	969	2170	949	855	567	512	388	476
25	103	572	1410	1710	1200	2080	738	721	577	518	371	335
26	96	563	1180	1380	1780	1710	770	801	581	534	365	331
27	94	543	1070	3100	2320	1690	1030	818	582	547	373	327
28	88	651	995	2070	2540	1560	1990	807	583	545	383	308
29	83	1710	862	1940	---	1420	2730	798	581	538	391	319
30	87	2910	813	1800	---	1340	2460	791	579	480	391	315
31	178	---	862	1410	---	2030	---	753	---	415	393	---
TOTAL	7836	24820	35750	32335	52143	72030	37064	32975	19088	16663	12420	11492
MEAN	253	827	1153	1043	1862	2324	1235	1064	636	538	401	383
MAX	307	2910	4790	3100	4390	7810	2730	2100	769	618	577	753
MIN	83	397	438	606	854	1340	738	721	519	415	365	308
AC-FT	15540	49230	70910	64140	103400	142900	73520	65410	37860	33050	24640	22790
CAL YR 1982	TOTAL	344226	MEAN	943	MAX	9230	MIN	83	AC-FT	682800		
WTR YR 1983	TOTAL	354616	MEAN	972	MAX	7810	MIN	83	AC-FT	703400		

11423700 NEW CAMP FAR WEST RESERVOIR NEAR WHEATLAND, CA

LOCATION.--Lat 39°03'01", long 121°18'53", in NE 1/4 SW 1/4 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 east of Wheatland, and 11.8 mi northeast of Sheridan.

DRAINAGE AREA.--283 mi².

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 between elevations 175.0 ft bottom of lowest river outlet, and 300.0 ft crest of spillway. Dead storage, 2,200 acre-ft. 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 Jan. 21, 1970, elevation, 307.3 ft; minimum, 2,200 acre-ft Oct. 11, 1968, elevation, 175.0 ft, may have been lower during periods of no record Oct. 12-16, 1968, and during the 1977 water year.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 117,000 acre-ft Dec. 21, elevation, 305.75 ft; minimum, 83,500 acre-ft Oct. 1, elevation, 288.73 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83500	104000	108700	105700	107900	115300	108500	109000	106100	105500	103300	92900
2	83700	105700	107700	104000	107700	112600	108300	108300	106100	105500	102900	92700
3	84500	106100	107000	106600	107400	111100	108100	108100	106100	105500	102500	92400
4	85000	106400	106600	106600	107400	110000	107900	107900	106100	105500	102100	92200
5	85300	106400	106600	106400	107400	109600	107700	107900	106100	105500	101800	91800
6	86000	106100	106400	106400	109000	109200	107400	108100	106100	105300	101600	91600
7	86500	106400	106400	106400	113700	109600	107400	107900	106100	105300	101400	91200
8	87100	106600	106400	106400	113100	109200	107000	107400	106100	105100	101400	91200
9	87700	106800	106100	106400	110700	108700	107400	107200	105900	105100	101000	91100
10	88200	106800	106100	106400	109000	108500	107200	107200	105900	104800	100600	91100
11	88800	106600	106100	106400	109000	108500	107400	107200	105900	104600	100500	91200
12	89400	106400	106100	106400	110900	109200	107200	107000	106100	104600	100100	91200
13	89700	106400	106100	106400	111300	116800	107700	107000	106100	104600	99700	91200
14	90300	106600	106100	106400	109800	111500	107200	107000	106100	104400	99300	91200
15	90900	105700	106100	106400	109000	109800	107000	106800	105900	104400	98600	91400
16	91400	104600	106100	106400	108500	109400	107000	106600	105900	104400	98800	91600
17	92000	105700	106400	106400	108100	109400	107000	106800	105900	104200	98400	91800
18	92400	109200	106600	106800	108700	109000	106800	106600	105900	104000	98000	92000
19	92900	108500	106600	107000	108300	108500	107000	106400	105700	104000	97600	92000
20	93500	107400	107000	106800	107900	108700	107200	105700	105900	104000	97300	91200
21	94100	106800	117000	106600	107900	109000	107200	106100	105900	104000	96900	92400
22	94800	106800	115000	107900	107700	109800	107000	106600	106600	104000	96700	93300
23	95600	107000	110900	108100	107400	109400	107200	106600	106600	104000	96300	94200
24	96300	106600	109000	110500	107200	110500	107400	106600	106600	103800	95900	95000
25	97600	106400	108300	108700	109000	109600	107200	106400	106400	103800	95600	95400
26	100100	106400	107900	109000	109200	108700	107000	105300	106400	103600	95200	95600
27	100800	106100	107400	111800	110700	109000	107000	106400	106400	103600	94800	95900
28	101000	106600	107000	109600	110900	108500	110700	106400	106400	103600	94100	96100
29	101400	110300	107000	110500	---	108300	110500	105500	105500	103500	94100	96500
30	102500	111800	106800	109200	---	107900	109800	106400	105500	103600	93500	97100
31	103100	---	106800	108500	---	108700	---	106100	---	103500	93300	---
MAX	103100	111800	117000	111800	113700	116800	110700	109000	106600	105500	103300	97100
MIN	83500	104000	106100	104000	107200	107900	106800	105300	105500	103500	93300	91100
a	299.26	303.40	301.09	301.87	302.97	301.98	302.51	300.84	300.47	299.47	294.10	296.19
b	+20100	+8700	-5000	+1700	+2400	-2200	+1100	-3700	-600	-2000	-10200	+3800

CAL YR 1982 b -2800

WTR YR 1983 b +14100

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

b Change in contents, in acre-feet.

11424000 BEAR RIVER NEAR WHEATLAND, CA

LOCATION.--Lat 39°00'01", long 121°24'21", in SE 1/4 SW 1/4 sec.3, T.13 N., R.5 E., Placer County, Hydrologic Unit 18020108, on right bank 100 ft downstream from bridge on U.S. Highway 99E, 1 mi southeast of Wheatland, and 6.5 mi downstream from Rock Creek.

DRAINAGE AREA.--292 mi².

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 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, 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).--54 years, 486 ft³/s, 352,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s Dec. 22, 1955, gage height, 19.30 ft site and datum then in use; maximum gage height, 20.83 ft Nov. 21, 1950, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,100 ft³/s Mar. 13, gage height, 17.85 ft; minimum daily, 6.8 ft³/s Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	28	4370	1030	1560	6710	2230	2860	296	128	26	33
2	16	230	2050	960	1330	8960	2070	2250	234	124	25	33
3	14	739	1400	923	1190	5860	1950	1840	221	122	23	33
4	13	889	1110	916	1110	4570	1790	1680	264	120	21	32
5	13	942	903	881	1090	3500	1660	1620	269	118	21	33
6	15	909	825	835	1180	3320	1580	1790	261	118	21	33
7	16	918	801	809	3880	3550	1470	1650	215	48	21	33
8	15	870	740	806	9550	3320	1390	1500	183	42	20	31
9	15	841	752	830	5980	2860	1350	1360	176	37	21	32
10	16	1010	729	832	4220	2560	1310	1280	163	68	20	36
11	15	862	711	826	3360	2600	1280	1240	192	48	20	34
12	11	592	694	805	3450	2870	1250	1170	244	47	20	31
13	9.5	495	723	778	5520	13500	1330	1110	287	50	21	32
14	12	464	683	760	4340	8880	1360	1060	300	46	21	29
15	10	454	650	752	3130	4360	1190	1020	206	38	22	28
16	9.5	444	612	761	2670	3120	1110	964	184	33	22	27
17	8.6	476	689	764	2350	3010	1080	899	183	33	22	28
18	7.1	1830	884	815	2350	2870	1060	844	164	32	22	27
19	8.3	3560	927	1200	2530	2430	1070	884	141	23	21	25
20	7.2	2000	953	1140	2260	2170	1210	851	123	26	20	24
21	7.7	1320	6960	943	2040	2520	1240	389	144	25	20	23
22	6.8	1080	10700	1140	1890	2570	1200	424	178	25	21	23
23	8.4	1260	7990	1760	1770	2960	1190	438	155	25	28	23
24	7.5	1300	3640	3610	1660	3010	1310	452	126	25	29	26
25	17	1020	2410	2920	1730	3480	1400	428	190	25	29	25
26	33	884	1880	1860	3090	2710	1170	347	162	26	29	25
27	28	831	1610	4660	4420	2510	1110	344	118	26	29	22
28	28	863	1390	3630	4100	2360	1990	360	130	25	29	28
29	29	2040	1240	2870	---	2070	4100	356	126	27	38	28
30	37	7170	1110	2780	---	1870	3540	340	122	27	37	37
31	31	---	1050	1990	---	2100	---	326	---	26	33	---
TOTAL	494.6	36321	61186	45586	83750	119180	46990	32076	5757	1583	752	874
MEAN	16.0	1211	1974	1471	2991	3845	1566	1035	192	51.1	24.3	29.1
MAX	37	7170	10700	4660	9550	13500	4100	2860	300	128	38	37
MIN	6.8	28	612	752	1090	1870	1060	326	118	23	20	22
AC-FT	981	72040	121400	90420	166100	236400	93200	63620	11420	3140	1490	1730
a	1983	0	0	0	0	0	0	11755	24170	26926	26792	12133

CAL YR 1982 TOTAL 426083.6 MEAN 1167 MAX 16700 MIN 6.8 AC-FT 845100 MEAN b 1354 AC-FT b 980100
WTR YR 1983 TOTAL 434549.6 MEAN 1191 MAX 13500 MIN 6.8 AC-FT 861900 MEAN b 1330 AC-FT b 963000

a Diversion, in acre-feet, to Camp Far West North and South canals and South Sutter Conveyance canal, furnished by South Sutter Water Agency.

b Adjusted for diversions and change in contents in New Camp Far West Reservoir.

11425000 FEATHER RIVER NEAR NICOLAUS, CA

LOCATION.--Lat 38°53'26", long 121°36'12", in SE 1/4 NE 1/4 sec.14, T.12 N., R.3 E., Sutter County, Hydrologic Unit 18020106, on left bank 1.7 mi southwest of Nicolaus, 4.2 mi downstream from Bear River, and at mile 8.1.

DRAINAGE AREA.--5,921 mi².

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 below National Geodetic Vertical Datum of 1929. Prior to November 1931, on middle fender pier of bridge 1.6 mi upstream at same datum. November 1931 to September 1974, at highway bridge 1.3 mi upstream at same datum.

REMARKS.--Records fair. Flow partly regulated by many reservoirs, total capacity, 6,868,000 acre-ft, 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 between stations at Oroville and near Nicolaus.

AVERAGE DISCHARGE.--40 years (water years 1944-83), 8,469 ft³/s, 6,136,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1944-83), 357,000 ft³/s Dec. 23, 1955, gage height, 51.60 ft; no flow on several days in 1924 and 1931.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 112,000 ft³/s Mar. 14; maximum gage height, 44.29 ft Mar. 4; minimum daily discharge, 3,620 ft³/s Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9840	4750	33600	13500	27100	45200	28600	33500	17500	13200	8560	8640
2	8980	4970	21800	13300	24100	90200	28500	29900	18300	13700	8740	8100
3	8820	5330	17000	13200	21400	95400	30000	27100	20000	15300	8830	8260
4	8590	5490	16500	13200	18000	84100	28800	26000	22200	13800	8850	8940
5	7830	5520	15800	13100	17200	76300	27100	25600	22700	13100	8830	9020
6	7820	5480	15800	13200	15700	58800	25700	26300	23800	13300	8860	9040
7	7810	5410	15300	13000	21700	51700	24000	29400	24500	13400	8910	9150
8	7780	5400	15000	12200	37000	55500	23000	28400	23500	13000	8980	9180
9	7960	5450	15200	11100	61400	53700	22700	26500	23100	12200	8980	9130
10	8600	5470	14100	10100	51800	50000	22500	25100	22900	11700	9040	9110
11	8540	5490	11700	9940	46300	47500	22300	24800	22800	11200	9020	9040
12	7600	5170	10700	9820	41400	44700	22000	24600	24100	11000	9050	7490
13	6650	5130	10600	9710	61300	57400	21800	24900	23800	11000	8560	7110
14	5690	5020	10800	9660	62900	112000	21900	25000	21200	11000	8570	7830
15	4720	4990	10700	9570	54100	103000	21700	24700	20500	10600	8460	8420
16	3890	4950	10600	9620	46800	92200	21800	24300	20600	10400	8550	8500
17	3620	5180	10300	9640	43400	88300	22400	24000	19400	10400	8540	8480
18	3920	6690	10700	9750	34600	90700	22000	20200	19000	9910	8580	9620
19	4280	21800	10700	12800	33200	67200	21800	20000	19100	9810	8570	10300
20	4320	17300	9820	14000	31300	47900	22300	19600	18700	9370	8560	9260
21	4350	14000	18400	11900	25700	37800	23100	19200	16100	8880	8550	9060
22	4510	12800	59800	11300	24600	39200	23000	18200	14200	8740	7240	9170
23	4410	13000	58000	20200	23900	42100	22700	18100	13400	8740	6730	8990
24	4240	13700	53700	23700	23400	42200	23500	18300	14500	8820	6700	8720
25	4370	13100	38000	42100	23000	45700	26500	16600	15300	8860	7270	9840
26	5010	11200	30900	29300	26100	41200	28400	14700	14400	8850	8280	10300
27	5020	10700	21500	30000	30400	37100	24500	14700	15100	8760	8770	8500
28	4670	10600	20300	57500	38600	39200	24000	16700	15200	8520	8800	7690
29	4480	13200	19100	49800	---	36000	31200	17600	14400	8520	8770	7630
30	4780	20800	16700	52300	---	32200	35600	17600	13600	8560	8810	7830
31	4840	---	14400	44700	---	27300	---	17500	---	8510	8820	---
TOTAL	187940	268090	637520	603210	966400	1831800	743400	699100	573900	333150	263780	262350
MEAN	6063	8936	20570	19460	34510	59090	24780	22550	19130	10750	8509	8745
MAX	9840	21800	59800	57500	62900	112000	35600	33500	24500	15300	9050	10300
MIN	3620	4750	9820	9570	15700	27300	21700	14700	13400	8510	6700	7110
AC-FT	372800	531800	1265000	1196000	1917000	3633000	1475000	1387000	1138000	660800	523200	520400

CAL YR 1982 TOTAL 6379130 MEAN 17480 MAX 107000 MIN 3620 AC-FT 12650000
WTR YR 1983 TOTAL 7370640 MEAN 20190 MAX 112000 MIN 3620 AC-FT 14620000

NOTE.--Stage-discharge relation indefinite Nov. 19 to Dec. 13, Dec. 17 to Jan. 6, Jan. 20 to Apr. 17, Apr. 25 to June 20.

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, 1980-81. Published as "at Nicolaus" 1951-66.

WATER TEMPERATURES: Water years 1951-58, 1960 to current year. Published as station 11425100 1964-74.

SEDIMENT RECORDS: Water years 1979 to May 1980.

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 May 1980 (storm season only).

INSTRUMENTATION.--Temperature recorder since November 1961.

REMARKS.--Prior to 1964 water year, thermograph located at gaging station "at Nicolaus", 1.3 mi upstream. Temperature records from October 1964 to September 1974 were obtained 2.5 mi downstream and are considered equivalent. Recorded temperatures for the current year may be affected by backwater from the Sacramento River during the following periods: Nov. 19 to Dec. 13, Dec. 17 to Jan. 6, Jan. 20 to Apr. 17, Apr. 25 to June 20.

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, 334 mg/L Jan. 13, 1980; minimum daily mean, 9 mg/L Dec. 14, 15, 1979.

SEDIMENT DISCHARGE: Maximum daily, 89,000 tons Jan. 17, 1980; minimum daily, 98 tons May 8, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.0°C Aug. 16; minimum recorded, 7.5°C on several days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11425500 SACRAMENTO RIVER AT VERONA, CA

LOCATION.--Lat 38°46'51", long 121°36'12", in SW 1/4 SE 1/4 sec.23, T.11 N., R.3 E., Sutter County, Hydrologic Unit 18020109, on left bank 0.8 mi southeast of Verona, 1 mi downstream from Feather River, 6.2 mi east of Knights Landing, and at mile 19.6 upstream from Sacramento.

DRAINAGE AREA.--21,251 mi².

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 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 flow begins over Fremont weir (just upstream) into Yolo Bypass (station 11453000). Gage height of crest of Fremont weir is 33.5 ft.

AVERAGE DISCHARGE.--54 years (water years 1930-83), 19,390 ft³/s, 14,050,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,900 ft³/s Feb. 22, 1980, gage height, 38.12 ft; maximum gage height, 41.20 ft Mar. 1, 1940; minimum daily discharge, 304 ft³/s July 23, 24, 1931; maximum reverse flow, 16,800 ft³/s Dec. 4, 1950, backwater from American River.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 79,400 ft³/s Mar. 4, gage height, 38.82 ft; minimum daily, 12,500 ft³/s Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19700	20500	51000	47500	69400	70400	65800	60000	41900	29000	21100	22900
2	18900	20100	55300	41500	68200	73800	66000	60300	42800	28900	21200	22600
3	18400	18900	54100	37100	67000	77800	66100	60000	43800	29900	21200	23000
4	18200	17800	51700	34700	66000	79300	65700	59700	45200	29700	21100	23500
5	17300	17400	48500	33000	65100	78100	65100	59500	45800	28800	21100	23800
6	17200	17500	45500	31600	64000	75700	64600	59900	46300	28600	21200	24000
7	17100	17300	42400	30100	64500	73900	63700	60500	46300	28500	21300	24300
8	16900	17100	39900	28500	67600	72900	62300	60100	45800	28000	21300	24000
9	16900	16800	37700	26900	69800	72000	60700	59600	45500	27100	21400	22800
10	17600	16700	34400	25400	69600	71300	59200	59500	45000	26200	21300	21600
11	17600	16800	30500	24500	68900	70700	57800	59300	44700	25500	21000	20700
12	16900	16600	27600	24000	68500	70100	56300	59200	44900	25100	21000	19100
13	15900	16500	25700	23500	69900	71900	53900	59100	44700	24900	20900	18400
14	15000	16400	24700	23000	70500	75200	50800	59000	42800	24900	20800	18700
15	14000	16100	24100	22500	70100	75400	47300	58700	41200	24400	21000	19400
16	13100	15800	23700	22000	69400	74400	44300	57700	40100	23900	21200	19700
17	12500	15800	27700	21600	68400	73700	42200	55000	38700	23300	21200	19800
18	12500	17000	32900	21300	67500	72900	40800	49300	37600	22800	21000	20200
19	13000	27900	36700	23700	67100	71000	40100	43100	37300	22500	21000	21100
20	13200	37900	38100	30300	66600	69300	39800	40100	36600	22200	21100	20300
21	13200	38900	42000	33700	66000	68300	40100	39100	34300	21900	21200	19800
22	13300	36800	56900	32300	65700	67600	40400	38400	31700	21600	20900	19900
23	13600	35900	65200	38900	65400	67900	40200	38300	29800	21600	20500	19900
24	13800	36000	66300	49300	65100	68300	40600	38500	29700	21600	20600	19300
25	14300	35900	65500	60000	64500	68500	42700	37600	30700	21600	21000	20500
26	15500	34000	64400	64300	65200	68100	45700	36700	30100	21700	22000	22300
27	17300	32400	62700	67600	66500	67500	46300	37400	30300	21500	22800	21900
28	18700	31500	61600	70200	68000	67100	46000	38800	30500	21500	22900	20700
29	17600	32900	59800	72600	---	66800	50500	40000	30200	21400	23100	21000
30	16900	42000	57200	73100	---	66100	56900	40700	29500	21300	23000	21600
31	18500	---	53200	71500	---	65600	---	41100	---	21200	23000	---
TOTAL	494600	733200	1407000	1206200	1884500	2211600	1561900	1566200	1163800	761100	663400	636800
MEAN	15950	24440	45390	38910	67300	71340	52060	50520	38790	24550	21400	21230
MAX	19700	42000	66300	73100	70500	79300	66100	60500	46300	29900	23100	24300
MIN	12500	15800	23700	21300	64000	65600	39800	36700	29500	21200	20500	18400
AC-FT	981000	1454000	2791000	2392000	3738000	4387000	3098000	3107000	2308000	1510000	1316000	1263000
CAL YR 1982	TOTAL	12357200	MEAN	33855	MAX	79300	MIN	12200	AC-FT	24510000		
WTR YR 1983	TOTAL	14290300	MEAN	39150	MAX	79300	MIN	12500	AC-FT	28340000		

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, two gages on right bank, one 100 ft upstream from weir and one 100 ft downstream from weir, 3.2 mi upstream from American River, 4 mi northwest of Sacramento, and at mile 4.2 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 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 upstream and 100 ft downstream from ends of weir.

REMARKS.--Crest of weir is at gage height 22.0 ft and top of moveable gates at 28.0 ft. Weir consists of 48 gates each 38.1 ft 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.

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

AVERAGE DISCHARGE.--44 years, 246 ft³/s, 178,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 118,000 ft³/s Mar. 26, 1928; maximum gage height, 33.01 ft Dec. 23, 1955; no flow all or most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 32,000 ft³/s Mar. 14; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			26	0	466	8010	6630	162				
2			109	0	372	19800	6850	177				
3			81	0	311	26700	6920	166				
4			1.3	0	276	29900	6520	159				
5			0	0	230	26800	6990	154				
6			0	0	185	22700	6990	161				
7			0	0	215	21000	6270	176				
8			0	0	449	19300	5180	169				
9			0	0	600	16000	3500	155				
10			0	0	556	13700	2260	148				
11			0	0	499	13300	1310	144				
12			0	0	445	14200	408	139				
13			0	0	490	22600	7.0	137				
14			0	0	447	32000	0	135				
15			0	0	547	30800	0	127				
16			0	0	4610	29500	0	105				
17			0	0	5250	27900	0	38				
18			0	0	4300	21500	0	0				
19			0	0	3960	17700	0	0				
20			0	0	3570	14800	0	0				
21			0	0	3260	13100	0	0				
22			309	0	3140	12800	0	0				
23			1100	0	3030	12500	0	0				
24			2270	0	1600	12900	0	0				
25			449	153	250	12700	0	0				
26			380	305	269	12100	0	0				
27			330	460	390	12200	0	0				
28			254	770	449	11200	0	0				
29			133	2740	---	10500	0	0				
30			37	1100	---	7900	64	0				
31			0	532	---	6700	---	0				
TOTAL	0	0	5479.3	6060	40166	552810	59899	2452	0	0	0	0
MEAN	0	0	177	195	1434	17830	1997	79.1	0	0	0	0
MAX	0	0	2270	2740	5250	32000	6990	177	0	0	0	0
MIN	0	0	0	0	185	6700	0	0	0	0	0	0
AC-FT	0	0	10870	12020	79670	1096000	118800	4860	0	0	0	0

CAL YR 1982	TOTAL	185449.0	MEAN	508	MAX	45000	MIN	0	AC-FT	367800
WTR YR 1983	TOTAL	666866.3	MEAN	1827	MAX	32000	MIN	0	AC-FT	1323000

11426190 LAKE VALLEY CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°17'56", long 120°38'31", in SE 1/4 NE 1/4 sec.32, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020128, on right bank 0.8 mi upstream from inlet to Carpenter Flat siphon and 1.5 mi east of Emigrant Gap.

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

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 5,410 ft, from topographic map. Prior to Oct. 1, 1979, on right bank 0.7 mi downstream at different datum.

REMARKS.--Canal diverts from right bank of the North Fork of North Fork American River, 2.0 mi 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.--19 years, 16.1 ft³/s, 11,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 75 ft³/s Jan. 13, 1980; no flow many days in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	17	30	35	33	37	32	42	40	37	38	39
2	31	15	28	34	37	34	31	42	33	37	38	39
3	30	14	28	36	35	32	31	43	32	37	38	38
4	35	30	28	39	33	32	31	42	32	36	38	38
5	35	29	28	37	33	32	31	42	32	37	39	38
6	34	25	31	37	34	32	31	42	33	37	39	38
7	36	22	34	37	37	34	32	43	32	37	39	37
8	36	21	34	39	34	32	35	40	32	36	39	37
9	35	26	33	38	33	32	34	36	32	35	38	37
10	35	25	33	38	33	35	34	36	32	35	38	37
11	34	24	32	38	33	33	34	36	32	36	38	24
12	36	22	32	38	38	55	34	36	31	37	38	0
13	34	18	33	38	35	40	34	37	31	36	38	0
14	33	18	31	38	33	35	33	37	31	35	38	0
15	34	17	31	38	33	33	34	38	31	37	38	0
16	34	17	30	28	33	33	34	37	31	39	37	0
17	32	21	36	24	32	32	35	38	31	38	38	0
18	32	35	32	24	33	32	36	39	38	38	40	0
19	22	22	31	26	32	32	37	40	39	37	40	0
20	8.9	26	35	29	32	32	36	40	39	38	40	0
21	7.9	26	41	32	32	32	29	40	38	39	40	0
22	8.4	28	39	34	32	33	35	40	39	39	40	0
23	11	28	32	30	32	32	36	40	38	38	40	0
24	11	26	30	34	39	31	36	40	36	38	40	0
25	21	22	30	30	40	31	34	41	36	38	40	0
26	33	21	32	29	39	31	38	42	36	31	39	0
27	23	21	33	30	37	31	43	42	36	39	39	0
28	18	31	33	29	45	31	43	42	37	39	39	15
29	15	32	33	29	---	31	43	42	37	39	39	37
30	35	32	33	28	---	35	42	41	37	38	39	38
31	24	---	35	28	---	33	---	40	---	38	39	---
TOTAL	845.2	711	1001	1024	972	1040	1048	1236	1034	1151	1203	492
MEAN	27.3	23.7	32.3	33.0	34.7	33.5	34.9	39.9	34.5	37.1	38.8	16.4
MAX	36	35	41	39	45	55	43	43	40	39	40	39
MIN	7.9	14	28	24	32	31	29	36	31	31	37	0
AC-FT	1680	1410	1990	2030	1930	2060	2080	2450	2050	2280	2390	976
CAL YR 1982	TOTAL	11437.3	MEAN	31.3	MAX	57	MIN	0	AC-FT	22690		
WTR YR 1983	TOTAL	11757.2	MEAN	32.2	MAX	55	MIN	0	AC-FT	23320		

11426200 NORTH FORK FORBES CREEK NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°08'37", long 120°45'30", in NW 1/4 SE 1/4 sec.17, T.15 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 0.2 mi downstream from Big Reservoir, and 6.0 mi southeast of Dutch Flat.

DRAINAGE AREA.--1.68 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 3,980 ft, from topographic map.

REMARKS.--Flow regulated by Big Reservoir, capacity, 2,200 acre-ft. Some diversions above station for mining.

COOPERATION.--Records furnished by Bureau of Reclamation and reviewed by Geological Survey.

AVERAGE DISCHARGE.--27 years, 4.65 ft³/s, 3,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 377 ft³/s Jan. 22, 1970, gage height, 4.76 ft; no flow many days in 1964-66, 1977, 1981, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 6.40 ft probably Dec. 23, 1955, from floodmarks, discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 70 ft³/s Mar. 13, gage height, 3.39 ft; minimum daily, 0.06 ft³/s Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.60	.46	8.4	16	50	31	28	.42	.38	.30	.23
2	.06	.46	.31	8.2	14	59	31	24	.46	.42	.30	.23
3	.07	.38	.23	8.2	12	51	28	20	.46	.42	.26	.23
4	.07	.34	.20	6.6	11	40	25	18	.46	.42	.26	.23
5	.07	.31	.20	6.2	10	35	22	18	.42	.38	.26	.23
6	.09	.31	.18	6.2	12	30	19	17	.38	.34	.26	.23
7	.16	.28	.16	5.7	23	29	17	14	.38	.30	.26	.23
8	.16	.46	.16	5.1	42	25	15	12	.34	.30	.26	.23
9	.18	.25	.16	4.8	43	22	12	10	.34	.30	.30	.26
10	.20	.18	.16	4.2	38	20	11	9.7	.34	.30	.30	.26
11	.20	.16	.16	3.6	33	19	10	8.8	.30	.26	.30	.23
12	.23	.13	.18	3.4	37	19	9.1	8.3	.30	.26	.30	.23
13	.25	.13	.18	3.4	55	57	8.5	7.5	.30	.26	.26	.23
14	.28	.11	.18	3.3	45	59	7.7	6.5	.30	.23	.26	.23
15	.31	.11	.18	3.1	36	42	7.0	6.0	.30	.23	.26	5.0
16	.31	.09	.18	3.4	30	33	6.0	5.4	.30	.23	.26	7.0
17	.23	.16	.38	3.6	24	30	5.4	5.0	.30	.23	.26	7.0
18	.11	.86	.31	3.7	25	26	4.8	4.6	.30	.23	.23	7.0
19	.11	.46	.28	6.6	23	22	5.0	4.2	.30	.23	.23	7.0
20	.18	.28	.51	5.3	19	19	6.0	3.6	.30	.23	.23	6.7
21	.23	.20	2.4	4.4	16	19	5.2	3.3	.34	.26	.23	3.7
22	.25	.23	2.5	7.6	14	18	4.6	3.1	.34	.26	.23	.20
23	.38	.20	1.3	10	13	18	5.7	3.0	.34	.26	.23	.20
24	.24	.18	.83	26	12	18	7.7	2.8	.34	.26	.23	.20
25	6.8	.16	.71	28	14	16	8.0	2.6	.34	.26	.23	.20
26	7.6	.16	.66	26	19	13	7.0	2.3	.38	.26	.23	.20
27	1.4	.13	.60	40	24	14	7.5	1.4	.38	.26	.23	.20
28	.71	.28	.60	30	34	13	16	.46	.38	.26	.23	.20
29	.51	.63	.76	28	---	12	27	.42	.38	.26	.23	.23
30	2.2	1.1	4.8	23	---	12	30	.42	.38	.30	.23	.23
31	1.0	---	8.4	19	---	26	---	.42	---	.30	.23	---
TOTAL	24.65	9.33	28.32	345.0	694	866	399.2	250.82	10.60	8.89	7.88	48.54
MEAN	.80	.31	.91	11.1	24.8	27.9	13.3	8.09	.35	.29	.25	1.62
MAX	7.6	1.1	8.4	40	55	59	31	28	.46	.42	.30	7.0
MIN	.06	.09	.16	3.1	10	12	4.6	.42	.30	.23	.23	.20
AC-FT	49	19	56	684	1380	1720	792	498	21	18	16	96
CAL YR 1982	TOTAL	2744.32	MEAN	7.52	MAX	34	MIN	.01	AC-FT	5440		
WTR YR 1983	TOTAL	2693.23	MEAN	7.38	MAX	59	MIN	.06	AC-FT	5340		

11426400 NORTH SHIRTTAIL CREEK NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°07'40", long 120°48'01", in SE 1/4 SW 1/4 sec.24, T.15 N., R.10 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank by spillway terminal structure downstream from Sugar Pine Dam, and 5.6 mi southeast of Dutch Flat. Prior to Nov. 4, 1981, at site 2,000 ft upstream.

DRAINAGE AREA.--9.10 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 3,371.09 ft, National Geodetic Vertical Datum of 1929 (levels by Gordon Ball Contractors, Division of Dillingham Corporation). Prior to Nov. 4, 1981, at site 2,000 ft upstream at different datum.

REMARKS.--Flow slightly regulated by Big Reservoir, capacity, 2,200 acre-ft. Since November 1981, regulated by Sugar Pine Reservoir, capacity, 6,700 acre-ft. Foresthill Public Utility District diverts up to 2,800 acre-ft annually since construction of Sugar Pine Dam.

COOPERATION.--Records furnished by Bureau of Reclamation and reviewed by Geological Survey.

AVERAGE DISCHARGE.--25 years (water years 1957-81) 19.6 ft³/s, 14,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,370 ft³/s Jan. 13, 1980, gage height, 12.32 ft site and datum then in use, from rating curve extended above 590 ft³/s on basis of slope-area measurement of peak flow; no flow many days in 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 7.30 ft, site and datum then in use, from floodmarks, discharge, 1,650 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 549 ft³/s Mar. 1, gage height, 29.58 ft; minimum daily, 1.0 ft³/s several days during October and November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	115	30	6.4	288	147	126	11	2.1	1.1	1.4
2	1.2	1.2	88	30	6.7	212	136	105	10	2.1	1.1	1.4
3	1.2	1.1	58	30	6.6	272	122	89	10	2.1	1.1	1.4
4	1.2	1.1	29	30	6.5	238	110	79	10	2.1	1.1	1.4
5	1.2	1.1	28	30	6.5	188	94	79	10	2.1	1.1	1.4
6	1.2	1.1	28	30	7.1	163	83	80	10	1.7	1.1	2.4
7	1.2	1.1	21	30	68	88	75	64	10	1.2	1.1	3.4
8	1.1	1.2	12	30	118	71	66	52	10	1.1	1.1	3.4
9	1.1	1.1	12	30	45	101	54	51	10	1.1	1.1	3.5
10	1.1	1.2	12	17	8.1	96	51	50	10	1.1	1.1	3.5
11	1.1	1.1	12	12	7.8	98	51	48	10	1.1	1.1	3.5
12	1.1	1.1	12	12	71	107	50	45	10	1.1	1.1	3.5
13	1.1	1.1	12	13	261	363	48	42	10	1.1	1.1	3.5
14	1.0	1.0	12	7.7	206	296	44	38	10	1.1	1.1	3.5
15	1.0	1.0	12	1.5	158	196	41	36	10	1.1	1.1	3.7
16	1.0	1.0	10	1.6	132	156	38	34	10	1.1	1.1	3.5
17	1.0	1.1	9.6	1.7	112	145	35	31	5.1	1.1	1.1	3.5
18	1.0	16	9.2	1.9	137	130	33	29	2.1	1.1	1.1	3.5
19	1.1	56	9.1	1.9	172	110	33	27	2.1	1.1	1.1	3.5
20	1.2	78	9.4	1.8	133	101	38	24	2.1	1.1	1.1	3.5
21	1.1	76	177	1.7	98	105	36	22	2.1	1.1	1.1	3.5
22	1.1	48	359	2.2	85	105	33	21	2.2	1.1	1.2	3.5
23	1.2	12	233	2.1	49	105	36	20	2.1	1.1	1.4	3.5
24	1.2	12	170	3.3	42	108	50	18	2.1	1.1	1.4	3.5
25	2.3	12	168	2.5	82	96	51	17	2.1	1.1	1.4	3.5
26	2.1	12	165	2.7	135	85	51	16	2.1	1.1	1.4	3.5
27	1.2	12	86	4.0	156	85	50	15	2.1	1.1	1.4	3.5
28	1.2	12	30	3.4	207	83	83	15	2.1	1.1	1.4	3.5
29	1.2	13	30	27	---	76	149	15	2.1	1.1	1.4	3.6
30	1.4	62	30	45	---	73	143	15	2.1	1.1	1.4	3.6
31	1.2	---	30	4.6	---	157	---	14	---	1.1	1.4	---
TOTAL	37.5	439.8	1988.3	440.6	2522.7	4497	2031	1317	193.5	39.8	36.9	93.6
MEAN	1.21	14.7	64.1	14.2	90.1	145	67.7	42.5	6.45	1.28	1.19	3.12
MAX	2.3	78	359	45	261	363	149	126	11	2.1	1.4	3.7
MIN	1.0	1.0	9.1	1.5	6.4	71	33	14	2.1	1.1	1.1	1.4
AC-FT	74	872	3940	874	5000	8920	4030	2610	384	79	73	186
CAL YR 1982	TOTAL	13487.86	MEAN	37.0	MAX	359	MIN	.16	AC-FT	26750		
WTR YR 1983	TOTAL	13637.70	MEAN	37.4	MAX	363	MIN	1.0	AC-FT	27050		

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA

LOCATION.--Lat 38°56'10", long 121°01'22", in SW 1/4 NW 1/4 sec.31, T.13 N., R.9 E., Placer County, Hydrologic Unit 18020128, on left bank 50 ft upstream from spillway at North Fork Dam, 2 mi upstream from Middle Fork, and 4 mi northeast of Auburn.

DRAINAGE AREA.--342 mi².

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 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 formed by North Fork Dam. Storage in Big Reservoir and Lake Valley Reservoir, combined capacity, 10,300 acre-ft 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.--42 years, 847 ft³/s, 613,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s Dec. 23, 1964, gage height, 11.87 ft, from rating curve extended above 24,000 ft³/s on basis of computed flow over spillway of dam at gage height 10.22 ft; 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.--Peak discharges above base of 4,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0615	10,400	5.03	Feb. 13	0500	9,550	4.85
Nov. 18	2115	7,190	4.33	Mar. 1	2130	8,410	4.61
Nov. 30	1115	6,350	4.12	Mar. 13	1130	*30,200	7.98
Dec. 22	2245	14,900	5.86	Mar. 31	1045	5,510	3.90
Jan. 24	0930	7,920	4.50	Apr. 29	0330	5,740	3.96
Feb. 8	0300	9,300	4.80	May 28	0145	6,350	4.12

Minimum daily, 78 ft³/s Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	656	2530	905	1900	7220	3440	3510	3840	1660	358	132
2	108	495	1590	835	1640	7510	3150	2860	3060	2160	339	189
3	104	411	1240	782	1460	5790	2740	2580	2960	1900	327	158
4	100	354	1070	743	1300	4270	2410	2670	3360	1650	315	138
5	96	318	991	719	1190	3580	2160	2580	3530	1840	295	127
6	96	288	905	712	1310	3350	1960	2530	3530	1820	278	118
7	112	269	845	694	3790	3570	1820	2290	3630	1630	266	113
8	114	272	745	691	7430	3610	1760	2300	3290	1230	261	109
9	101	268	687	704	4590	3170	1780	2180	3220	1020	248	105
10	96	269	643	661	3570	3010	1710	2090	3440	882	242	105
11	94	260	609	622	2940	3510	1590	1920	4250	894	234	103
12	90	242	588	619	3560	3340	1480	1960	3250	948	222	101
13	89	232	663	606	7730	19400	1400	2050	2850	999	206	100
14	83	223	590	597	4730	9890	1320	2170	2930	958	196	98
15	82	214	544	571	3470	5970	1250	2390	3190	954	196	95
16	80	208	512	568	2860	4480	1210	2730	2940	803	220	94
17	79	219	1000	610	2430	3970	1290	2390	3050	715	195	92
18	80	2740	1090	605	2540	3680	1330	2540	3100	654	180	90
19	79	3170	829	1010	2570	3130	1500	2950	2410	601	176	90
20	78	1440	888	803	2240	2800	1880	3460	2190	560	190	89
21	82	981	9850	693	1970	2840	1880	3760	2200	520	192	87
22	87	895	10300	1130	1790	2860	1680	4060	2300	518	176	89
23	148	1030	8500	1900	1740	3060	1900	4270	2590	515	192	93
24	568	833	3840	5070	1650	3630	2140	4370	2480	475	171	94
25	2210	691	2680	3110	1930	3720	2280	4420	2240	464	158	93
26	5310	605	2130	2240	2950	2920	1960	4860	2220	441	148	98
27	1360	545	1760	5510	3350	2750	1770	4940	2090	412	141	95
28	735	722	1420	3410	4240	2530	3460	5180	1920	395	134	92
29	533	2850	1250	3160	---	2260	4880	5220	1830	385	129	102
30	1140	4900	1110	3010	---	2080	4110	4610	1760	377	126	192
31	1150	---	1000	2320	---	4220	---	4420	---	378	125	---
TOTAL	15198	26600	62399	45610	82870	138120	63240	100260	85650	28758	6636	3281
MEAN	490	887	2013	1471	2960	4455	2108	3234	2855	928	214	109
MAX	5310	4900	10300	5510	7730	19400	4880	5220	4250	2160	358	192
MIN	78	208	512	568	1190	2080	1210	1920	1760	377	125	87
AC-FT	30150	52760	123800	90470	164400	274000	125400	198900	169900	57040	13160	6510
CAL YR 1982	TOTAL	600727	MEAN	1646	MAX	25800	MIN	68	AC-FT	1192000		
WTR YR 1983	TOTAL	658622	MEAN	1804	MAX	19400	MIN	78	AC-FT	1306000		

SACRAMENTO RIVER BASIN

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to January 1983 (discontinued).

CHEMICAL ANALYSES: Water years 1977, 1979-80.

BIOLOGICAL DATA: Water years 1979-80.

WATER TEMPERATURES: Water years 1960 to January 1983 (discontinued).

SEDIMENT RECORDS: Water years 1979-80.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1959 to January 1983 (discontinued).

INSTRUMENTATION.--Temperature recorder from November 1959 to January 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 29.0°C Aug. 8, 9, 1978; minimum recorded, 3.5°C Dec. 31, 1978, Jan. 1, 2, 1979.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 24.0°C Oct. 23; minimum recorded, 6.5°C Jan. 2-5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	12.0	11.0	10.0	9.5	7.0	7.0				
2	---	---	12.0	11.0	9.5	9.5	7.0	6.5				
3	---	---	12.0	11.0	9.5	9.0	7.0	6.5				
4	---	---	12.0	11.0	9.0	9.0	7.0	6.5				
5	---	---	11.5	10.5	9.0	9.0	7.0	6.5				
6	---	---	11.5	10.5	9.0	9.0	7.5	7.0				
7	---	---	11.5	10.5	9.0	8.5	8.0	7.5				
8	---	---	11.0	10.5	9.0	8.5	8.0	7.5				
9	---	---	10.5	10.0	8.5	8.0	8.0	7.5				
10	---	---	10.5	10.5	8.5	8.0	8.0	7.5				
11	---	---	10.5	10.0	8.0	8.0	8.0	7.5				
12	---	---	10.5	10.0	8.0	8.0	8.0	7.5				
13	---	---	10.5	9.5	8.0	7.5	8.0	7.5				
14	---	---	10.5	9.5	8.0	7.5	7.5	7.0				
15	---	---	10.0	9.5	8.0	7.5	7.5	7.5				
16	---	---	10.0	9.5	8.0	7.5	8.0	7.5				
17	---	---	10.5	9.5	8.5	7.5	8.5	8.0				
18	---	---	10.5	9.5	8.0	7.5	8.5	8.0				
19	---	---	10.0	9.5	8.5	8.0	8.5	8.0				
20	---	---	10.0	9.5	8.5	8.0	9.0	8.5				
21	---	---	9.5	9.0	9.0	8.0	8.5	8.0				
22	20.5	15.0	9.5	9.0	9.5	9.0	8.0	7.5				
23	24.0	18.0	9.5	9.0	9.5	9.0	8.0	7.5				
24	22.5	19.5	9.5	9.0	9.0	8.5	9.0	8.0				
25	19.0	14.0	9.5	9.0	8.5	8.0	---	---				
26	14.0	12.0	9.0	9.0	8.0	7.5	---	---				
27	12.5	12.0	9.5	9.0	8.0	7.5	---	---				
28	12.5	12.0	9.5	9.0	8.5	8.0	---	---				
29	12.0	12.0	9.5	9.0	8.0	7.5	---	---				
30	12.0	11.5	9.5	9.5	7.5	7.5	---	---				
31	12.0	11.5	---	---	7.5	7.0	---	---				
MONTH	---	---	12.0	9.0	10.0	7.0	---	---				

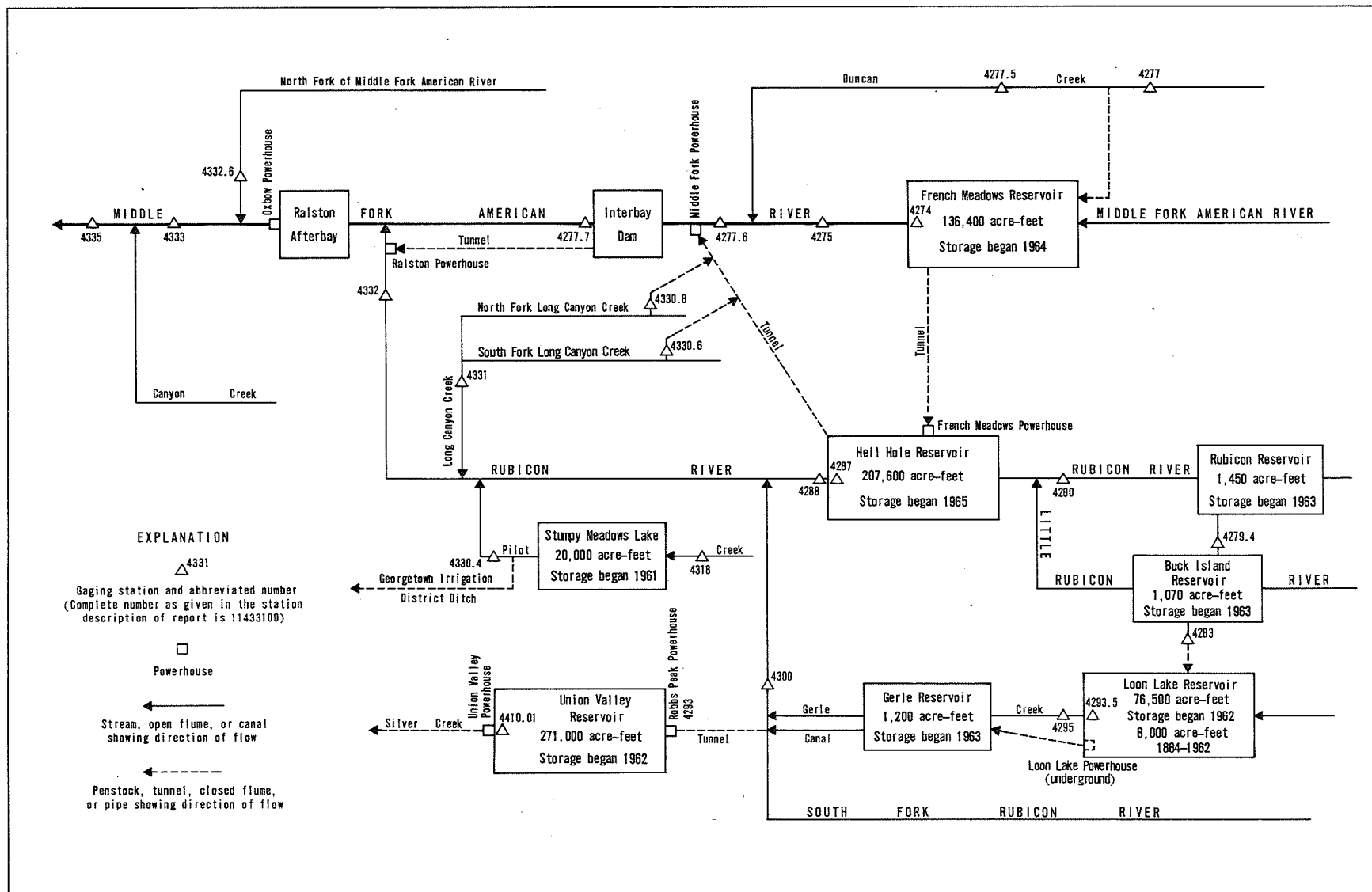


FIGURE 10. — Schematic diagram showing diversions and storage in Middle Fork American and Rubicon river basins.

SACRAMENTO RIVER BASIN

11427400 FRENCH MEADOWS RESERVOIR NEAR FORESTHILL, CA

LOCATION.--Lat 39°06'32", long 120°25'49", in SW 1/4 NE 1/4 sec.32, T.15 N., R.14 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 2.2 mi upstream from dam on Middle Fork American River, 6.9 mi upstream from Chipmunk Creek, and 21 mi northeast of Foresthill.

DRAINAGE AREA.--47.0 mi².

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 between elevations 5,125 ft minimum operating level, and 5,263 ft top of radial gates. Dead storage, 10,804 acre-ft. Reservoir is used to store water for hydroelectric power. Up to 400 ft³/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 May 19, 1966, elevation, 5,263.9 ft; minimum since reservoir first filled, 37,722 acre-ft Nov. 20, 1977, elevation, 5,170.86 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 136,405 acre-ft July 6, 15, elevation, 5,263.00 ft; minimum, 49,020 acre-ft Jan. 7, elevation 5,185.07 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84080	71050	59952	51958	55834	51454	56458	51030	91944	135839	131441	112248
2	83424	70626	59561	51428	55303	51497	56512	50918	93612	136377	130970	111577
3	82780	70123	59152	50900	54730	51471	56431	50728	95469	136320	130485	110870
4	82106	69601	58736	50333	54204	51281	56204	50737	97698	136263	129960	110167
5	81435	69091	58331	49811	53672	51065	55915	50754	100190	136377	129438	109466
6	80810	68553	57889	49283	53247	50892	55627	50668	102567	136405	128942	108729
7	80155	67948	57414	49020	53071	50900	55330	50582	104971	136263	128365	107997
8	79470	67464	56903	49079	53097	50926	55061	50668	107254	135939	127818	107229
9	78767	66932	56413	49198	52728	50892	54864	50582	109591	135585	127231	106490
10	78066	66334	55960	49198	52351	50935	54605	50625	112273	135478	126660	105754
11	77412	65768	55420	49334	51924	51039	54328	50616	114467	135557	126049	105081
12	76717	65165	54971	49555	51950	51402	53982	50720	115456	135769	125426	104325
13	76060	64555	54525	49759	52465	56585	53619	50961	116984	135980	124818	103620
14	75369	63929	54079	50008	52448	57835	53238	51333	118613	136193	124172	102894
15	74684	63324	53459	50187	52273	58359	52842	51976	120137	136405	123702	102145
16	73950	62780	52895	50470	51984	58644	52456	52728	121966	136320	122912	101399
17	73261	62333	52649	50720	51663	58755	52168	53424	124453	136249	122218	100620
18	72554	63114	52221	51099	51402	58755	51915	54168	126224	136079	121553	99880
19	71871	63229	51706	51420	51065	58671	51749	55825	127640	135881	120996	99618
20	71191	62914	51532	51663	50711	58552	51767	57551	128735	135628	120335	99582
21	70534	62495	52896	51897	50290	58395	51758	59393	130181	135487	119689	99606
22	69961	62248	54133	52299	50187	58248	51732	62143	131579	135106	119033	99630
23	69661	61821	54954	52737	50290	58110	57863	64835	133001	134824	118364	99642
24	69171	61320	55303	53283	50436	57899	51915	67522	133757	134500	117673	99665
25	70072	60954	55124	53725	50470	57551	51784	70625	134178	134178	117010	99689
26	71485	60475	54783	54302	50737	57176	51610	73682	134698	133827	116297	99701
27	71556	60027	54426	54694	50995	56876	51307	76970	134937	133449	115534	99713
28	71252	59999	53929	54971	51142	56467	51281	80476	135360	133085	114916	99737
29	70949	60270	53477	55348	---	56023	51350	84124	135726	132680	114173	99761
30	71505	60279	52956	55600	---	55717	51263	87021	135783	132290	113393	99773
31	71414	---	52491	55825	---	56312	---	89793	---	131886	112806	---
MAX	84080	71050	59952	55825	55834	58755	56512	89793	135783	136405	131441	112248
MIN	69171	59999	51532	49020	50187	50892	51263	50582	91944	131886	112806	99582
a	5209.13	5197.70	5189.10	5192.85	5187.55	5193.39	5187.69	5226.26	5262.56	5259.78	5245.45	5234.85
b	-13315	-11135	-7788	+3334	-4683	+5170	-5049	+38530	+45990	-3897	-19080	-13033

CAL YR 1982 b -60379

WTR YR 1983 b +15044

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

b Change in contents, in acre-feet.

11427500 MIDDLE FORK AMERICAN RIVER AT FRENCH MEADOWS, CA

LOCATION.--Lat 39°06'35", long 120°28'49", in SW 1/4 NW 1/4 sec.36, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 0.6 mi downstream from French Meadows Dam, 4.1 mi upstream from Chipmunk Creek, and 14 mi south of Cisco.

DRAINAGE AREA.--47.9 mi².

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, from topographic map. Prior to Oct. 1, 1962, at site 0.8 mi upstream at different datum.

REMARKS.--Flow regulated by French Meadows Reservoir (station 11427400) 0.6 mi 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, 107,900 acre-ft/yr; 19 years (water years 1965-83), 22.4 ft³/s, 16,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s Jan. 31, 1963, gage height, 14.20 ft, from rating curve extended above 1,100 ft³/s on basis of maximum flow at former site; minimum, 0.3 ft³/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 Apr. 30, 1965, gage height, 7.68 ft; minimum daily, 0.8 ft³/s Oct. 22-25, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 792 ft³/s June 12, gage height, 6.90 ft; minimum daily, 4.6 ft³/s June 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	9.3	12	12	12	26	17	18	14	400	8.8	8.2
2	7.8	9.1	12	12	12	22	18	17	13	418	8.8	8.1
3	7.6	8.6	11	11	12	18	16	18	12	509	8.8	8.1
4	7.6	8.5	11	11	11	16	15	19	12	513	8.8	8.1
5	7.8	8.5	11	11	11	16	15	18	11	517	8.8	8.1
6	8.2	8.5	11	11	12	17	14	17	11	521	8.8	8.1
7	8.3	8.5	11	11	19	20	14	18	10	512	8.6	8.1
8	8.2	8.5	10	11	19	19	15	18	9.9	389	8.6	8.1
9	8.1	8.2	10	11	15	17	15	18	9.1	208	8.6	8.1
10	8.1	8.1	10	11	14	18	15	17	20	73	8.6	8.0
11	8.1	8.1	10	11	14	19	14	17	413	5.4	8.6	7.9
12	8.1	8.1	10	11	21	23	14	18	622	6.6	8.6	7.9
13	8.1	8.1	11	11	25	71	13	19	403	7.6	8.6	7.9
14	8.1	8.1	10	11	17	29	13	19	313	7.6	8.6	7.9
15	8.1	8.1	10	11	15	22	13	21	256	7.6	8.4	7.9
16	8.1	8.6	10	11	14	19	13	20	82	7.7	8.4	7.9
17	8.1	8.6	15	11	13	18	14	20	5.5	7.6	8.3	7.9
18	8.1	26	12	12	13	17	14	21	5.3	7.6	8.3	7.9
19	8.1	15	11	13	13	16	16	23	5.0	7.6	8.4	7.9
20	8.1	12	19	12	13	15	20	24	4.8	7.6	8.3	7.9
21	8.1	11	33	12	13	15	18	25	4.6	7.6	8.3	7.9
22	8.1	12	33	16	12	15	18	25	4.6	7.6	8.3	8.3
23	8.9	12	24	16	13	14	18	23	123	7.6	8.3	8.3
24	8.8	11	17	27	13	14	17	20	376	7.6	8.3	8.3
25	14	10	15	16	13	13	16	20	528	7.6	8.3	8.3
26	16	10	14	15	13	13	15	19	493	7.6	8.2	8.3
27	9.7	10	14	15	13	13	15	18	390	8.0	8.1	8.3
28	8.9	16	13	14	18	13	21	18	255	8.6	8.1	8.3
29	8.9	19	13	13	---	13	21	17	324	8.7	8.1	8.5
30	13	14	12	13	---	14	20	15	396	8.8	8.1	8.4
31	10	---	12	13	---	24	---	14	---	8.8	8.3	---
TOTAL	274.9	322.5	427	396	403	599	477	594	5125.8	4221.4	262.1	242.9
MEAN	8.87	10.8	13.8	12.8	14.4	19.3	15.9	19.2	171	136	8.45	8.10
MAX	16	26	33	27	25	71	21	25	622	521	8.8	8.5
HIM	7.6	8.1	10	11	11	13	13	14	4.6	5.4	8.1	7.9
AC-FT	545	640	847	785	799	1190	946	1180	10170	8370	520	482
a	21060	20630	18940	4820	15770	21150	29060	22140	23270	24440	24120	14180

CAL YR 1982 TOTAL 27240.0 MEAN 74.6 MAX 993 MIN 7.5 AC-FT 54030
WTR YR 1983 TOTAL 13345.6 MEAN 36.6 MAX 622 MIN 4.6 AC-FT 26470

a Diversion, in acre-feet, from French Meadows Reservoir to Hell Hole Reservoir through French Meadows powerplant, furnished by Placer County Water Agency.

SACRAMENTO RIVER BASIN

11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39°08'09", long 120°28'39", in NE 1/4 NW 1/4 sec.24, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 0.2 mi upstream from diversion dam, 0.5 mi downstream from Little Duncan Creek, 2 mi northwest of French Meadows, and 20 mi northeast of Foresthill.

DRAINAGE AREA.--9.94 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 5,270 ft, from topographic map. Prior to Sept. 3, 1965, at site 150 ft upstream at datum 9.56 ft higher.

REMARKS.--No storage or diversion above station. See schematic diagram of Middle Fork American River 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.--23 years, 38.4 ft³/s, 27,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,650 ft³/s Dec. 22, 1964, gage height, 10.6 ft from floodmarks, from rating curve extended above 400 ft³/s on basis of computation of flow over diversion dam; minimum daily, 0.10 ft³/s on several days during July and August 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 25	2345	508	7.83	May 29	1830	547	7.82
Nov. 18	1445	332	7.41	June 10	2400	503	7.79
Mar. 13	1045	*778	8.31				

Minimum daily, 1.6 ft³/s Oct. 16-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	38	42	30	26	65	106	56	358	213	24	7.2
2	2.6	29	36	28	25	56	94	57	318	254	22	5.5
3	2.4	24	35	26	24	49	81	67	311	220	20	4.8
4	2.3	20	36	26	24	43	72	77	336	221	18	4.3
5	2.2	18	37	26	23	40	66	71	347	230	16	3.7
6	2.2	16	34	26	22	41	62	67	358	212	15	3.5
7	3.5	15	32	26	40	53	61	74	362	172	14	3.3
8	2.6	15	29	26	55	62	63	83	351	137	13	3.3
9	2.3	14	27	27	41	63	65	86	358	113	12	3.2
10	2.1	14	27	26	38	70	60	85	382	102	11	3.2
11	2.0	14	26	26	38	77	55	83	426	103	11	2.9
12	1.8	13	25	27	64	89	51	93	351	112	9.9	2.8
13	1.8	13	25	27	104	594	48	104	325	112	9.1	2.6
14	1.7	12	23	27	73	314	46	117	355	108	9.3	2.5
15	1.7	12	22	27	64	204	46	147	347	97	9.9	2.3
16	1.6	11	21	28	56	156	47	154	343	82	8.5	2.3
17	1.6	17	34	27	52	126	51	154	370	70	7.7	2.2
18	1.6	152	25	29	50	105	53	176	329	62	7.7	2.2
19	1.6	83	24	29	46	89	64	222	282	55	8.8	2.1
20	1.6	51	48	27	45	81	77	259	266	49	8.8	2.1
21	1.8	40	106	26	43	71	72	304	263	46	7.9	2.1
22	2.5	39	90	34	42	66	76	342	291	45	7.5	3.5
23	21	39	88	35	44	60	82	386	298	43	6.8	3.5
24	22	35	60	46	44	57	71	398	285	41	6.3	3.8
25	196	32	51	38	43	52	66	421	282	38	5.9	3.2
26	177	30	45	35	41	48	61	435	272	34	5.6	2.8
27	51	29	41	34	39	47	58	456	251	32	5.2	2.9
28	35	64	38	31	42	44	60	474	236	30	4.9	2.7
29	29	72	36	30	---	42	61	492	228	28	4.7	3.6
30	123	53	33	28	---	49	61	443	212	27	4.5	9.7
31	55	---	31	26	---	159	---	426	---	25	7.2	---
TOTAL	755.4	1014	1227	904	1248	3072	1936	6809	9493	3113	322.2	103.8
MEAN	24.4	33.8	39.6	29.2	44.6	99.1	64.5	220	316	100	10.4	3.46
MAX	196	152	106	46	104	594	106	492	426	254	24	9.7
MIN	1.6	11	21	26	22	40	46	56	212	25	4.5	2.1
AC-FT	1500	2010	2430	1790	2480	6090	3840	13510	19830	6170	639	206

CAL YR 1982	TOTAL	25636.5	MEAN 70.2	MAX 886	MIN 1.5	AC-FT	50850
WTR YR 1983	TOTAL	29997.4	MEAN 82.2	MAX 594	MIN 1.6	AC-FT	59500

11427750 DUNCAN CREEK BELOW DIVERSION DAM, NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39°07'59", long 120°28'58", in NE 1/4 SE 1/4 sec.23, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 800 ft downstream from unnamed right bank tributary, 1,000 ft downstream from Duncan Creek diversion dam, and 20 mi northeast of Foresthill.

DRAINAGE AREA.--10.5 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 5,210 ft, from topographic map.

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. 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.--19 years, 14.7 ft³/s, 10,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,640 ft³/s Dec. 22, 1964, gage height, 8.74 ft in gage well, 10.0 ft from floodmarks, from rating curve extended above 400 ft³/s on basis of computation of peak flow over diversion dam; no flow at times in 1965-66.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 706 ft³/s Mar. 13, gage height, 4.70 ft; minimum daily, 1.8 ft³/s Oct. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	12	16	14	12	14	29	15	74	52	5.0	8.3
2	3.3	8.5	15	14	12	14	23	15	34	105	4.8	5.9
3	3.0	4.1	15	14	12	13	21	16	26	69	4.6	5.0
4	2.7	3.9	15	14	12	12	20	17	33	69	4.6	4.4
5	2.6	3.6	14	14	11	12	19	16	38	80	4.4	3.9
6	4.0	3.5	14	14	11	12	19	15	44	63	4.3	3.7
7	5.2	3.4	14	14	14	13	19	16	42	23	4.2	3.4
8	3.6	3.3	14	14	15	13	19	16	34	10	4.3	3.3
9	3.0	3.2	14	14	13	13	20	17	47	10	4.4	3.1
10	2.6	7.1	14	14	13	15	19	17	68	9.8	4.5	3.2
11	2.4	11	14	14	13	16	19	17	104	10	4.5	2.9
12	2.3	11	14	13	16	17	17	18	43	10	6.4	2.8
13	2.2	11	14	14	19	485	16	19	31	10	8.5	2.6
14	2.1	10	14	14	17	244	16	20	53	10	8.3	2.5
15	2.0	10	13	14	16	131	16	23	53	10	9.2	2.4
16	1.9	9.5	13	14	15	90	16	23	53	10	7.9	2.2
17	1.8	10	16	14	15	57	16	23	77	10	7.3	2.1
18	1.8	42	14	14	15	35	17	25	47	10	7.0	2.1
19	1.8	21	14	14	13	21	19	28	20	10	8.4	2.0
20	1.8	17	18	13	13	19	21	35	20	10	8.7	2.0
21	2.3	16	27	13	12	19	20	57	27	9.8	7.2	2.0
22	3.4	16	26	14	13	18	20	88	56	9.4	7.1	3.8
23	29	15	18	14	13	18	19	146	81	9.5	6.6	4.2
24	29	14	18	16	13	17	18	168	79	9.3	6.0	4.3
25	199	14	17	14	12	17	17	210	85	9.1	5.6	3.8
26	137	14	16	14	12	17	16	247	81	8.8	5.1	3.0
27	14	14	16	13	11	17	16	244	70	7.9	4.7	3.1
28	12	19	15	13	12	16	17	238	62	6.6	4.5	2.8
29	9.7	21	15	13	---	16	16	258	63	6.1	4.2	3.6
30	34	18	15	12	---	17	16	211	48	5.7	4.0	10
31	14	---	15	12	---	77	---	159	---	5.3	5.8	---
TOTAL	537.2	366.1	487	426	375	1495	556	2417	1593	678.3	182.1	108.4
MEAN	17.3	12.2	15.7	13.7	13.4	48.2	18.5	78.0	53.1	21.9	5.87	3.61
MAX	199	42	27	16	19	485	29	258	104	105	9.2	10
MIN	1.8	3.2	13	12	11	12	16	15	20	5.3	4.0	2.0
AC-FT	1070	726	966	845	744	2970	1100	4790	3160	1350	361	215
CAL YR 1982	TOTAL	11607.84	MEAN	31.8	MAX	781	MIN	.63	AC-FT	23020		
WTR YR 1983	TOTAL	9221.10	MEAN	25.3	MAX	485	MIN	1.8	AC-FT	18290		

11427760 MIDDLE FORK AMERICAN RIVER ABOVE MIDDLE FORK POWERHOUSE, NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'31", long 120°35'40", in NW 1/4 NW 1/4 sec.36, T.14 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 300 ft upstream from Middle Fork powerhouse, 3.7 mi upstream from Big Mosquito Creek, and 11 mi east of Foresthill.

DRAINAGE AREA.--87.8 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft, from topographic map. Prior to Nov. 9, 1982, at datum 1.00 ft higher.

REMARKS.--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.--18 years, 108 ft³/s, 78,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft³/s Jan. 13, 1980, gage height, 8.47 ft; minimum daily, 5.3 ft³/s Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s Mar. 13, gage height, 5.00 ft; minimum daily, 20 ft³/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	48	231	156	231	617	397	390	408	472	37	39
2	26	46	185	143	214	606	395	361	339	531	36	35
3	26	46	170	132	197	527	364	352	304	570	35	31
4	25	42	164	124	181	457	337	362	297	562	34	30
5	24	39	154	121	171	418	310	356	290	569	33	29
6	25	38	145	119	185	408	287	340	286	554	33	28
7	36	37	138	116	317	456	272	333	286	517	32	28
8	27	40	128	118	449	459	266	334	264	437	32	27
9	25	37	122	117	383	426	267	327	260	268	32	27
10	24	39	119	112	359	444	258	316	264	169	32	27
11	23	44	114	111	330	481	246	303	536	61	32	26
12	22	44	116	113	403	519	234	308	704	58	31	26
13	22	43	124	115	633	921	218	314	546	59	35	25
14	22	43	113	113	485	929	209	324	466	58	35	25
15	21	41	108	113	415	753	202	348	446	57	38	25
16	21	40	104	121	360	614	202	357	304	56	36	25
17	21	48	205	121	323	527	208	350	213	56	35	24
18	21	297	174	133	344	454	215	366	194	55	34	24
19	20	260	153	156	324	396	235	400	150	54	36	24
20	21	154	214	127	303	361	310	431	135	53	36	23
21	23	118	779	119	281	342	295	480	135	52	35	24
22	26	130	805	206	269	331	284	532	154	51	34	27
23	66	143	707	234	270	320	302	602	236	49	33	30
24	67	118	471	547	267	313	296	620	466	48	32	28
25	299	105	360	395	282	293	294	653	617	47	32	32
26	532	97	304	344	305	269	269	696	594	46	31	27
27	94	92	264	385	331	271	264	685	507	45	30	26
28	66	157	234	325	415	255	351	661	395	42	29	27
29	56	320	210	309	---	239	415	668	411	41	29	29
30	132	346	189	277	---	235	421	588	483	40	29	41
31	60	---	171	251	---	504	---	525	---	38	32	---
TOTAL	1900	3052	7475	5873	9027	14144	8623	13682	10690	5715	1030	839
MEAN	61.3	102	241	189	322	456	287	441	356	184	33.2	28.0
HAX	532	346	805	547	633	929	421	696	704	570	38	41
MIN	20	37	104	111	171	235	202	303	135	38	29	23
AC-FT	3770	6050	14830	11650	17910	28050	17100	27140	21200	11340	2040	1660
CAL YR 1982	TOTAL	91450	MEAN 251	HAX 1680	MIN 20	AC-FT 181400						
WTR YR 1983	TOTAL	82050	MEAN 225	HAX 929	MIN 20	AC-FT 162700						

11427770 MIDDLE FORK AMERICAN RIVER BELOW INTERBAY DAM, NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'35", long 120°36'09", in SW 1/4 SE 1/4 sec.26, T.14 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 500 ft downstream from Interbay Dam, 3.3 mi upstream from Big Mosquito Creek, and 10.6 mi east of Foresthill.

DRAINAGE AREA.--89.1 mi².

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, from topographic map.

REMARKS.--Flow regulated by French Meadows Reservoir (station 11427400) and after Aug. 22, 1966, by Interbay Reservoir, capacity, 130 acre-ft between normal operating limits of 2,502.0 ft and 2,526.0 ft. 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.--18 years, 66.4 ft³/s, 48,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,900 ft³/s Jan. 13, 1980, gage height, 7.95 ft; minimum daily, 1.0 ft³/s Oct. 25-30, 1966, Jan. 19, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,820 ft³/s Mar. 13, gage height, 5.67 ft; minimum daily, 11 ft³/s July 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	39	42	30	26	643	406	293	216	388	15	27
2	27	39	42	30	26	636	408	275	167	450	15	26
3	27	26	42	30	26	556	372	260	144	487	15	26
4	27	25	42	30	26	408	348	271	151	477	15	26
5	26	25	42	32	26	399	298	266	154	498	17	25
6	25	25	42	32	26	394	265	250	141	452	19	25
7	26	25	42	32	26	440	280	243	142	418	19	26
8	26	26	42	32	27	440	272	246	117	343	20	25
9	26	26	42	32	27	422	272	233	122	199	24	25
10	27	27	42	32	27	434	263	233	119	112	25	25
11	27	27	42	28	27	470	254	214	335	58	24	25
12	27	28	42	23	26	483	239	225	632	73	25	25
13	28	28	42	23	79	2330	225	227	468	68	26	25
14	28	29	42	23	19	941	212	240	382	84	25	25
15	28	30	42	23	19	807	206	267	371	85	26	24
16	29	30	41	23	19	655	207	271	237	91	26	24
17	29	30	41	23	19	553	209	272	159	75	25	25
18	29	31	41	23	20	465	220	284	122	76	26	24
19	30	32	40	23	20	410	237	552	111	74	26	24
20	30	32	41	24	20	374	311	244	76	45	27	24
21	30	32	113	24	20	357	299	283	187	11	26	24
22	30	32	350	24	19	341	285	325	201	11	27	24
23	31	32	241	24	19	332	303	378	212	14	27	24
24	31	33	28	25	142	325	295	393	388	13	27	24
25	32	33	29	25	258	301	294	421	522	13	27	24
26	38	33	29	25	294	278	271	446	500	15	27	24
27	35	33	29	26	356	280	265	435	426	13	27	24
28	35	33	29	26	416	263	339	412	314	13	27	24
29	37	34	29	26	---	246	310	417	329	13	27	24
30	38	45	29	26	---	242	320	355	392	14	27	24
31	38	---	30	26	---	514	---	307	---	14	27	---
TOTAL	924	920	1770	825	2055	15739	9485	9538	7837	4697	736	741
MEAN	29.8	30.7	57.1	26.6	73.4	508	283	308	261	152	23.7	24.7
MAX	38	45	350	32	416	2330	408	552	632	498	27	27
MIN	25	25	28	23	19	242	206	214	76	11	15	24
AC-FT	1830	1820	3510	1640	4080	31220	16830	18920	15540	9320	1460	1470
a	37590	51620	53080	44630	48950	55640	55410	57130	55270	57320	54280	54440

CAL YR 1982 TOTAL 113215.8 MEAN 310 MAX 8090 MIN 8.9 AC-FT 224600
WTR YR 1983 TOTAL 54267.0 MEAN 149 MAX 2330 MIN 11 AC-FT 107600

a Diversion, in acre-feet, to Ralston powerplant.

11427940 RUBICON-ROCKBOUND TUNNEL NEAR MEEKS BAY, CA

LOCATION.--Lat 38°59'26", long 120°13'29", in NE 1/4 SE 1/4 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 upstream from diversion dam on Rubicon River, 2.5 mi upstream from Rubicon Springs, and 6.4 mi southwest of Meeks Bay.

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

GAGE.--Water-stage recorder. Datum of gage is 6,533.23 ft National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District). Auxiliary water-stage recorder since Aug. 26, 1966, 220 ft 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.--20 years, 109 ft³/s, 78,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,120 ft³/s Dec. 23, 1964, no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	148	55	19	20	38	103	32	744	686	343	608
2	35	90	53	19	18	38	72	33	550	948	338	369
3	28	64	41	18	18	33	48	62	550	821	339	157
4	22	50	36	19	17	27	35	108	717	779	309	94
5	17	43	35	20	16	23	30	78	791	900	264	67
6	14	41	33	21	16	21	29	55	811	925	240	57
7	14	38	31	21	18	22	23	59	799	867	245	52
8	18	34	29	22	29	27	27	94	771	668	239	49
9	17	32	28	22	29	32	38	99	771	432	234	45
10	14	35	27	21	28	45	37	103	867	377	223	39
11	11	34	27	21	24	52	31	77	943	433	205	32
12	8.1	32	27	21	26	49	29	100	820	525	184	28
13	6.4	30	28	21	50	264	23	132	734	600	152	26
14	5.1	28	26	21	50	288	23	169	807	662	163	26
15	4.3	26	24	21	34	145	22	236	901	646	249	24
16	3.6	24	23	21	25	98	24	296	877	495	196	21
17	2.8	26	26	21	22	59	33	250	912	427	150	20
18	2.2	73	27	20	21	45	38	287	886	389	118	20
19	1.7	104	25	22	20	42	56	358	765	357	120	17
20	1.3	75	30	22	20	37	78	416	675	336	135	15
21	1.3	53	56	21	20	30	70	492	717	326	112	12
22	57	45	48	21	20	26	104	594	803	378	103	17
23	579	43	53	24	23	25	114	686	907	393	85	53
24	360	39	49	34	26	25	71	738	885	358	72	61
25	811	36	38	34	24	24	51	817	845	366	65	42
26	856	33	30	28	23	23	40	867	828	336	59	37
27	373	32	27	26	23	22	33	890	788	301	52	82
28	183	49	24	25	26	22	32	918	759	319	48	57
29	135	48	23	23	---	21	33	940	746	329	48	64
30	643	47	21	22	---	32	33	910	693	350	47	148
31	348	---	20	21	---	125	---	865	---	363	79	---
TOTAL	4615.8	1452	1020	692	686	1760	1380	11761	23662	16092	5216	2339
MEAN	149	48.4	32.9	22.3	24.5	56.8	46.0	379	789	519	168	78.0
MAX	856	148	56	34	50	288	114	940	943	948	343	608
MIN	1.3	24	20	18	16	21	22	32	550	301	47	12
AC-FT	9160	2880	2020	1370	1360	3490	2740	23330	46930	31920	10350	4640
CAL YR 1982	TOTAL	65624.1	MEAN	180	MAX	1000	MIN	1.3	AC-FT	130200		
WTR YR 1983	TOTAL	70675.8	MEAN	194	MAX	948	MIN	1.3	AC-FT	140200		

11428000 RUBICON RIVER AT RUBICON SPRINGS, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°01'10", long 120°14'46", in SW 1/4 NE 1/4 sec.31, T.14 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 200 ft downstream from Rubicon Springs, 0.7 mi upstream from Miller Creek, and 7 mi west of Meeks Bay.

DRAINAGE AREA.--31.4 mi².

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 National Geodetic Vertical Datum of 1929. Feb. 1, 1910, to Mar. 31, 1914, nonrecording gage or water-stage recorder at site 0.4 mi downstream at different datum.

REMARKS.--Records good. Low summer flow, beginning in 1950, augmented by release from streamflow maintenance dams on Lakes Clyde, Lois, Middle Velma, and Schmidell, total controlled capacity, 555 acre-ft. Flow below 1,200 ft³/s controlled by Rubicon diversion dam 5.5 mi 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).--30 years (water years 1911-13, 1957-83), 127 ft³/s, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s Feb. 1, 1963, gage height, 14.28 ft, from rating curve extended above 1,200 ft³/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 from floodmarks, present site and datum, discharge, 9,270 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,870 ft³/s Oct. 26, gage height, 9.10 ft; minimum daily, 5.4 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.6	22	21	14	14	58	46	25	107	34	7.4	30		
2	6.2	17	19	14	14	34	37	28	93	334	7.2	11		
3	5.9	15	18	14	13	24	28	49	149	80	7.2	9.1		
4	5.5	14	19	14	13	20	23	56	151	32	7.2	8.6		
5	5.4	13	19	15	13	19	21	39	138	90	7.5	8.1		
6	6.0	12	18	16	13	20	20	31	130	198	7.5	7.8		
7	7.5	12	17	16	18	26	20	43	114	106	7.6	7.7		
8	7.2	13	16	18	23	31	25	57	113	22	7.4	7.3		
9	7.1	14	16	17	18	30	32	52	114	18	7.3	7.4		
10	6.9	15	16	16	16	32	30	50	186	16	7.3	7.6		
11	6.8	15	16	17	15	36	24	42	669	16	7.2	7.5		
12	6.8	15	17	17	27	34	21	57	141	16	7.1	7.6		
13	6.8	15	17	17	59	495	19	69	94	15	7.1	7.6		
14	6.7	14	15	16	29	89	18	84	109	15	7.5	7.5		
15	6.6	14	15	16	22	42	19	108	241	14	8.2	7.5		
16	6.6	14	14	17	19	32	21	90	172	13	7.7	7.2		
17	6.5	15	22	16	18	28	27	91	315	12	7.4	7.2		
18	6.4	144	18	17	18	24	30	110	215	11	7.1	7.2		
19	6.5	51	16	19	17	22	38	136	63	11	8.0	7.0		
20	6.6	27	50	16	16	22	47	160	61	10	8.5	7.0		
21	7.0	21	84	15	16	20	43	160	62	9.6	8.0	7.1		
22	14	21	41	20	17	20	55	171	93	9.6	7.9	8.3		
23	72	22	42	21	22	19	50	174	214	9.4	7.4	9.4		
24	26	19	24	39	23	18	32	176	147	9.0	7.2	8.3		
25	697	18	20	23	21	17	27	192	94	8.8	7.3	7.6		
26	937	17	19	19	19	17	24	205	71	8.5	7.1	7.7		
27	42	18	18	19	17	17	22	255	47	8.3	7.1	7.5		
28	27	32	16	16	20	16	25	311	43	8.1	7.0	7.9		
29	22	33	16	16	---	16	29	490	41	7.9	7.1	9.9		
30	162	25	15	15	---	22	28	317	35	7.6	6.9	11		
31	39	---	14	14	---	100	---	204	---	7.5	9.2	---		
TOTAL	2175.6	697	688	539	550	1400	881	4032	4222	1157.3	231.6	262.6		
MEAN	70.2	23.2	22.2	17.4	19.6	45.2	29.4	130	141	37.3	7.47	8.75		
MAX	937	144	84	39	59	495	55	490	669	334	9.2	30		
MIN	5.4	12	14	14	13	16	18	25	35	7.5	6.9	7.0		
AC-FT	4320	1380	1360	1070	1090	2780	1750	8000	8370	2300	459	521		
MEAN a	219	71.6	55.0	39.7	44.1	102	75.5	510	929	557	176	86.7		
AC-FT a	13480	4260	3380	2440	2450	6270	4490	31330	55300	34220	10810	5160		
CAL YR 1982	TOTAL	18262.1	MEAN	50.0	MAX	2370	MIN	5.4	AC-FT	36220	MEAN a	230	AC-FT a	166400
WTR YR 1983	TOTAL	16836.1	MEAN	46.1	MAX	937	MIN	5.4	AC-FT	33390	MEAN a	240	AC-FT a	174000

a Adjusted for diversion to Rubicon-Rockbound tunnel.

SACRAMENTO RIVER BASIN

11428300 BUCK-LOON TUNNEL NEAR MEEKS BAY, CA

LOCATION.--Lat 39°00'17", long 102°15'21", in SE 1/4 NW 1/4 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 southwest of Meeks Bay.

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

GAGE.--Water-stage recorder. Datum of gage is 6,425.0 ft National Geodetic Vertical Datum of 1929 (levels by Sacramento Municipal Utility District).

REMARKS.--Records good. 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.--20 years, 140 ft³/s, 101,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,240 ft³/s Dec. 23, 1964; no flow many days in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	246	81	27	26	66	171	47	1000	852	381	488
2	49	140	76	26	24	66	118	46	788	1060	370	594
3	39	95	64	25	23	53	81	70	705	1030	373	265
4	30	73	53	25	22	42	58	128	904	971	355	150
5	23	60	49	25	22	35	45	128	1010	1060	310	102
6	19	53	47	26	24	32	37	94	1040	1070	277	77
7	18	50	45	27	31	34	33	82	1030	1050	277	65
8	19	49	41	28	40	40	35	114	1000	921	277	59
9	20	44	38	29	40	44	46	133	1010	587	274	55
10	18	44	37	28	37	57	54	139	1060	445	262	50
11	14	45	36	27	32	75	49	117	1090	483	244	42
12	12	43	37	27	37	79	42	124	1040	579	224	35
13	9.1	40	41	27	77	298	35	159	982	689	188	30
14	7.3	37	37	27	89	446	31	204	1010	768	177	29
15	5.9	35	34	27	62	269	30	279	1070	809	253	28
16	4.9	32	32	28	43	162	33	355	1060	631	255	25
17	4.0	32	39	28	34	107	42	321	1080	507	198	22
18	3.4	96	37	29	36	73	53	350	1070	452	154	20
19	2.6	167	35	36	32	59	69	433	1010	408	137	20
20	2.0	127	45	31	29	54	100	515	893	384	160	18
21	1.7	90	111	28	27	48	100	616	900	363	150	15
22	13	72	105	33	26	42	128	742	978	401	143	17
23	450	65	91	35	28	39	157	851	1070	440	116	44
24	588	58	73	55	33	39	126	925	1060	406	94	83
25	825	52	58	52	39	35	89	1020	1050	406	81	67
26	1090	47	47	43	41	32	64	1060	1040	389	73	48
27	631	44	39	46	39	33	54	1070	1020	343	65	71
28	282	64	35	36	40	30	52	1080	981	347	59	83
29	182	85	32	36	---	29	51	1080	951	361	56	82
30	641	92	30	33	---	37	50	1070	903	377	56	132
31	579	---	28	29	---	141	---	1060	---	400	63	---
TOTAL	5640.9	2177	1553	979	1033	2596	2033	14412	29805	18989	6102	2816
MEAN	182	72.6	50.1	31.6	36.9	83.7	67.8	465	994	613	197	93.9
MAX	1090	246	111	55	89	446	171	1080	1090	1070	381	594
MIN	1.7	32	28	25	22	29	30	46	705	343	56	15
AC-FT	11190	4320	3080	1940	2050	5150	4030	28590	59120	37660	12100	5590

CAL YR 1982 TOTAL 80612.4 MEAN 221 MAX 1150 AC-FT 159900
WTR YR 1983 TOTAL 88135.9 MEAN 241 MAX 1090 MIN 1.7 AC-FT 174800

SACRAMENTO RIVER BASIN

11428700 HELL HOLE RESERVOIR NEAR MEEKS BAY, CA

221

LOCATION.--Lat 39°03'54", long 120°24'50", in SE 1/4 NW 1/4 sec.16, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.3 mi upstream from Hell Hole Dam on Rubicon River, and 15.6 mi west of Meeks Bay.

DRAINAGE AREA.--114 mi².

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 between elevations 4,287.65 ft, invert of river outlet and 4,630.0 ft, crest of ogee spillway. Dead storage 248 acre-ft. 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, 211,050 acre-ft Dec. 20, 1981, elevation, 4,632.75 ft; minimum since reservoir first filled, 37,499 acre-ft Mar. 23, 1973, elevation, 4,428.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 209,348 acre-ft June 14, 15, elevation, 4,631.40 ft; minimum, 105,384 acre-ft May 12, elevation, 4,529.06 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140418	146108	135484	131477	118065	118250	119825	107561	167852	208343	202018	176995
2	140096	145598	135068	130933	118208	118216	119741	107116	169962	208883	201388	176080
3	139623	145050	134610	130381	118258	117855	119361	106881	172540	208719	200735	175088
4	139140	144318	134219	129779	118132	117511	118847	106873	175943	208468	200084	174077
5	138767	143552	133909	129425	117603	116983	118325	106745	179272	208468	199311	173002
6	138420	142644	133428	128859	117192	116499	117788	106472	182877	208594	198528	171966
7	137953	142414	132850	128384	117611	116340	117142	106140	186193	208217	197770	170889
8	137375	142068	132256	128042	118183	116106	116574	106060	189386	207879	196942	169850
9	136790	141208	131781	127498	118401	115773	116081	105899	192729	207678	196114	168738
10	136199	140323	131031	127061	118451	115498	115506	105738	196625	207590	195217	167631
11	135664	139623	130470	126408	118351	115465	114957	105465	202821	207841	194333	166551
12	135068	138561	130026	125712	119285	115756	114285	105384	206126	208092	193524	165497
13	134492	137663	129495	125081	121002	123763	113582	105481	208719	208092	192765	164394
14	133991	136966	129142	124374	121579	125972	112863	105794	209348	208142	192103	163285
15	133537	136014	128525	123566	121936	126660	112146	106551	209348	208053	191239	162193
16	133094	135150	127928	123088	122218	126599	111489	107390	209159	207841	190318	161073
17	132661	134546	127857	122464	122481	126373	110931	108273	209285	207678	189481	159949
18	132184	136957	127516	122038	122942	125981	110440	109379	208832	207465	188731	158917
19	131638	137580	127122	122047	123079	125470	110097	111612	208468	207252	187982	157426
20	131209	137301	127385	121868	122900	124951	110048	114202	208594	207002	187033	155740
21	130773	136818	129938	121019	122678	124374	109836	117175	208468	206789	186240	153884
22	130381	136531	131093	121036	122157	124004	109721	120612	208794	206539	185520	152089
23	130595	136199	132796	121087	121715	123489	109746	124159	208719	206252	184778	150314
24	130755	135793	133754	121452	120866	122891	109502	128701	208632	205927	183991	148757
25	138776	135361	134319	121112	120146	122209	109111	133238	208607	205541	183181	146987
26	141809	134674	134155	120781	119015	121273	108598	136205	208481	205117	182141	145137
27	142673	134319	133845	120586	117931	120849	108160	143513	208393	204632	181080	143300
28	142596	134601	133446	120087	117561	120045	108225	149297	208317	204148	180430	141456
29	142289	135150	132985	119496	---	119243	108184	155615	208431	203651	179318	139642
30	144932	135673	132526	118906	---	118485	107974	160612	208343	203156	178224	137934
31	145882	---	132014	118477	---	119741	---	164918	---	202611	177614	---
MAX	145882	146108	135484	131477	123079	126660	119825	164918	209348	208883	202018	176995
MIN	130381	134319	127122	118477	117192	115465	107974	105384	167852	202611	177614	137934
a	4575.40	4564.66	4560.63	4544.99	4543.90	4546.49	4532.27	4593.73	4630.60	4626.00	4605.06	4567.10
b	+5160	-10209	-3659	-13537	-916	+2180	-11767	+56944	+43425	-5732	-24997	-39680

CAL YR 1982 b -75827

WTR YR 1993 b -2788

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

b 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 NE 1/4 NE 1/4 sec.21, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 600 ft downstream from outlet of dam, and 15.3 mi west of Meeks Bay.

DRAINAGE AREA.--114 mi².

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 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.--17 years, 31.7 ft³/s, 22,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,380 ft³/s Dec. 20, 1981, including flow over spillway; no flow Aug. 25 to Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft³/s June 18, including flow over spillway; minimum daily, 10 ft³/s on several days during October and December.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	13	15	20	30	24	23	36	594	21	22
2	12	15	12	15	20	23	23	22	35	1240	21	22
3	12	15	13	15	20	21	23	22	34	1090	20	22
4	12	14	13	15	19	20	22	23	35	791	20	22
5	11	15	13	15	19	20	21	23	36	915	21	22
6	11	14	13	15	20	21	21	23	36	929	21	22
7	11	14	12	15	27	22	21	22	35	915	21	22
8	11	14	11	15	25	21	21	22	33	420	21	22
9	11	14	11	15	23	20	21	21	31	212	21	21
10	11	14	11	15	22	21	21	21	32	104	21	22
11	11	14	11	15	22	21	21	21	33	120	21	22
12	11	14	11	15	28	24	21	21	30	229	21	22
13	11	14	11	14	27	61	20	22	172	345	21	22
14	11	14	11	14	20	32	20	23	1210	404	21	21
15	11	14	11	14	19	26	20	24	1550	395	21	21
16	10	14	10	14	19	24	20	25	1590	253	21	22
17	10	14	14	14	19	24	20	25	1030	127	21	22
18	10	23	11	15	21	23	20	26	1950	39	21	22
19	10	17	11	15	20	23	21	30	1210	23	21	22
20	10	14	17	14	19	23	25	32	825	21	21	22
21	11	13	31	14	18	23	23	35	919	21	21	21
22	11	14	28	20	18	23	22	37	934	21	21	21
23	11	14	21	17	19	22	23	39	1300	21	21	21
24	11	13	17	27	19	22	23	40	1300	21	21	21
25	18	12	16	17	19	21	23	42	1100	21	21	21
26	20	12	16	17	20	21	23	43	1030	21	21	21
27	13	12	16	17	22	22	23	43	870	20	21	22
28	12	14	16	16	27	21	28	44	761	21	21	21
29	13	16	15	15	---	21	26	43	745	20	21	23
30	20	15	15	15	---	24	24	39	674	21	22	23
31	16	---	15	17	---	32	---	38	---	21	22	---
TOTAL	375	432	446	486	591	752	664	914	19576	9395	651	652
MEAN	12.1	14.4	14.4	15.7	21.1	24.3	22.1	29.5	653	303	21.0	21.7
MAX	20	23	31	27	28	61	28	44	1950	1240	22	23
MIN	10	12	10	14	18	20	20	21	30	20	20	21
AC-FT	744	857	885	964	1170	1490	1320	1810	38830	18630	1290	1290
a	35520	47860	42130	33860	35520	55070	55530	58270	58230	59650	55820	55790

CAL YR 1982 TOTAL 32971.94 MEAN 90.3 MAX 1190 MIN .34 AC-FT 65400

WTR YR 1983 TOTAL 34934.00 MEAN 95.7 MAX 1950 MIN 10 AC-FT 69290

a Diversion, in acre-feet, from Hell Hole Reservoir to Middle Fork powerplant, furnished by Placer County Water Agency.

SACRAMENTO RIVER BASIN

11429300 ROBBS PEAK POWERPLANT NEAR KYBURZ, CA

223

LOCATION.--Lat`38°53'50", long 120°22'38", in SE 1/4 SW 1/4 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 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, from topographic map. Prior to October 1965, water-stage recorder and concrete control in abandoned section of canal 0.5 mi upstream at different datum.

REMARKS.--Tunnel diverts at South Fork Rubicon River diversion dam in NE 1/4 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.--21 years, 252 ft³/s, 182,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,440 ft³/s Dec. 22-24, 1964; no flow many days in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	524	656	459	225	580	792	325	933	973	222	227
2	42	519	585	419	289	545	475	486	928	973	605	238
3	0	514	459	425	267	449	298	417	973	973	519	188
4	266	509	439	464	268	395	524	398	983	973	489	0
5	259	501	410	476	264	382	504	400	973	958	457	39
6	248	501	404	405	148	269	484	394	978	973	462	173
7	277	122	389	440	278	590	509	481	978	973	10	315
8	281	431	306	456	355	676	509	411	978	968	490	343
9	265	492	400	151	339	681	306	605	978	973	467	314
10	0	540	377	409	341	756	273	620	978	973	462	336
11	273	98	369	436	304	837	311	605	978	968	455	6
12	288	463	159	431	420	822	304	691	983	807	475	357
13	286	502	329	443	550	943	288	746	963	782	466	304
14	272	76	374	426	441	968	286	772	983	756	8	342
15	281	479	363	438	397	822	299	721	983	645	524	290
16	268	489	338	123	345	807	209	615	983	620	328	332
17	21	453	473	453	191	555	202	726	983	615	399	314
18	277	666	422	435	256	671	287	802	983	575	180	0
19	265	499	157	467	329	701	365	923	978	540	274	304
20	261	519	428	411	146	701	545	938	978	438	318	311
21	272	165	625	407	146	711	501	943	983	443	19	302
22	275	469	540	239	292	681	514	948	983	401	296	302
23	330	570	374	278	325	767	459	963	983	393	243	323
24	54	509	600	372	349	777	309	953	983	435	165	329
25	625	466	640	279	341	767	320	968	983	405	170	22
26	741	448	349	167	320	761	393	968	983	496	167	287
27	331	427	453	159	185	767	326	978	983	363	109	285
28	410	595	374	191	316	756	570	978	983	409	0	275
29	346	681	346	195	---	852	600	978	988	381	148	317
30	711	464	415	158	---	913	580	963	983	335	171	324
31	265	---	411	154	---	973	---	963	---	358	156	---
TOTAL	8632	13691	12964	10766	8427	21875	12342	22679	29310	20875	9254	7499
MEAN	278	456	418	347	301	706	411	732	977	673	299	250
MAX	741	681	656	476	550	973	792	978	988	973	605	357
MIN	0	76	157	123	146	269	202	325	928	335	0	0
AC-FT	17120	27160	25710	21350	16710	43390	24480	44980	58140	41410	18360	14870
CAL YR 1982	TOTAL	158750	MEAN	435	MAX	993	MIN	0	AC-FT	314900		
WTR YR 1983	TOTAL	178314	MEAN	489	MAX	988	MIN	0	AC-FT	353700		

11429350 LOON LAKE NEAR MEEKS BAY, CA

LOCATION.--Lat 38°58'59", long 120°19'22", in SE 1/4 SW 1/4 sec.8, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, in powerhouse intake structure, 1.6 mi southwest of right bank end of Loon Lake Dam on Gerle Creek, and 10 mi southwest of town of Meeks Bay.

DRAINAGE AREA.--7.96 mi².

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 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. Usable capacity, 73,900 acre-ft, between elevations 6,325 ft, invert of fishwater release valve and 6,410 ft crest of spillway. Dead storage, 2,300 acre-ft. 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 June 6, 1969, elevation, 6,411.1 ft; minimum since reservoir first filled, 3,690 acre-ft Nov. 3, 1970, elevation, 6,330.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 75,400 acre-ft July 7, 8, elevation, 6,409.4 ft; minimum, 5,810 acre-ft Apr. 15, elevation, 6,336.7 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67200	68400	54800	42300	31300	27900	9620	6610	44800	73300	74800	68200
2	67200	67800	55400	41600	30900	27700	10200	5900	46500	73800	74500	68900
3	67400	67100	53500	41000	30600	27600	10600	5980	48000	74400	74200	69100
4	66900	66300	53000	40200	30200	27300	9860	6360	49600	74700	74100	69200
5	66300	65600	52600	39600	29900	27100	9180	6700	51800	75100	73700	69300
6	65800	64800	52100	38800	30100	27200	8440	6650	53900	75200	73300	69100
7	65300	64900	51600	38300	30100	26700	7610	6570	55200	75400	73800	68600
8	64800	64300	51000	37600	30200	26100	6780	7120	56400	75400	73400	67900
9	64300	63500	50500	37800	30000	25300	7070	6950	57800	74800	73000	67200
10	64300	62700	50000	37100	29700	24600	7340	6860	59500	73800	72400	66700
11	63600	62700	49400	36500	29600	23600	7070	6570	61200	73000	72000	66700
12	63100	61900	49500	35800	29400	23300	6860	6320	62600	72800	71400	66200
13	62600	61000	49200	35200	29700	25100	6530	6360	63900	72800	70700	65600
14	62100	61000	48600	34600	29700	26600	6190	6740	65300	73300	71200	65000
15	61400	60300	48100	33800	29500	26800	5810	7940	66600	73800	70600	64400
16	61000	59500	47600	33900	29300	26400	6020	9130	67800	74100	70500	63700
17	60900	58900	47200	33300	29200	26200	6280	10100	68900	74000	70000	63200
18	60400	59100	46800	32800	29300	25400	6360	11200	70000	74000	69800	63200
19	59800	59600	46800	32300	29000	24400	6530	12800	70900	73800	69500	62600
20	59200	59200	46800	31800	29000	23400	6860	14300	71400	73800	69200	61900
21	58700	59400	47400	31200	29100	22400	6950	16100	71600	73800	69500	61300
22	58200	59100	47400	31200	28800	21400	7160	18400	71900	74000	69200	60700
23	58700	58600	47500	31100	28400	20100	7890	20900	72300	74200	68900	60100
24	60000	58000	46800	31300	28100	18800	8440	23300	72700	74400	68800	59600
25	62300	57500	46000	31200	28000	17400	8490	26100	73000	74400	68600	59600
26	64800	56800	45800	31400	27800	15800	8260	28900	73100	74400	68300	59200
27	65800	56200	45200	31600	28000	14700	8030	31700	73300	74400	68000	58700
28	66000	55900	44700	31500	27900	13400	7520	34500	73400	74200	68200	58200
29	66000	55700	44200	31500	---	11700	6990	37300	73400	74200	67900	57700
30	67600	55500	43600	31600	---	9980	6360	40000	73300	74400	67600	57300
31	68800	---	43000	31500	---	9740	---	42600	---	74500	67500	---
MAX	68800	68400	55400	42300	31300	27900	10600	42600	73400	75400	74800	69300
MIN	58200	55500	43000	31100	27800	9740	5810	5900	44800	72800	67500	57300
a	6404.7	6394.4	6384.1	6373.1	6369.4	6345.4	6338.0	6383.7	6407.9	6408.8	6403.7	6395.8
b	+1700	-13300	-12500	-11500	-3600	-18160	-3380	+36240	+30700	+1200	-7000	-10200

CAL YR 1982 b -19600
WTR YR 1983 b -9800

a Elevation, in feet NGVD, at end of month.
b 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 NE 1/4 NE 1/4 sec.5, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.3 mi downstream from Loon Lake Dam, and 11 mi southwest of Meeks Bay.

DRAINAGE AREA.--8.01 mi².

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, from topographic map. Prior to August 1962, nonrecording gage at site 1,400 ft 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, 94,910 acre-ft/yr; 12 years (water years 1972-83), 8.32 ft³/s, 6,030 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,240 ft³/s, unregulated, Feb. 1, 1963, gage height, 12.65 ft, from rating curve extended above 600 ft³/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 June 5, 1969, gage height, 9.03 ft; minimum daily, 3.6 ft³/s Sept. 27, 28, Nov. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft³/s Oct. 25, gage height, 2.34 ft; maximum gage height, 2.65 ft Mar. 13 (backwater from ice); minimum daily, 5.8 ft³/s April 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	8.9	8.3	7.5	7.7	8.5	6.7	8.3	13	10	8.7	9.4
2	8.3	8.9	8.3	7.5	7.7	8.0	6.5	8.3	13	10	8.6	8.6
3	8.3	8.8	8.3	7.5	7.7	8.0	6.5	9.2	14	9.8	8.6	8.6
4	8.3	8.6	8.3	7.5	7.7	7.8	6.4	9.8	14	9.8	8.6	8.6
5	8.3	8.6	8.2	7.2	7.7	7.8	6.2	9.6	15	9.8	8.5	8.7
6	8.4	8.6	8.0	7.2	7.7	7.7	6.2	9.5	14	9.8	8.4	8.7
7	8.3	8.6	8.0	7.4	7.8	8.0	6.1	9.6	13	9.7	8.4	8.6
8	8.3	8.6	8.0	7.7	8.0	8.1	6.0	9.9	14	9.6	8.3	8.6
9	8.3	8.6	8.0	7.7	7.8	8.0	5.8	10	13	9.5	8.3	8.6
10	8.3	8.6	8.0	7.7	7.7	7.9	5.8	9.9	13	9.5	8.3	8.6
11	8.3	8.6	8.0	7.7	7.7	7.8	5.8	9.8	13	9.5	8.6	8.6
12	8.3	8.6	8.0	7.7	8.5	8.0	5.8	9.9	12	9.5	9.1	8.4
13	8.3	8.4	8.0	7.9	8.8	17	6.7	10	12	9.5	9.1	8.0
14	8.3	8.3	8.0	8.0	8.0	9.1	8.0	10	12	9.5	9.1	8.0
15	8.3	8.3	8.0	8.0	8.0	8.1	7.9	11	12	9.4	8.9	8.0
16	8.3	8.3	7.9	8.0	7.9	7.8	7.8	11	12	9.3	8.6	8.0
17	8.1	8.4	7.7	8.0	7.8	7.7	8.0	11	12	9.3	8.6	8.0
18	8.0	11	7.7	8.0	7.9	7.6	8.0	12	11	9.3	8.4	8.0
19	8.0	9.1	7.7	8.0	7.8	7.5	8.4	13	11	9.2	8.3	8.0
20	8.0	8.6	8.1	8.0	7.7	7.4	8.9	13	11	9.2	8.3	8.0
21	8.1	8.6	8.6	7.9	7.7	7.2	8.8	13	11	9.1	8.3	8.0
22	8.0	8.7	8.2	7.9	7.7	7.2	9.1	13	11	9.1	8.3	8.4
23	9.2	8.6	8.1	8.0	7.8	7.2	9.1	13	11	9.1	8.3	8.6
24	8.7	8.6	7.8	8.1	7.9	7.1	9.3	14	11	9.0	8.6	8.5
25	13	8.6	7.7	8.0	8.0	7.0	9.1	14	11	9.0	8.6	8.3
26	11	8.3	7.7	8.0	7.9	6.9	8.8	14	10	8.9	8.6	8.3
27	9.0	8.4	7.7	7.9	8.0	6.7	8.6	14	10	8.9	8.6	8.3
28	8.9	8.7	7.7	7.7	8.1	6.7	8.7	14	10	8.8	8.6	8.3
29	9.0	8.4	7.7	7.7	---	6.6	8.6	14	9.8	8.8	8.6	8.3
30	11	8.3	7.5	7.7	---	6.7	8.5	13	9.8	8.7	8.6	8.3
31	9.1	---	7.5	7.7	---	8.2	---	14	---	8.7	8.9	---
TOTAL	270.0	259.6	246.7	240.8	220.7	245.3	226.1	354.8	358.6	289.3	265.7	251.3
MEAN	8.71	8.65	7.96	7.77	7.88	7.91	7.54	11.4	12.0	9.33	8.57	8.38
MAX	13	11	8.6	8.1	8.8	17	9.3	14	15	10	9.1	9.4
MIN	8.0	8.3	7.5	7.2	7.7	6.6	5.8	8.3	9.8	8.7	8.3	8.0
AC-FT	536	515	489	478	438	487	448	704	711	574	527	498
a	11200	20080	17130	14170	7520	25710	9030	5400	38740	38470	18850	15210
CAL YR 1982	TOTAL	3395.9	MEAN	9.30	MAX	103	MIN	7.5	AC-FT	6740		
WTR YR 1983	TOTAL	3228.9	MEAN	8.85	MAX	17	MIN	5.8	AC-FT	6400		

a Diversion, in acre-feet, to Loon Lake powerplant, furnished by Sacramento Municipal Utility District.

11430000 SOUTH FORK RUBICON RIVER BELOW GERLE CREEK, NEAR GEORGETOWN, CA

LOCATION.--Lat 38°57'17", long 120°24'02", in SW 1/4 SW 1/4 sec.22, T.13 N., R.14 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank 600 ft downstream from Gerle Creek, and 18 mi east of Georgetown.

DRAINAGE AREA.--47.6 mi².

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, from topographic map. Feb. 1, 1910, to June 21, 1914, nonrecording gage at site about 700 ft downstream 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. 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. Water is diverted 1.2 mi upstream at South Fork Rubicon River diversion dam to Robbs Peak Powerplant (station 11429300). Diversion of up to 1,320 ft³/s to Silver Creek basin began in October 1962. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE (unadjusted).--21 years (water years 1963-83), 23.3 ft³/s, 16,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s Jan. 31, 1963, gage height, 12.32 ft, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement of maximum flow; minimum, 0.8 ft³/s Sept. 21, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,760 ft³/s Mar. 13, gage height, 8.03 ft; minimum daily, 4.8 ft³/s Nov. 7, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	11	11	7.1	7.4	30	12	17	62	112	12	15
2	9.9	7.1	9.2	6.4	7.1	20	12	16	11	227	12	12
3	9.9	6.5	9.1	6.2	6.8	15	9.7	16	47	91	12	12
4	10	5.6	9.1	6.2	6.7	13	8.4	16	135	86	12	12
5	10	5.2	8.2	6.0	6.6	13	7.6	15	240	134	12	12
6	10	5.0	7.8	6.1	7.3	14	7.2	15	222	185	13	12
7	11	4.8	7.5	5.8	19	18	7.2	15	376	124	12	12
8	10	5.1	8.8	5.7	17	16	7.5	15	316	48	15	12
9	10	5.1	8.9	5.6	13	14	7.9	15	246	45	12	12
10	10	5.3	8.8	5.5	11	13	7.7	15	321	9.3	12	12
11	10	4.9	8.6	5.5	10	14	7.1	14	583	11	12	11
12	10	5.3	8.8	5.5	19	22	6.9	15	179	13	13	11
13	10	5.0	9.1	5.5	23	1390	6.6	16	144	8.7	12	11
14	10	4.8	8.9	5.5	13	131	6.2	15	185	8.9	12	11
15	10	5.6	8.8	5.6	11	14	6.2	16	184	9.1	12	11
16	10	5.4	8.6	5.7	9.6	12	6.6	15	254	9.0	11	11
17	10	5.7	15	6.0	9.2	11	6.9	15	309	8.9	13	11
18	10	115	11	7.4	9.8	10	7.3	16	211	8.9	11	11
19	10	18	9.4	8.3	9.3	9.6	8.1	101	84	9.0	12	11
20	10	9.8	20	6.9	8.8	9.3	11	235	101	9.1	12	11
21	11	8.1	44	6.7	8.3	8.9	9.9	241	308	9.7	12	11
22	11	9.9	147	14	8.3	8.5	10	248	364	11	12	12
23	12	8.8	134	11	8.7	8.1	11	276	408	11	12	12
24	12	7.3	13	23	8.6	7.9	9.7	284	380	11	12	12
25	20	6.9	10	33	9.7	7.6	8.7	341	383	11	12	11
26	337	6.6	9.8	10	11	7.4	8.1	360	348	12	12	11
27	12	7.1	8.4	11	12	7.5	28	367	308	11	12	11
28	10	11	7.9	9.3	19	7.1	20	378	270	12	12	12
29	11	15	7.8	9.0	---	6.8	23	403	257	12	20	12
30	18	15	7.3	8.2	---	8.3	20	223	225	12	13	12
31	13	---	7.5	7.7	---	36	---	150	---	12	14	---
TOTAL	671.8	335.9	593.3	265.4	310.2	1903.0	308.5	3884	7461	1281.6	387	349
MEAN	21.7	11.2	19.1	8.56	11.1	61.4	10.3	125	249	41.3	12.5	11.6
MAX	337	115	147	33	23	1390	28	403	583	227	20	15
MIN	9.9	4.8	7.3	5.5	6.6	6.8	6.2	14	11	8.7	11	11
AC-FT	1330	666	1180	526	615	3770	612	7700	14800	2540	768	692

CAL YR 1982 TOTAL 15855.7 MEAN 43.4 MAX 2990 MIN 4.8 AC-FT 31450
WTR YR 1983 TOTAL 17750.7 MEAN 48.6 MAX 1390 MIN 4.8 AC-FT 35210

11431800 PILOT CREEK ABOVE STUMPY MEADOWS LAKE, CA

LOCATION.--Lat 38°53'41", long 120°34'02", in NE 1/4 NW 1/4 sec.18, T.12 N., R.13 E., El Dorado County, Hydrologic Unit 18020128, on right bank 2.1 mi upstream from Stumpy Meadows Dam, and 12.5 mi east of Georgetown.

DRAINAGE AREA.--11.7 mi².

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, from topographic map.

REMARKS.--Records good. No regulation or diversion above station. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--23 years, 26.3 ft³/s, 19,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,490 ft³/s Jan. 13, 1980, gage height, 6.31 ft in gage well, 6.84 ft from floodmarks, from rating curve extended above 170 ft³/s on basis of slope-area measurement of maximum flow; maximum gage height, 8.05 ft Jan. 31, 1963; minimum daily discharge, 0.14 ft³/s Aug. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0230	203	3.13	Feb. 13	0130	378	3.63
Nov. 18	1900	276	3.36	Mar. 1	2045	351	3.56
Nov. 30	0700	178	3.04	Mar. 13	1000	*1,980	5.84
Dec. 22	2015	905	4.60	Mar. 31	0515	184	3.04
Jan. 24	0715	335	3.52	Apr. 28	2245	189	3.06
Feb. 7	2300	276	3.36	May. 22	2130	140	2.88

Minimum daily, 5.3 ft³/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	21	77	42	64	299	120	147	78	24	12	13
2	7.6	18	56	40	59	273	121	131	70	25	12	11
3	7.3	15	49	37	55	218	111	125	66	23	12	9.8
4	6.9	14	44	36	52	179	103	124	63	22	12	8.9
5	6.7	13	40	34	48	160	94	121	60	21	12	8.4
6	7.0	12	37	33	57	153	88	116	58	21	11	8.0
7	11	12	34	32	142	187	83	112	56	20	11	7.8
8	7.7	12	32	32	191	175	81	109	55	20	11	7.7
9	6.7	11	31	31	145	153	80	105	52	20	11	7.7
10	6.3	12	29	30	124	153	77	101	50	19	11	7.4
11	6.0	11	28	29	105	165	73	96	50	18	11	7.0
12	5.8	11	28	29	149	198	71	98	45	18	10	6.8
13	5.8	10	28	29	266	1220	68	105	42	17	9.7	6.5
14	5.7	9.9	26	28	173	470	65	102	40	17	11	6.4
15	5.5	9.4	25	28	139	269	63	106	38	17	14	6.2
16	5.5	9.4	25	31	119	203	63	105	37	17	11	6.1
17	5.4	10	53	31	103	170	63	102	35	16	10	6.0
18	5.4	132	41	35	109	145	65	106	34	16	10	5.9
19	5.3	86	37	41	99	126	67	114	33	16	12	5.7
20	5.4	45	63	35	90	115	82	117	32	16	14	5.6
21	6.1	34	318	33	84	107	80	123	31	16	12	5.7
22	7.2	37	542	76	80	101	80	127	30	15	12	9.2
23	14	38	366	73	79	93	89	128	29	15	11	9.3
24	13	31	180	227	77	89	87	124	28	15	11	8.5
25	48	27	123	143	88	83	84	124	27	15	10	8.0
26	89	25	94	120	108	77	80	124	26	14	9.5	7.5
27	29	23	76	131	135	81	83	119	26	14	9.4	7.2
28	20	38	65	104	197	76	142	111	25	14	9.2	9.1
29	17	78	57	93	---	72	174	105	25	13	8.9	11
30	40	129	51	80	---	76	167	93	24	13	8.8	15
31	29	---	46	70	---	151	---	87	---	13	11	---
TOTAL	443.2	933.7	2701	1813	3137	6037	2704	3507	1265	540	340.5	242.4
MEAN	14.3	31.1	87.1	58.5	112	195	90.1	113	42.2	17.4	11.0	8.08
MAX	89	132	542	227	266	1220	174	147	78	25	14	15
MIN	5.3	9.4	25	28	48	72	63	87	24	13	8.8	5.6
AC-FT	879	1850	5360	3600	6220	11970	5360	6960	2510	1070	675	481

CAL YR 1982	TOTAL	20518.9	MEAN	56.2	MAX	1260	MIN	4.2	AC-FT	40700
WTR YR 1983	TOTAL	23663.8	MEAN	64.8	MAX	1220	MIN	5.3	AC-FT	46940

SACRAMENTO RIVER BASIN

11433040 PILOT CREEK BELOW MUTTON CANYON, NEAR GEORGETOWN, CA

LOCATION.--Lat 38°55'25", long 120°38'27", in NE 1/4 NW 1/4 sec.4, T.12 N., R.12 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank 450 ft downstream from Mutton Canyon, 500 ft downstream from Georgetown Divide diversion dam, 2.5 mi downstream from Stumpy Meadows Dam, and 10 mi east of Georgetown.

DRAINAGE AREA.--21.1 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 3,760 ft, from topographic map.

REMARKS.--Records good. Flow regulated by Stumpy Meadows Lake, usable capacity, 20,000 acre-ft completed in November 1961. Georgetown Irrigation District ditch, capacity, about 20 ft³/s diverts water out of Pilot Creek, 500 ft above station. See schematic diagram of Middle Fork American and Rubicon River basins.

AVERAGE DISCHARGE.--22 years, 33.6 ft³/s, 24,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s Dec. 22, 1964, gage height, 9.60 ft, from rating curve extended above 300 ft³/s on basis of slope-area measurement at gage height 5.00 ft; maximum gage height, 10.06 ft Dec. 23, 1964; minimum daily discharge, 0.20 ft³/s Sept. 24, Nov. 1-5, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,890 ft³/s Mar. 13, gage height, 8.75 ft; minimum daily, 2.2 ft³/s several days during October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	5.3	195	104	140	568	226	260	84	19	15	12
2	2.6	5.1	128	96	126	593	228	226	75	19	15	12
3	2.5	4.7	102	89	116	476	206	205	71	18	15	12
4	2.5	4.6	88	82	106	398	187	199	66	18	15	11
5	2.5	4.6	76	77	100	345	171	204	61	18	15	11
6	2.6	4.4	68	73	135	315	156	192	55	17	15	11
7	3.4	4.3	63	70	310	366	145	171	52	17	14	11
8	2.7	4.4	55	67	451	330	137	161	54	17	14	11
9	2.5	4.3	51	64	365	283	131	151	49	16	14	11
10	2.4	4.4	48	52	298	275	126	144	46	16	14	11
11	2.4	4.4	46	43	245	297	122	135	49	16	14	11
12	2.4	4.3	47	40	304	324	120	131	41	16	14	10
13	2.3	4.3	55	39	541	1870	111	135	36	15	14	10
14	2.3	4.2	46	37	387	1040	103	130	32	15	14	9.3
15	2.3	4.2	42	37	300	561	97	130	30	15	14	7.2
16	2.2	4.7	40	43	245	410	93	128	29	15	14	7.1
17	2.2	7.0	103	43	206	356	91	116	28	15	13	7.1
18	2.2	39	78	55	250	291	94	117	26	15	13	7.0
19	2.2	22	65	86	210	237	95	121	24	15	13	6.9
20	2.2	11	96	55	178	212	114	125	23	15	13	6.8
21	2.3	7.0	514	45	163	204	110	130	22	14	13	6.9
22	2.4	8.7	1040	110	153	196	104	134	21	14	12	7.7
23	3.5	7.6	993	133	147	181	132	136	20	14	12	7.5
24	3.1	6.8	468	383	141	185	152	133	20	14	12	7.4
25	9.2	15	314	281	188	159	142	129	20	14	12	7.4
26	15	22	237	235	242	142	119	130	20	14	12	4.6
27	6.4	27	193	343	285	162	124	126	19	14	12	2.7
28	5.7	59	162	236	423	144	216	119	19	13	12	4.0
29	5.3	153	142	232	---	131	291	112	19	13	12	6.2
30	12	341	126	191	---	134	297	101	19	15	12	6.4
31	6.6	---	114	158	---	283	---	92	---	17	12	---
TOTAL	120.5	798.3	5795	3599	6755	11468	4440	4523	1130	483	415	256.2
MEAN	3.89	26.6	187	116	241	370	148	146	37.7	15.6	13.4	8.54
MAX	15	341	1040	383	541	1870	297	260	84	19	15	12
MIN	2.2	4.2	40	37	100	131	91	92	19	13	12	2.7
AC-FT	239	1580	11490	7140	13400	22750	8810	8970	2240	958	823	508
CAL YR 1982	TOTAL	36863.5	MEAN	101	MAX	2120	MIN	2.2	AC-FT	73120		
WTR YR 1983	TOTAL	39783.0	MEAN	109	MAX	1870	MIN	2.2	AC-FT	78910		

11433060 SOUTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°03'04", Long 120°28'14", in SW 1/4 NE 1/4 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 upstream from confluence with North and South Forks Long Canyon Creek, and 17.2 mi 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, 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.--18 years, 9.66 ft³/s, 7,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 251 ft³/s Nov. 12, 1973; no flow for part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	23	17			0	78	0	1.0	
2		0	0	22	16			0	63	0	.65	
3		0	0	20	16			0	58	0	.34	
4		0	0	20	16			0	60	0	.08	
5		0	0	20	15			0	62	0	0	
6		0	0	21	16			0	79	0	0	
7		0	0	22	14			0	102	0	0	
8		0	0	23	0			0	96	0	0	
9		0	0	22	0			0	99	0	0	
10		0	7.0	20	0			0	103	0	0	
11		0	17	18	0			0	116	7.0	0	
12		0	18	19	0			0	93	14	0	
13		0	18	18	0			0	52	14	0	
14		0	17	18	0			0	0	13	0	
15		0	9.7	18	0			0	0	12	0	
16		0	0	19	0			34	0	10	0	
17		0	0	19	0			83	0	9.0	0	
18		0	0	21	0			94	0	8.0	0	
19		0	0	23	0			117	0	7.4	0	
20		0	0	21	0			132	0	6.5	0	
21		0	0	20	0			147	0	5.9	0	
22		0	0	20	0			162	0	5.0	0	
23		12	0	24	0			174	0	4.8	0	
24		18	0	30	0			169	0	4.5	0	
25		16	0	24	0			176	0	3.8	0	
26		14	0	24	0			178	0	3.5	0	
27		13	0	23	0			180	0	3.3	0	
28		23	0	22	0			181	0	2.8	0	
29		0	0	21	---			169	0	2.4	0	
30		0	9.5	19	---			116	0	2.2	0	
31		---	24	18	---		---	106	---	1.6	0	---
TOTAL	0	96	120.2	652	110	0	0	2218	1061	140.7	2.07	0
MEAN	0	3.20	3.88	21.0	3.93	0	0	71.5	35.4	4.54	.067	0
MAX	0	23	24	30	17	0	0	181	116	14	1.0	0
MIN	0	0	0	18	0	0	0	0	0	0	0	0
AC-FT	0	190	238	1290	218	0	0	4400	2100	279	4.1	0
CAL YR 1982	TOTAL	747.35	MEAN	2.05	MAX	121	MIN	0	AC-FT	1480		
WTR YR 1983	TOTAL	4399.97	MEAN	12.1	MAX	181	MIN	0	AC-FT	8730		

SACRAMENTO RIVER BASIN

11433080 NORTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°02'57", long 120°28'56", in SW 1/4 NW 1/4 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 upstream from confluence of North and South Forks Long Canyon Creek, and 16.9 mi 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, 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.--18 years, 3.70 ft³/s, 2,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 75 ft³/s May. 25, 1983; no flow for part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0	55			
2								0	52			
3								0	52			
4								0	54			
5								0	55			
6								0	56			
7								0	51			
8								0	51			
9								0	52			
10								0	51			
11								0	53			
12								0	42			
13								0	21			
14								0	0			
15								0	0			
16								11	0			
17								30	0			
18								54	0			
19								63	0			
20								65	0			
21								64	0			
22								60	0			
23								63	0			
24								73	0			
25								75	0			
26								68	0			
27								66	0			
28								62	0			
29								69	0			
30								69	0			
31		---			---		---	69	---			---
TOTAL	0	0	0	0	0	0	0	961	645	0	0	0
MEAN	0	0	0	0	0	0	0	31.0	21.5	0	0	0
MAX	0	0	0	0	0	0	0	75	56	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	1910	1280	0	0	0
CAL YR 1982	TOTAL	82.22	MEAN	.23	MAX	21	MIN	0	AC-FT	163		
WTR YR 1983	TOTAL	1606.00	MEAN	4.40	MAX	75	MIN	0	AC-FT	3190		

11433100 LONG CANYON CREEK NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39°01'16", long 120°30'53", in SE 1/4 NW 1/4 sec.34, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 75 ft downstream from North Fork Long Canyon, 6.5 mi south of French Meadows, and 18 mi east of Foresthill.

DRAINAGE AREA.--18.0 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 4,100 ft, from topographic map.

REMARKS.--Water is diverted above this station to a diversion tunnel from Hell Hole Reservoir to Middle Fork American River powerplant via South Fork and North Fork Long Canyon diversion tunnels (stations 11433060, 11433080); diversions began in February 1966. 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 (since diversion to Middle Fork American River powerplant).--17 years (water years 1967-83), 35.1 ft³/s, 25,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft³/s Jan. 13, 1980, gage height, 10.05 ft, from rating curve extended above 900 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 11.20 ft Dec. 23, 1964; minimum daily discharge, 0.08 ft³/s Sept. 27, 28, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,910 ft³/s Mar. 13, gage height, 7.80 ft; minimum daily, 1.6 ft³/s Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	27	82	51	94	466	212	207	75	53	5.2	4.2
2	2.9	21	69	48	81	385	202	190	73	62	5.2	3.7
3	2.7	18	67	45	62	290	169	187	70	52	5.3	3.4
4	2.6	16	68	44	57	242	144	200	67	49	5.3	2.9
5	2.5	14	66	44	55	222	130	184	66	47	5.2	2.3
6	2.7	13	64	45	59	234	120	170	51	45	5.0	2.2
7	3.9	12	62	46	169	283	117	174	26	41	4.6	2.1
8	2.8	13	57	48	268	270	121	174	25	36	4.5	2.1
9	2.6	12	55	46	203	249	123	165	23	32	4.5	2.0
10	2.4	12	52	46	178	249	116	155	23	29	4.5	2.0
11	2.3	12	37	48	157	268	106	147	22	19	4.3	1.9
12	2.2	12	38	48	282	307	98	154	20	9.4	4.0	1.9
13	2.1	11	40	47	468	1120	92	162	49	8.8	3.6	1.9
14	2.2	11	37	46	267	516	88	171	142	8.4	3.7	1.8
15	1.9	11	38	45	207	333	86	194	137	8.3	4.5	1.8
16	1.9	10	49	48	173	269	90	149	131	8.5	3.9	1.8
17	1.8	12	110	48	154	215	97	76	129	7.9	3.7	1.7
18	1.8	218	84	53	172	195	103	56	117	7.4	3.6	1.7
19	1.8	125	71	59	164	169	121	60	102	7.2	4.1	1.7
20	2.0	68	182	52	149	155	177	65	93	6.9	5.3	1.6
21	2.0	52	661	49	137	145	148	75	87	6.6	4.3	1.6
22	2.5	65	613	123	138	136	142	85	85	6.4	4.1	2.1
23	9.4	62	434	149	149	128	147	90	83	6.3	3.9	2.1
24	11	38	240	404	147	119	134	74	79	6.2	3.6	1.9
25	75	32	179	225	157	111	125	78	75	6.1	3.4	1.9
26	138	29	147	179	177	102	118	80	70	5.8	3.3	1.8
27	37	27	126	186	204	104	121	83	65	5.3	3.1	1.8
28	25	51	110	151	282	96	213	82	61	5.2	3.1	1.8
29	19	135	99	133	---	90	263	77	59	5.0	3.0	2.1
30	72	111	81	116	---	104	257	89	54	4.9	2.9	2.7
31	39	---	55	103	---	330	---	81	---	4.9	3.7	---
TOTAL	478.1	1250	4073	2775	4810	7902	4180	3924	2159	600.5	128.4	64.5
MEAN	15.4	41.7	131	89.5	172	255	139	127	72.0	19.4	4.14	2.15
MAX	138	218	661	404	468	1120	263	207	142	62	5.3	4.2
MIN	1.8	10	37	44	55	90	86	56	20	4.9	2.9	1.6
AC-FT	948	2480	8080	5500	9540	15670	8290	7780	4280	1190	255	128
CAL YR 1982	TOTAL	34217.81	MEAN	93.7	MAX	1550	MIN	.60	AC-FT	67870		
WTR YR 1983	TOTAL	32344.50	MEAN	88.6	MAX	1120	MIN	1.6	AC-FT	64160		

11433200 RUBICON RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 38°59'33", long 120°43'14", in SE 1/4 NW 1/4 sec.11, T.13 N., R.11 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.6 mi upstream from Ralston powerhouse, 1.2 mi upstream from confluence of Rubicon River and Middle Fork American River, and 5.6 mi southeast of Foresthill.

DRAINAGE AREA.--315 mi².

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, from topographic map. October 1958 to May 17, 1963, at site 2.0 mi upstream, 150 ft downstream from Ralston Bridge, and May 17, 1963, to Mar. 30, 1965, at site 2.1 mi upstream, 100 ft upstream from Ralston Bridge at datum 1,362.20 ft 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. 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, 440,900 acre-ft/yr; 18 years (water years 1966-83), 332 ft³/s, 240,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown, Dec. 23, 1964, gage height, 55.4 ft from floodmarks, caused by overtopping of the partly constructed Hell Hole Dam; next highest peak discharge, 83,000 ft³/s Feb. 1, 1963, gage height, 35.0 ft former site and datum; minimum daily, 10 ft³/s Sept. 20-27, 1962. Maximum discharge since construction of Hell Hole Dam in 1965, 37,000 ft³/s Jan. 13, 1980, gage height, 19.65 ft from floodmarks; minimum daily, 7.4 ft³/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, 56,000 ft³/s, and 73,000 ft³/s, respectively, on basis of 1958-64 stage-discharge relation and U.S. Forest Service floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,900 ft³/s Mar. 13, gage height, 15.80 ft; minimum daily, 58 ft³/s October 16-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	182	1010	565	1040	3020	1710	1820	745	1060	130	99
2	71	152	663	525	938	2760	1670	1600	660	1710	130	99
3	67	129	540	493	831	2080	1470	1550	695	1790	127	94
4	63	117	497	470	756	1700	1300	1410	706	1320	121	93
5	62	109	460	451	706	1440	1190	1380	822	1550	121	91
6	62	105	424	437	790	1380	1090	1330	823	1650	118	89
7	81	101	397	422	1670	1520	1040	1240	851	1540	115	89
8	75	100	364	414	2730	1420	1030	1190	789	729	115	88
9	66	104	339	402	2140	1230	1020	1130	756	413	112	87
10	62	104	328	384	1840	1200	976	1080	750	221	109	86
11	62	104	294	378	1570	1290	922	1010	1070	232	109	84
12	60	102	285	369	1800	1320	886	1010	721	374	107	84
13	60	101	324	361	3270	11100	828	1020	533	529	107	83
14	60	97	294	352	2290	5140	781	1000	1480	610	104	82
15	60	96	275	343	1790	2900	752	1020	2080	598	114	79
16	58	94	266	351	1460	2570	756	1000	2800	400	106	77
17	58	94	532	365	1190	2180	774	874	2100	220	99	77
18	58	874	502	391	1290	1870	806	852	3230	168	96	76
19	58	965	415	588	1170	1580	882	894	1970	156	96	74
20	58	430	573	451	950	1440	1180	1110	1460	155	98	74
21	58	301	4230	404	808	1370	1050	1250	1880	153	99	74
22	61	287	5340	817	745	1310	1000	1260	1960	150	98	76
23	88	350	4500	1030	730	1220	1130	1290	2530	150	96	85
24	100	263	2180	2930	681	1200	1150	1300	2490	143	94	82
25	278	229	1530	1900	860	1080	1080	1280	2210	142	94	82
26	1060	213	1210	1510	1040	979	965	1390	2060	142	94	81
27	269	203	1010	2320	1200	1060	1070	1330	1760	142	94	73
28	164	286	870	1690	1730	965	1640	1350	1550	142	93	72
29	135	959	771	1550	---	907	2170	1340	1330	136	91	80
30	310	2030	698	1370	---	972	2150	1300	1250	136	96	100
31	278	---	617	1180	---	2460	---	1050	---	136	93	---
TOTAL	4073	9281	31738	25213	38015	62663	34468	37660	44061	16997	3276	2510
MEAN	131	309	1024	813	1358	2021	1149	1215	1469	548	106	83.7
HAX	1060	2030	5340	2930	3270	11100	2170	1820	3230	1790	130	100
MIN	58	94	266	343	681	907	752	852	533	136	91	72
AC-FT	8080	18410	62950	50010	75400	124300	68370	74700	87390	33710	6500	4980
CAL YR 1982	TOTAL	297257	MEAN 814	HAX	12500	MYN 41	AC-FT	589600				
WTR YR 1983	TOTAL	309955	MEAN 849	HAX	11100	MYN 58	AC-FT	614800				

NOTE.--No gage-height record Mar. 16 to May 3.

11433260 NORTH FORK OF MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'27", long 120°43'03", in NE 1/4 NW 1/4 sec.35, T.14 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 1.0 mi downstream from El Dorado Canyon, and 4.8 mi east of Foresthill.

DRAINAGE AREA.--88.9 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft, 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.--18 years, 281 ft³/s, 203,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,100 ft³/s Jan. 13, 1980, gage height, 17.00 ft from floodmarks; minimum daily, 7.1 ft³/s Sept. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft³/s Mar. 13, gage height, 11.50 ft; minimum daily, 31 ft³/s Oct. 17, 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	176	757	356	559	2300	1320	1140	700	203	88	56
2	41	144	572	334	526	2420	1280	984	620	235	85	52
3	41	121	465	317	503	1320	1130	912	637	207	82	50
4	39	106	414	304	466	1050	977	935	639	192	80	47
5	38	94	386	293	432	959	877	888	650	194	78	46
6	37	88	362	289	488	967	811	858	650	188	76	45
7	50	82	347	286	1540	1130	781	880	635	174	74	44
8	45	85	317	289	2250	1160	775	815	627	158	73	43
9	40	83	293	286	1510	1000	774	770	620	150	71	42
10	38	81	281	279	1250	1060	790	730	612	139	69	42
11	37	78	267	272	1020	1270	800	685	619	134	67	42
12	36	73	259	275	1430	1200	787	705	560	130	66	41
13	35	70	278	272	2690	6730	740	735	510	127	65	41
14	34	69	253	269	1410	3460	698	780	512	121	64	40
15	33	66	236	258	1060	2060	666	810	498	120	63	39
16	32	64	221	272	850	1500	667	820	456	118	64	38
17	31	66	568	275	715	1340	696	790	451	116	62	38
18	32	1260	489	290	799	1180	718	758	416	113	60	38
19	31	935	384	396	792	1040	787	810	357	111	59	38
20	31	468	585	323	682	951	878	905	335	107	59	37
21	31	342	3930	299	618	912	830	970	329	106	57	37
22	43	333	4190	622	612	912	784	1010	324	105	56	40
23	90	399	2960	656	600	904	835	1020	321	104	54	45
24	122	321	1300	2220	581	912	821	1060	305	102	53	44
25	485	269	881	1130	637	912	850	1090	292	98	52	47
26	1180	236	656	803	930	811	763	1140	278	96	51	41
27	309	212	575	1360	1060	822	777	1200	262	94	50	40
28	192	379	510	968	1400	790	1220	1250	242	92	49	40
29	150	1300	466	816	---	790	1540	1190	231	91	47	44
30	294	1580	419	677	---	828	1370	1100	216	91	47	78
31	253	---	379	608	---	2030	---	910	---	91	48	---
TOTAL	3893	9580	24000	16094	27410	44720	26742	28650	13904	4107	1969	1315
MEAN	126	319	774	519	979	1443	891	924	463	132	63.5	43.8
MAX	1180	1580	4190	2220	2690	6730	1540	1250	700	235	88	78
MIN	31	64	221	258	432	790	666	685	216	91	47	37
AC-FT	7720	19000	47600	31920	54370	88700	53040	56830	27580	8150	3910	2610

CAL YR 1982 TOTAL 198259 MEAN 543 MAX 9850 MIN 31 AC-FT 393200
WTR YR 1983 TOTAL 202384 MEAN 554 MAX 6730 MIN 31 AC-FT 401400

NOTE: No gage-height record July 16 to Aug. 19.

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 39°00'23", long 120°45'40", in NW 1/4 NW 1/4 sec.4, T.13 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 1.7 mi downstream from Oxbow powerhouse, and 3.2 mi east of Foresthill.

DRAINAGE AREA.--524 mi².

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, from topographic map. Prior to Oct. 22, 1965, at site 3.2 mi 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, and Ralston and Oxbow powerplants. Robbs Peak tunnel (station 11429800) and Georgetown Divide ditch, capacity, about 25 ft³/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.--25 years, 1,183 ft³/s, 857,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310,000 ft³/s Dec. 23, 1964, gage height, 69.0 ft 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 on basis of slope-area measurement at gage height 38.0 ft and slope-conveyance study at gage height 69.0 ft at site and datum then in use; next highest peak, 113,000 ft³/s Feb. 1, 1963, gage height, 38.00 ft site and datum then in use; minimum daily, 35 ft³/s Oct. 19, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,300 ft³/s Mar. 13, gage height, 17.43 ft; minimum daily, 565 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	565	1060	2730	2210	2520	8850	4170	4500	3140	2820	1210	1190
2	641	1250	2280	2110	2400	8010	4050	4140	2760	3590	1230	1200
3	663	1190	2080	2060	2330	6380	3790	4020	2660	3640	1210	1120
4	591	1220	1950	1950	2330	4830	3570	4030	2700	2980	1200	1100
5	777	1220	1880	1840	2470	4320	3290	3950	2830	3180	1220	1100
6	737	1230	1910	1890	2630	4240	3010	3830	2820	3250	1200	1100
7	842	883	1840	1670	4950	4980	2920	3710	2840	3230	1200	1090
8	847	960	1790	1450	7500	4580	2860	3650	2720	2590	1200	1090
9	855	1220	1720	1440	5520	4120	2760	3550	2660	2120	1180	1090
10	824	1220	1700	1430	4780	4140	2560	3420	2670	1840	1210	1090
11	823	1220	1650	1430	4140	4550	2540	3260	3350	1570	1190	1090
12	813	1220	1610	1360	4730	4460	2520	3240	3150	1500	1160	1090
13	854	1210	1680	1310	7740	18600	2490	3270	2660	1600	1110	1090
14	781	1100	1500	1340	5200	8090	2500	3300	3470	1590	1060	1090
15	758	1210	1590	1340	4190	5900	2510	3420	4430	1540	1190	1090
16	759	1150	1500	1360	3710	5220	2540	3480	4310	1320	1190	1080
17	743	1070	2270	1360	3360	4780	2540	3220	4050	1320	1110	1090
18	780	2510	2050	1370	3670	4340	2590	3250	4390	1360	1080	1060
19	779	2790	1820	1480	3670	4010	2660	3450	3420	1260	1120	1020
20	751	2000	2200	1430	3340	3790	3140	3790	2810	1240	1200	985
21	739	1770	8820	1390	3170	3690	3060	4020	3260	1190	1130	1090
22	777	1690	9520	2150	3010	3640	2940	4100	3210	1180	1090	1110
23	836	1840	8160	2660	2890	3600	3150	4240	3760	1220	1070	1100
24	854	1660	4150	7180	3010	3740	3320	4200	4110	1240	1060	915
25	1280	1480	3340	4430	3410	3560	3420	4210	4020	1240	1050	1080
26	2910	1390	3250	3670	4060	3310	3170	4360	3920	1200	1150	1070
27	1200	1480	3000	5040	4520	3380	3070	4240	3550	1240	1160	1050
28	1160	1580	2760	4040	6130	3240	4240	4230	3220	1200	938	1060
29	1130	3010	2640	3750	---	3020	5160	4150	3050	1240	1160	1060
30	1350	4100	2460	3430	---	2930	4980	3900	3070	1210	1150	1130
31	1100	---	2380	2990	---	5070	---	3550	---	1230	987	---
TOTAL	28519	46933	88230	72560	111380	157370	95520	117680	99010	56930	35415	32520
MEAN	920	1564	2846	2341	3978	5076	3184	3796	3300	1836	1142	1084
MAX	2910	4100	9520	7180	7740	18600	5160	4500	4430	3640	1230	1200
MIN	565	883	1500	1310	2330	2930	2490	3220	2660	1180	938	915
AC-FT	56570	93090	175000	143900	220900	312100	189500	233400	196400	112900	70250	64500
CAL YR 1982	TOTAL	942134	MEAN	2581	MAX	31500	MIN	219	AC-FT	1869000		
WTR YR 1983	TOTAL	942067	MEAN	2581	MAX	18600	MIN	565	AC-FT	1869000		

11433420 MAINE BAR CANYON CREEK NEAR GREENWOOD, CA

LOCATION.--Lat 38°55'34", long 120°56'51", in NW 1/4 NW 1/4 sec.2, T.12 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, on right bank 2.8 mi northwest of Greenwood, and 4.5 mi northeast of Cool.

DRAINAGE AREA.--0.76 mi².

PERIOD OF RECORD.--March to September 1972 (discharge measurements only), October 1972 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,520 ft, from topographic map.

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

AVERAGE DISCHARGE.--11 years, 1.14 ft³/s, 826 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 263 ft³/s Jan. 13, 1980, gage height, 2.35 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	1300	40	1.34	Feb. 12	1930	77	1.64
Nov. 30	0245	64	1.55	Mar. 1	1800	26	1.16
Dec. 21	1845	105	1.80	Mar. 13	Unknown	*175	2.09
Jan. 27	0415	50	1.44	Apr. 20	0015	22	1.11
Feb. 8	0300	37	1.31	Apr. 28	0900	27	1.19

Minimum daily, 0.01 ft³/s Sept. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.24	4.9	.97	4.1	15	3.7	5.3	.33	.16	.04	.04
2	.05	.18	2.8	.86	3.4	11	4.1	3.4	.30	.15	.04	.03
3	.05	.16	1.9	.78	2.9	8.8	3.1	2.4	.28	.13	.04	.03
4	.06	.14	1.5	.72	2.4	7.2	2.6	2.1	.25	.12	.04	.03
5	.06	.13	1.2	.65	2.4	6.4	2.3	3.0	.23	.10	.04	.03
6	.14	.14	1.1	.59	8.6	6.2	2.1	2.8	.20	.09	.03	.03
7	.14	.14	.93	.54	20	8.6	1.8	2.1	.20	.10	.03	.03
8	.11	.33	.81	.50	21	6.2	1.7	1.9	.20	.10	.03	.03
9	.10	.29	.74	.46	9.4	5.9	1.6	1.7	.19	.10	.03	.02
10	.15	.50	.65	.44	6.1	6.1	1.5	1.5	.22	.09	.03	.02
11	.17	.37	.57	.41	4.6	6.6	1.4	1.3	.22	.08	.04	.02
12	.17	.33	.73	.38	18	8.0	1.3	1.2	.20	.08	.03	.02
13	.17	.37	.78	.36	16	80	1.2	1.1	.18	.07	.03	.02
14	.17	.38	.59	.33	6.9	25	1.1	.99	.16	.07	.03	.02
15	.17	.38	.53	.33	5.1	9.8	1.1	.90	.16	.08	.03	.02
16	.17	.38	.57	.35	4.1	6.0	1.0	.84	.15	.08	.02	.02
17	.18	1.0	2.5	.35	3.4	4.6	.98	.74	.15	.09	.02	.02
18	.18	14	1.3	1.3	4.6	3.6	1.0	.68	.15	.09	.03	.01
19	.18	3.3	.99	1.4	3.3	3.1	8.4	.62	.15	.10	.04	.01
20	.19	1.2	7.7	.74	2.9	2.7	8.9	.57	.14	.09	.04	.02
21	.22	.75	62	.59	2.6	2.5	.92	.51	.14	.07	.05	.02
22	.24	1.6	44	4.2	2.4	2.3	.76	.48	.13	.06	.04	.04
23	.55	1.3	14	3.1	2.2	2.1	1.9	.47	.13	.06	.03	.04
24	.50	.80	5.4	15	2.0	1.9	3.2	.39	.13	.06	.03	.04
25	1.6	.58	3.6	4.3	5.2	1.8	2.6	.41	.13	.07	.03	.03
26	.97	.48	2.7	11	5.8	1.7	1.8	.37	.12	.07	.03	.03
27	.23	.44	2.2	24	7.8	2.2	2.2	.34	.13	.07	.03	.03
28	.18	1.6	1.8	7.7	8.7	1.7	15	.32	.14	.06	.03	.03
29	.22	11	1.5	13	---	1.5	9.2	.30	.14	.05	.03	.07
30	1.9	25	1.3	8.4	---	1.8	8.1	.29	.13	.05	.03	.11
31	.38	---	1.1	5.4	---	5.4	---	.31	---	.04	.04	---
TOTAL	9.65	67.51	172.39	109.15	185.9	255.7	96.56	39.33	5.38	2.63	1.03	0.91
MEAN	.31	2.25	5.56	3.52	6.64	8.25	3.22	1.27	.18	.085	.033	.030
MAX	1.9	25	62	24	21	80	15	5.3	.33	.16	.05	.11
MIN	.05	.13	.53	.33	2.0	1.5	.76	.29	.12	.04	.02	.01
AC-FT	19	134	342	216	369	507	192	78	11	5.2	2.0	1.8

CAL YR 1982 TOTAL 828.81 MEAN 2.27 MAX 62 MIN .02 AC-FT 1640
WTR YR 1983 TOTAL 946.14 MEAN 2.59 MAX 80 MIN .01 AC-FT 1880

NOTE.--No gage-height record Mar. 2-30.

11433500 MIDDLE FORK AMERICAN RIVER NEAR AUBURN, CA

LOCATION.--Lat 38°55'05", long 121°00'51", in NE 1/4 SW 1/4 sec.6, T.12 N., R.9 E., Placer County, Hydrologic Unit 18020128, on right bank at quarry, 1.4 mi upstream from mouth, and 3.3 mi northeast of Auburn.

DRAINAGE AREA.--614 mi².

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 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 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, 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 basins.

AVERAGE DISCHARGE.--72 years, 1,344 ft³/s, 973,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 253,000 ft³/s Dec. 23, 1964, gage height, 60.4 ft from floodmarks, from rating curve extended above 69,000 ft³/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 Feb. 1, 1963, gage height, 43.1 ft from floodmarks, site and datum then in use; maximum gage height, 102.65 ft Jan. 14, 1980, backwater from Auburn Dam (under construction); minimum discharge, 20 ft³/s Sept. 6, 1931, Sept. 19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 20,000 ft³/s Dec. 22, gage height 19.72 ft, but may have been higher during period of no gage-height record Jan. 25 to May 11; minimum daily, 619 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	619	912	3720	2050	3240	9080	5500	5680	3090	2720	1170	1140
2	664	1070	2550	1960	2850	9790	5140	4980	2770	3200	1190	1130
3	650	1020	2120	1870	2570	8010	4770	4560	2640	3580	1160	1150
4	694	1030	1920	1780	2410	6530	4330	4510	2660	2920	1160	1130
5	694	1030	1750	1650	2550	5760	3930	4390	2770	2980	1170	1130
6	647	1030	1750	1740	2620	5580	3600	4450	2800	3090	1160	1110
7	740	760	1700	1640	5050	5790	3430	4120	2770	3080	1150	1110
8	756	781	1600	1330	9170	6000	3330	3980	2650	2590	1150	1110
9	763	1030	1570	1320	6710	5370	3260	3810	2680	2010	1140	1110
10	731	1040	1530	1310	5610	5050	3140	3710	2560	1740	1170	1110
11	732	1040	1460	1310	4840	5730	2990	3520	3090	1540	1150	1110
12	724	1030	1400	1290	4830	5420	2860	3340	3190	1450	1120	1110
13	781	1020	1520	1230	8970	16600	2750	3340	2630	1510	1080	1110
14	696	917	1310	1270	6470	16100	2720	3340	3090	1510	1030	1110
15	673	1000	1400	1260	5230	8630	2680	3400	4320	1530	1140	1100
16	674	954	1340	1260	4490	7120	2660	3500	4190	1480	1160	1100
17	656	890	2030	1270	3840	6530	2640	3230	3930	1420	1070	1100
18	683	2510	1980	1280	3960	6150	2670	3240	4310	1340	1040	1090
19	668	3960	1710	1480	4210	5450	2760	3380	3380	1310	1060	1050
20	676	2000	1970	1380	3810	5000	3250	3710	2760	1290	1140	982
21	667	1580	12200	1400	3530	4990	3310	3950	3060	1220	1100	1100
22	659	1510	13900	1770	3280	4860	3080	4020	3070	1220	1050	1100
23	731	1640	11700	3010	3140	5030	3220	4150	3490	1210	1030	1120
24	803	1520	4990	7960	3130	5250	3830	4190	3890	1210	1030	956
25	1130	1390	3680	5650	3470	5400	4190	4090	3840	1200	1060	1130
26	3260	1290	3440	4180	4670	4810	3610	4330	3740	1190	1110	1110
27	1260	1330	3110	6990	5080	4630	3370	4190	3430	1200	1130	1100
28	884	1410	2740	5450	6360	4400	5050	4140	3100	1180	930	1100
29	976	3900	2570	4900	---	4010	6720	4070	2940	1200	1120	1110
30	1250	7420	2320	4580	---	3750	6390	3850	2990	1170	1120	1150
31	1010	---	2200	3800	---	5880	---	3480	---	1190	966	---
TOTAL	26551	48014	99180	79370	126090	202700	111180	122650	95830	55480	34256	33068
MEAN	856	1600	3199	2555	4503	6555	3706	3956	3194	1790	1105	1102
MAX	3260	7420	13900	7950	9170	16600	6720	5680	4320	3580	1190	1150
MIN	619	760	1310	1230	2410	3750	2640	3230	2560	1170	930	956
AC-FT	52660	95240	196700	157400	250100	402100	220500	243300	190100	110000	67950	65590
CAL YR 1982	TOTAL	1051671	MEAN	2881	MAX	32000	MIN	279	AC-FT	2086000		
WTR YR 1983	TOTAL	1034369	MEAN	2834	MAX	16600	MIN	619	AC-FT	2052000		

NOTE.--No gage-height record Jan. 25 to May 11.

11433800 NORTH FORK AMERICAN RIVER BELOW AUBURN DAMSITE, NEAR AUBURN, CA

LOCATION.--Lat 38°52'20", long 121°03'18", in SE 1/4 SW 1/4 sec.23, T.12 N., R.8 E., Placer County, Hydrologic Unit 18020128, on right bank 1,080 ft upstream from Knickerbocker Creek, 4,000 ft downstream from Auburn damsite, and 2.0 mi southeast of Auburn.

DRAINAGE AREA.--973 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR CA-80-4: 1973-75(M), 1978(M), 1979(M).

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

REMARKS.--Records good prior to June and fair thereafter. Natural flow of stream affected by many reservoirs and diversions (see REMARKS for stations 11427000, 11433500).

AVERAGE DISCHARGE.--11 years, 2,304 ft³/s, 1,669,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,700 ft³/s Jan. 14, 1980, gage height, 87.5 ft from floodmarks, affected by temporary storage at Auburn damsite; minimum daily, 51 ft³/s July 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,300 ft³/s Mar. 13, gage height, 81.68 ft; minimum daily, 774 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	774	1740	6910	3100	5140	16300	8940	9190	7720	4380	1530	1270
2	815	1730	4410	2920	4490	17300	8290	7840	6530	5360	1530	1320
3	799	1580	3580	2780	4030	13800	7510	7140	6200	5480	1490	1310
4	855	1540	3190	2640	3710	10800	6740	7180	6680	4570	1480	1270
5	852	1490	2950	2510	3740	9340	6090	6970	7020	4820	1460	1260
6	796	1470	2850	2600	3930	8930	5560	6980	6980	4910	1440	1230
7	921	1130	2730	2470	8840	9360	5250	6410	7080	4710	1420	1220
8	943	1150	2530	2150	16600	9610	5090	6280	6640	3820	1410	1220
9	937	1450	2420	2150	11300	8540	5040	5990	5900	3030	1390	1220
10	898	1460	2320	2100	9180	8060	4850	5800	6000	2620	1410	1220
11	891	1450	2230	2060	7780	9240	4580	5440	7340	2430	1380	1210
12	874	1420	2150	2050	8390	8760	4340	5410	6440	2400	1340	1210
13	938	1390	2330	1980	16700	36000	4150	5520	5480	2510	1290	1210
14	838	1260	2070	2010	11200	26500	4040	5650	6020	2470	1230	1210
15	822	1350	2080	1970	8700	14600	3930	5910	7510	2480	1340	1200
16	825	1290	2000	1990	7350	11600	3870	6430	7130	2280	1380	1190
17	804	1230	3050	2050	6270	10500	3930	5810	6980	2140	1260	1190
18	825	4750	3290	2050	6500	9830	4000	5940	7410	1990	1220	1180
19	812	7710	2710	2640	6780	8580	4260	6530	5790	1910	1240	1140
20	821	3780	2870	2340	6050	7800	5130	7410	4950	1850	1330	1070
21	810	2810	20500	2180	5500	7830	5190	7990	5260	1740	1290	1190
22	811	2630	23800	2930	5070	7720	4760	8350	5370	1740	1230	1190
23	940	2950	22300	5230	4880	8090	5120	8620	6080	1720	1220	1210
24	1460	2570	9680	12400	4780	8880	5970	8820	6370	1680	1200	1050
25	3410	2230	6800	8760	5400	9120	6470	8670	6080	1660	1220	1220
26	8590	2000	5760	6420	7620	7730	5570	9320	5960	1630	1260	1210
27	2950	2020	5000	12500	8430	7380	5140	9280	5520	1610	1270	1200
28	1760	2160	4270	8860	10600	6930	8510	9500	5020	1580	1060	1190
29	1670	6670	3910	8060	---	6270	11600	9450	4770	1580	1250	1210
30	2560	12400	3550	7590	---	5830	10500	8920	4750	1550	1250	1340
31	2370	---	3320	6120	---	10100	---	8440	---	1570	1090	---
TOTAL	44371	78810	167560	127610	208960	341330	174420	227190	186980	84220	40910	36360
MEAN	1431	2627	5405	4116	7463	11010	5814	7329	6233	2717	1320	1212
MAX	8590	12400	23800	12500	16700	36000	11600	9500	7720	5480	1530	1340
MIN	774	1130	2000	1970	3710	5830	3870	5410	4750	1550	1060	1050
AC-FT	88010	156300	332400	253100	414500	677000	346000	450600	370900	167100	81140	72120

CAL YR 1982 TOTAL 1644187 MEAN 4505 MAX 56500 MIN 432 AC-FT 3261000
WTR YR 1983 TOTAL 1718721 MEAN 4709 MAX 36000 MIN 774 AC-FT 3409000

NOTE.--No gage-height record June 9 to September 30.

SACRAMENTO RIVER BASIN

11433800 NORTH FORK AMERICAN RIVER BELOW AUBURN DAMSITE, NEAR AUBURN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1982 to September 1983.

INSTRUMENTATION.--Temperature recorder since October 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C Oct. 3, 1982; minimum recorded, 5.0°C Jan. 1, 2, 1983.

EXTREMES FOR THE CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 25.0°C Oct. 3; minimum recorded, 5.0°C Jan. 1, 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.5	14.5	12.5	12.0	9.0	9.0	5.5	5.0	---	---	9.0	8.5
2	22.5	14.5	12.0	11.5	8.5	8.5	5.5	5.0	7.5	7.0	9.0	9.0
3	25.0	14.5	12.0	11.5	8.5	8.0	5.5	5.5	7.5	7.0	9.0	9.0
4	21.0	14.5	12.0	11.5	8.5	8.0	6.0	5.5	7.5	6.5	9.5	9.0
5	18.0	14.0	11.5	11.0	8.5	8.0	6.0	6.0	7.0	7.0	9.0	9.0
6	15.0	14.0	11.5	11.0	8.0	8.0	6.5	6.0	7.5	7.0	9.5	9.0
7	18.0	14.0	11.5	11.5	8.0	7.5	6.5	6.5	8.5	7.5	9.5	9.0
8	15.5	13.5	11.5	11.0	7.5	7.0	7.0	6.5	8.5	8.5	10.0	9.0
9	15.5	13.5	11.0	10.5	7.5	7.0	7.0	6.5	8.5	8.5	10.0	9.5
10	15.5	14.0	10.5	10.5	7.5	7.0	6.5	6.0	9.0	8.5	10.5	9.5
11	15.5	14.0	10.5	10.5	7.5	7.0	6.5	6.0	9.0	8.5	10.5	9.5
12	17.0	14.0	10.5	10.5	7.5	7.0	6.5	6.0	9.5	9.0	9.5	9.5
13	15.5	14.5	10.5	10.5	7.5	7.5	6.0	6.0	9.5	8.0	10.0	8.5
14	21.5	14.5	10.5	10.0	7.5	7.0	6.5	6.0	8.5	8.0	8.5	8.0
15	23.5	15.0	10.0	10.0	7.0	7.0	6.5	6.0	8.5	8.0	8.5	8.5
16	21.5	15.0	10.0	10.0	7.5	6.5	7.0	6.5	9.0	8.5	8.5	8.0
17	20.5	14.5	10.0	10.0	8.0	7.5	7.5	7.0	9.0	8.5	8.5	8.0
18	19.5	14.5	10.0	10.0	7.5	7.0	7.5	7.5	9.0	8.5	8.5	8.0
19	20.0	14.5	10.0	10.0	7.5	7.0	7.5	7.5	8.5	8.0	9.0	8.0
20	21.5	14.5	10.0	9.5	7.5	7.0	7.0	6.5	8.5	8.0	8.5	8.5
21	15.5	15.0	9.5	9.0	8.5	7.5	6.5	6.0	8.5	8.0	9.0	8.5
22	19.0	15.0	9.0	9.0	8.5	8.5	6.5	6.5	9.0	8.5	8.5	8.0
23	24.5	15.5	9.5	9.0	8.5	7.5	7.0	6.5	9.5	8.5	8.0	8.0
24	24.5	19.0	9.5	9.0	7.5	7.0	7.5	7.5	9.5	9.0	8.0	8.0
25	21.5	18.0	9.0	8.5	6.5	6.5	7.5	7.5	9.0	8.5	8.5	8.0
26	17.0	14.5	9.0	8.5	7.0	6.5	8.0	7.5	8.5	8.5	8.5	8.0
27	14.5	13.5	9.0	8.5	7.0	7.0	8.5	8.0	8.5	8.5	9.0	8.0
28	13.5	13.0	9.0	9.0	7.0	6.5	8.5	8.5	8.5	8.5	9.0	8.5
29	13.0	13.0	9.0	9.0	6.5	6.0	8.5	8.0	---	---	9.0	8.5
30	13.0	13.0	9.0	9.0	6.0	5.5	8.0	8.0	---	---	9.5	8.5
31	13.0	12.5	---	---	5.5	5.5	---	---	---	---	10.0	9.5
MONTH	25.0	12.5	12.5	8.5	9.0	5.5	8.5	5.0	9.5	6.5	10.5	8.0

11433800 NORTH FORK AMERICAN RIVER BELOW AUBURN DAMSITE, NEAR AUBURN, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

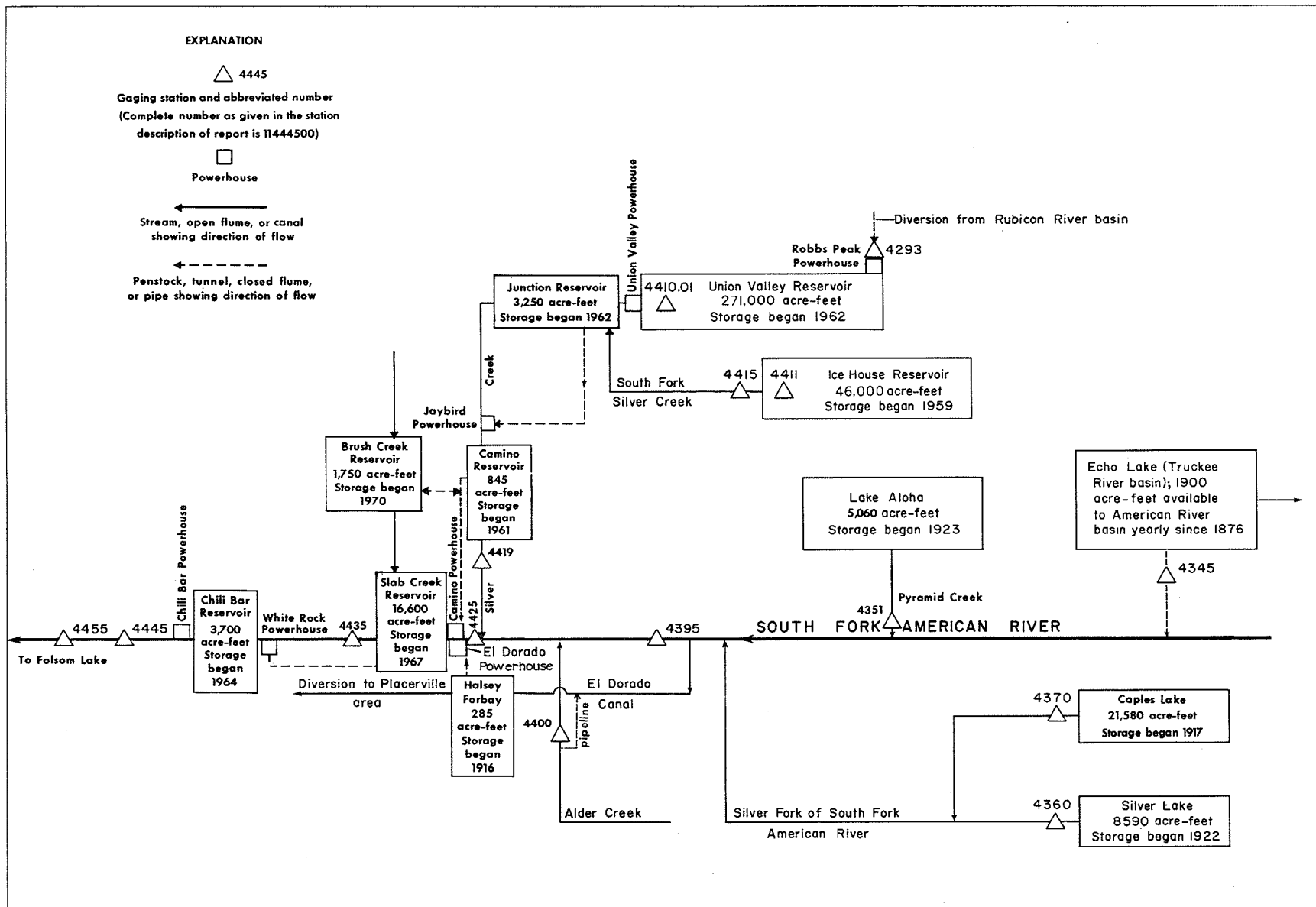


FIGURE 11.-- Schematic diagram showing diversions and storage in South Fork American River basin.

11434500 ECHO LAKE CONDUIT NEAR PHILLIPS, CA

LOCATION.--Lat 38°49'52", long 120°02'12", in NW 1/4 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 downstream from intake, and 2.4 mi 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, from topographic map. Prior to July 16, 1929, nonrecording gage at site 0.4 mi upstream at different datum.

REMARKS.--Conduit diverts from Echo Lake, capacity, 1,900 acre-ft in Truckee River basin into South Fork American River basin 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, 33 ft³/s Sept. 10, 11, 1980; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	25	3.9									0
2	26	25	1.9									0
3	25	24	1.1									0
4	25	23	.13									0
5	22	23	0									0
6	24	22	0									0
7	23	22	0									0
8	23	21	0									0
9	22	21	0									0
10	21	21	0									0
11	21	20	0									0
12	21	20	0									0
13	20	18	0									0
14	19	14	0									0
15	18	5.0	0									0
16	17	.04	0									0
17	16	.03	0									0
18	15	.01	0									0
19	14	.01	0									0
20	14	.01	0									0
21	13	.01	0									0
22	12	.01	0									0
23	12	.01	0									0
24	14	0	0									0
25	20	0	0									0
26	25	0	0									26
27	26	0	0									25
28	25	0	0									25
29	25	0	0									25
30	25	3.3	0									26
31	25	---	0									---
TOTAL	634	307.43	7.03	0	0	0	0	0	0	0	0	127
MEAN	20.5	10.2	.23	0	0	0	0	0	0	0	0	4.23
MAX	26	25	3.9	0	0	0	0	0	0	0	0	26
MIN	12	0	0	0	0	0	0	0	0	0	0	0
AC-FT	1260	610	14	0	0	0	0	0	0	0	0	252

CAL YR 1982 TOTAL 1567.34 MEAN 4.29 MAX 28 MIN 0 AC-FT 3110
WTR YR 1983 TOTAL 1075.46 MEAN 2.95 MAX 26 MIN 0 AC-FT 2130

11435100 PYRAMID CREEK AT TWIN BRIDGES, CA

LOCATION.--Lat 38°48'57", long 120°06'58", in NW 1/4 SW 1/4 sec.9, T.11 N., R.17 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 0.5 mi northeast of Twin Bridges, and 2.2 mi west of Phillips.

DRAINAGE AREA.--8.76 mi².

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,320 ft, from topographic map.

REMARKS.--Flow regulated by Lake Aloha, capacity, 5,060 acre-ft. Lake of the Woods, Ropi Lake, and Toem Lake (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.--13 years, 41.5 ft³/s, 30,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 858 ft³/s June 26, 1971, gage height, 4.62 ft, from rating curve extended above 300 ft³/s; minimum daily, 0.07 ft³/s Sept. 20-24, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 418 ft³/s Oct. 26, gage height, 3.47 ft; minimum daily, 11 ft³/s Oct. 16-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	35	30	16	18	24	24	18	190	213	82	181
2	16	30	22	16	17	21	24	18	168	277	78	90
3	15	26	20	16	17	20	21	26	188	211	74	76
4	13	24	20	17	17	19	20	33	207	221	65	70
5	13	23	20	17	17	18	19	26	212	236	67	68
6	12	23	19	17	17	18	18	23	206	254	59	65
7	16	22	18	18	24	20	18	24	199	228	54	64
8	17	21	18	18	24	20	19	28	193	189	57	63
9	15	20	19	18	22	22	21	29	199	163	56	61
10	14	20	19	17	21	23	20	29	227	163	51	60
11	13	19	19	17	19	24	19	25	266	172	45	59
12	12	18	19	18	20	24	18	27	205	185	43	59
13	12	18	20	18	23	43	18	31	197	189	36	58
14	12	17	19	17	20	28	18	42	218	209	44	57
15	12	17	18	17	19	23	18	58	236	198	61	61
16	11	16	18	17	18	22	19	60	228	180	42	82
17	11	18	20	17	18	21	21	61	258	173	35	82
18	11	31	20	17	18	20	20	74	229	169	30	80
19	11	38	18	18	21	19	23	92	199	170	35	79
20	11	25	20	18	19	19	27	103	199	162	32	78
21	12	21	23	18	18	19	24	117	206	159	30	77
22	19	23	30	19	18	18	27	133	229	162	31	80
23	82	22	30	20	20	20	28	143	243	166	28	82
24	60	20	21	23	19	20	24	154	227	164	29	79
25	233	19	20	22	19	20	23	166	219	167	63	78
26	159	19	19	19	21	18	21	174	214	154	65	78
27	54	19	18	23	21	19	20	240	213	129	64	76
28	37	23	18	20	21	19	19	242	207	88	63	79
29	34	26	17	20	---	18	20	260	213	84	63	99
30	88	35	17	20	---	19	19	240	204	85	62	102
31	50	---	17	18	---	30	---	223	---	85	79	---
TOTAL	1094	688	626	566	546	668	630	2919	6399	5405	1623	2323
MEAN	35.3	22.9	20.2	18.3	19.5	21.5	21.0	94.2	213	174	52.4	77.4
MAX	233	38	30	23	24	43	28	260	266	277	82	181
MIN	11	16	17	16	17	18	18	18	168	84	28	57
AC-FT	2170	1360	1240	1120	1080	1320	1250	5790	12690	10720	3220	4610
CAL YR 1982	TOTAL	22785	MEAN	62.4	MAX	283	MIN	11	AC-FT	45190		
WTR YR 1983	TOTAL	23487	MEAN	64.3	MAX	277	MIN	11	AC-FT	46590		

11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, CA

LOCATION.--Lat 38°40'17", long 120°07'18", in SW 1/4 sec.32, T.10 N., R.17 E., Amador County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 1,000 ft downstream from Silver Lake Dam, and 3.5 mi southwest of Kirkwood.

DRAINAGE AREA.--15.2 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Silver Lake 1,000 ft upstream, capacity, 3,840 acre-ft at spillway level and 8,590 acre-ft with 11 ft of flashboards; contents in Silver Lake were 7,060 acre-ft Sept. 30, 1982, and 4,571 acre-ft Sept. 30, 1983. Some water, in addition to that released through dam and over spillway, escapes from Silver Lake through porous rock formation and is measured at staff gage 0.25 mi east of station. For leakage from Silver Lake, refer to listed annual figures below; not included in average discharge. 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.--61 years, 35.4 ft³/s, 25,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s Nov. 21, 1950, gage height, 6.03 ft, from rating curve extended above 430 ft³/s; no flow many days in February and March 1948, Jan. 13, 14, 1954, Nov. 3, 1959, to Feb. 5, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 499 ft³/s May. 29, gage height, 4.23 ft; minimum daily, 1.0 ft³/s Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	123	35	9.0	11	28	19	20	411	306	90	72
2	20	230	28	8.8	10	25	21	18	302	341	80	146
3	19	263	23	8.6	9.4	20	21	19	268	374	62	67
4	25	284	19	8.4	8.8	16	19	29	282	373	62	9.8
5	32	300	17	8.3	8.5	13	18	35	346	397	49	7.9
6	35	321	16	8.3	11	11	16	35	410	404	42	14
7	33	285	15	8.3	18	11	15	32	419	403	42	17
8	27	255	14	8.4	20	10	14	35	385	373	25	15
9	29	269	13	8.5	17	9.6	15	42	355	314	7.0	13
10	36	189	12	8.3	15	10	17	47	398	234	22	49
11	39	109	12	8.1	12	13	18	46	467	191	30	87
12	20	75	12	8.3	13	14	17	48	450	189	14	99
13	3.7	60	15	8.7	18	30	17	52	409	190	6.6	103
14	3.6	26	14	8.8	16	34	16	60	390	207	9.7	100
15	2.9	1.0	12	9.2	14	29	15	79	420	207	14	98
16	4.7	1.1	11	9.9	12	25	13	103	433	193	8.3	95
17	14	1.2	13	10	11	25	13	112	433	149	7.6	93
18	19	8.0	13	11	14	24	14	128	462	74	6.5	90
19	23	19	12	17	15	20	16	164	443	32	12	100
20	29	20	14	16	12	18	22	213	405	18	11	105
21	34	19	24	14	11	17	25	259	293	29	4.2	101
22	33	19	35	17	9.5	18	25	295	273	46	3.8	97
23	34	19	35	19	8.9	19	29	347	312	63	3.6	93
24	35	17	25	26	9.3	20	36	383	263	73	3.8	89
25	22	16	17	22	12	18	35	413	188	81	3.8	85
26	7.5	15	14	17	19	15	28	432	224	91	3.5	81
27	8.7	14	13	25	22	15	25	437	265	94	3.1	77
28	11	16	11	21	22	14	25	454	286	94	2.8	73
29	14	22	10	20	---	12	24	469	298	78	1.9	69
30	36	35	9.7	17	---	11	23	466	305	70	2.1	93
31	71	---	9.4	13	---	16	---	431	---	80	4.0	---
TOTAL	732.1	3031.3	523.1	402.9	379.4	560.6	611	5703	10595	5768	637.3	2238.7
MEAN	23.6	101	16.9	13.0	13.6	18.1	20.4	184	353	186	20.6	74.6
MAX	71	321	35	26	22	34	36	469	467	404	90	146
MIN	2.9	1.0	9.4	8.1	8.5	9.6	13	18	188	18	1.9	7.9
AC-FT	1450	6010	1040	799	753	1110	1210	11310	21020	11440	1260	4440
a	288	145	1.2	0	0	0	0	0	132	689	908	413

CAL YR 1982 TOTAL 24740.6 MEAN 67.8 MAX 497 MIN 1.0 AC-FT 49070 AC-FT a 3780
WTR YR 1983 TOTAL 31182.4 MEAN 85.4 MAX 469 MIN 1.0 AC-FT 61850 AC-FT a 2580

a Leakage, in acre-feet, from Silver Lake.

SACRAMENTO RIVER BASIN

11437000 CAPLES LAKE OUTLET NEAR KIRKWOOD, CA

LOCATION.--Lat 38°42'29", long 120°03'00", in SW 1/4 SW 1/4 sec.18, T.10 N., R.18 E., Alpine County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 500 ft downstream from main dam and outlet gate of Caples Lake, and 1.3 mi east of Kirkwood.

DRAINAGE AREA.--13.5 mi².

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, from topographic map.

REMARKS.--Flow regulated by Caples Lake 500 ft upstream, capacity, 19,750 acre-ft at spillway level and 21,580 acre-ft with 3 ft of flashboards; contents in Caples Lake were 21,400 acre-ft Sept. 30, 1982, and 15,586 acre-ft Sept. 30, 1983. Flow over Caples Lake spillway and leakage occurred Oct. 1-22 and July 23 to Sept 14, 83 acre-ft, and is included in the table below. 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).--61 years, 37.6 ft³/s, 27,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum combined daily discharge for outlet and spillway, 669 ft³/s June 3, 1969; minimum daily, 0.1 ft³/s Mar. 25-31, 1944, Nov. 27, 28, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum combined daily discharge for outlet and spillway, 292 ft³/s July 7-9; minimum daily, 5.1 ft³/s Nov. 12-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	88	16	19	128	13	15	15	281	289	113	83
2	9.0	112	21	19	128	13	15	15	278	289	111	140
3	16	186	21	18	128	13	15	15	278	289	118	107
4	24	220	20	18	128	14	15	15	278	289	123	47
5	24	243	20	17	127	14	15	15	280	289	113	57
6	22	290	20	17	125	14	15	15	282	290	106	57
7	21	213	19	17	123	14	15	15	283	292	106	55
8	21	6.5	19	16	122	14	15	15	284	292	94	54
9	22	6.3	19	16	123	14	15	15	284	292	85	97
10	25	6.3	18	16	122	14	15	15	283	290	82	149
11	26	6.1	18	15	62	15	15	15	284	285	82	147
12	35	5.1	18	15	12	15	15	15	284	275	82	148
13	72	5.1	18	15	12	15	15	15	284	161	81	147
14	76	5.1	17	15	12	15	15	15	284	145	80	143
15	79	5.1	17	14	12	14	15	15	284	131	79	141
16	83	5.1	18	14	12	14	15	15	285	127	74	142
17	80	5.1	18	14	12	14	15	15	287	74	71	141
18	77	5.1	17	14	12	14	15	16	287	31	70	139
19	70	5.1	18	15	12	14	15	16	289	26	94	142
20	63	5.3	19	15	12	14	15	80	289	26	89	149
21	61	5.4	22	15	13	14	15	127	287	25	50	148
22	57	5.5	23	15	13	15	15	128	287	20	36	147
23	38	5.5	23	16	13	15	15	131	287	14	25	145
24	39	5.6	23	18	13	15	15	217	287	12	17	144
25	43	5.9	22	80	13	15	15	280	288	16	17	143
26	21	6.5	22	132	13	15	15	278	289	14	17	142
27	63	7.9	21	131	13	15	15	278	289	12	12	141
28	37	10	21	131	13	15	15	278	289	17	7.8	139
29	15	12	20	130	---	15	15	279	289	76	7.2	139
30	44	12	20	129	---	15	15	281	289	118	7.0	137
31	77	---	20	127	---	15	---	281	---	116	14	---
TOTAL	1349.1	1499.6	608	1243	1528	445	450	2925	8549	4622	2063.0	3710
MEAN	43.5	50.0	19.6	40.1	54.6	14.4	15.0	94.4	285	149	66.5	124
MAX	83	290	23	132	128	15	15	281	289	292	123	149
MIN	9.0	5.1	16	14	12	13	15	15	278	12	7.0	47
AC-FT	2680	2970	1210	2470	3030	883	893	5800	16960	9170	4090	7360
CAL YR 1982	TOTAL	20932.6	MEAN	57.3	MAX	290	MIN	4.7	AC-FT	41520		
WTR YR 1983	TOTAL	28991.7	MEAN	79.4	MAX	292	MIN	5.1	AC-FT	57500		

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA

LOCATION.--Lat 38°45'49", long 120°19'39", in SW 1/4 SW 1/4 sec.29, T.11 N., R.15 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 0.8 mi downstream from Silver Fork of South Fork, and 1.9 mi southwest of Kyburz.

DRAINAGE AREA.--193 mi².

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, from topographic map. Prior to Oct. 1, 1962, at datum 1.00 ft higher.

REMARKS.--Flow at low and medium stages partly regulated by four reservoirs since beginning of record, total capacity, 37,100 acre-ft. 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: 61 years (water years 1923-83), 302 ft³/s, 218,800 acre-ft/yr.
Combined river and diversion: 61 years (water years 1923-83), 418 ft³/s, 302,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 17,400 ft³/s Dec. 23, 1964, gage height, 10.92 ft, from rating curve extended above 6,300 ft³/s on basis of contracted-opening measurement at gage height 10.40 ft; minimum daily, 0.13 ft³/s Nov. 26, 1977.
Combined flow: Maximum discharge, 17,500 ft³/s Dec. 23, 1964; minimum daily, 10 ft³/s Oct. 17, 19, 1929.

EXTREMES FOR CURRENT YEAR.--River only: Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0030	3,990	7.17	May 29	1945	*6,940	8.50
Mar. 13	0930	3,870	7.10	June 11	0400	5,830	8.09

Minimum daily, 4.1 ft³/s Oct. 2.

Combined flow: Maximum discharge, 6,960 ft³/s May 29; minimum daily, 155 ft³/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	511	241	152	325	977	772	729	3970	2520	645	883
2	4.1	635	179	144	318	812	734	697	3340	3230	621	630
3	5.0	697	162	136	305	650	666	795	3310	2740	582	493
4	5.5	702	172	133	293	635	597	971	3440	2750	550	263
5	6.3	789	172	131	284	601	550	859	3800	2890	506	220
6	5.8	681	160	133	315	550	528	789	4040	2880	460	246
7	14	402	148	131	481	601	519	830	3990	2610	456	244
8	15	362	135	144	587	630	523	971	3710	2190	448	238
9	5.4	345	133	142	485	635	546	1010	3630	1920	420	235
10	5.9	290	129	136	428	671	555	997	4010	1760	383	355
11	5.3	183	122	138	390	756	506	920	4920	1720	369	405
12	5.2	136	127	140	345	789	472	1010	3870	1760	341	413
13	6.9	114	138	140	559	2670	448	1050	3570	1720	325	413
14	6.7	93	119	138	420	1600	440	1170	3750	1680	341	402
15	8.8	39	111	138	365	1130	440	1410	4080	1520	405	394
16	9.0	94	102	148	315	939	448	1490	4020	1340	318	417
17	10	124	168	146	296	877	489	1520	4260	1210	284	417
18	15	413	152	154	335	789	510	1700	3970	1020	269	405
19	8.8	444	140	179	312	712	587	2020	3440	914	305	409
20	6.5	220	200	162	302	681	739	2420	3190	835	328	424
21	12	162	532	144	281	650	723	2920	3130	806	269	417
22	30	195	697	258	284	621	772	3250	3260	835	238	440
23	298	205	606	235	315	597	835	3660	3470	818	215	440
24	214	148	390	611	345	592	750	4150	3230	789	186	432
25	1400	124	318	387	372	555	707	4440	3050	789	210	420
26	1580	109	284	468	387	528	630	4710	2990	745	205	420
27	513	102	252	523	390	532	621	4980	2860	712	195	452
28	266	156	230	440	468	506	718	5270	2790	630	183	432
29	258	244	210	424	---	489	818	5460	2810	630	176	510
30	1150	287	193	387	---	519	772	4840	2640	686	170	640
31	571	---	176	345	---	920	---	4550	---	671	244	---
TOTAL	6447.1	9006	6898	7087	10302	24214	18415	71588	106540	47320	10647	12509
MEAN	208	300	223	229	368	781	614	2309	3551	1526	343	417
MAX	1580	789	697	611	587	2670	835	5460	4920	3230	645	883
MIN	4.1	39	102	131	281	489	440	697	2640	630	170	220
AC-FT	12790	17860	13680	14060	20430	48030	36530	142000	211300	93860	21120	24810
CAL YR 1982	TOTAL	238979.9	MEAN	655	MAX	6740	MIN	4.1	AC-FT	474000		
WTR YR 1983	TOTAL	330973.1	MEAN	907	MAX	5460	MIN	4.1	AC-FT	656500		

SACRAMENTO RIVER BASIN

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SOUTH FORK AMERICAN RIVER
AND EL DORADO CANAL NEAR KYBURZ, CA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	660	364	286	460	1090	817	770	3980	2530	658	892
2	163	784	314	278	453	927	775	739	3350	3240	634	641
3	155	846	300	273	440	765	708	839	3320	2750	596	507
4	161	851	310	273	428	702	641	1020	3450	2760	564	270
5	168	938	311	273	419	663	598	900	3810	2900	520	227
6	165	830	299	276	447	625	569	831	4050	2890	474	253
7	176	551	287	274	605	677	559	876	4000	2620	464	251
8	178	511	274	287	702	709	578	1020	3720	2200	457	245
9	158	494	275	285	600	718	630	1050	3640	1930	432	243
10	166	439	277	279	543	746	623	1040	4020	1770	397	362
11	162	332	270	281	505	832	574	963	4930	1730	386	412
12	160	282	275	283	460	869	540	1060	3880	1770	359	420
13	163	258	286	283	674	2750	516	1100	3580	1730	344	422
14	171	237	267	281	535	1650	497	1210	3760	1690	361	413
15	174	183	260	281	480	1170	484	1450	4090	1530	424	401
16	174	187	251	291	436	984	492	1530	4030	1350	338	424
17	175	184	308	289	421	924	536	1570	4270	1220	304	424
18	180	475	282	297	460	836	558	1740	3980	1030	292	413
19	174	538	270	322	437	758	630	2060	3450	924	328	415
20	171	350	331	306	427	730	783	2460	3200	846	354	430
21	177	292	649	288	406	693	769	2970	3140	818	285	423
22	195	327	812	397	409	665	819	3300	3270	845	246	447
23	459	345	721	369	440	644	878	3700	3480	826	224	446
24	376	293	506	702	470	637	793	4200	3240	797	195	438
25	1550	269	433	513	497	598	754	4510	3060	798	221	426
26	1720	254	399	598	512	571	674	4770	3000	755	213	427
27	660	247	367	638	512	578	664	5020	2870	723	203	458
28	417	300	345	555	561	553	764	5300	2790	640	191	438
29	407	374	326	539	---	530	873	5480	2810	642	184	516
30	1290	409	308	503	---	561	821	4860	2650	699	179	646
31	713	---	303	473	---	965	---	4570	---	684	253	---
TOTAL	11321	13040	10980	11273	13739	26120	19917	72908	106820	47637	11080	12730
MEAN	365	435	354	364	491	843	664	2352	3561	1537	357	424
MAX	1720	938	812	702	702	2750	878	5480	4930	3240	658	892
MIN	155	183	251	273	406	530	484	739	2650	640	179	227
AC-FT	22460	25860	21780	22360	27250	51810	39510	144600	211900	94490	21980	25250
CAL YR 1982	TOTAL	287132	MEAN	787	MAX	6850	MIN	152	AC-FT	569500		
WTR YR 1983	TOTAL	357565	MEAN	980	MAX	5480	MIN	155	AC-FT	709200		

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA

LOCATION.--Lat 38°51'49", long 120°26'15", in NW 1/4 NW 1/4 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 upstream from Little Silver Creek, and 6.6 mi north of Riverton.

DRAINAGE AREA.--83.7 mi².

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 May 1962. Usable capacity, 270,300 acre-ft between elevations 4,645.0 ft, minimum operating level and 4,870.0 ft, top of radial spillway gates. Dead storage, 7,000 acre-ft. Reservoir receives water from the South Fork Rubicon River via Robbs Peak powerplant (station 11429300). 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 July 9, 1974, elevation, 4,870.6 ft; minimum since reservoir first filled, 18,300 acre-ft Jan. 13, 1977, elevation, 4,683.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 276,700 acre-ft July 5, 6, elevation, 4,869.8 ft; minimum, 155,600 acre-ft Oct. 1-3, elevation, 4,820.6 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155600	187000	194600	198100	211700	210900	220800	193200	231900	272900	269700	259400
2	155600	187700	196000	197700	211400	211900	220200	192300	233800	274900	270000	259100
3	155600	188400	195800	197000	211400	211900	219200	191600	236200	275500	270000	258500
4	156200	188600	195600	197000	211200	211700	218500	191200	238900	276400	270300	258500
5	156800	188900	195100	197200	211200	211200	217700	190700	241800	276700	270300	258200
6	157200	189100	194900	197700	211200	210500	216700	189500	244900	276700	270300	258500
7	157800	189500	194900	197900	212400	210700	215700	188900	247000	276400	270000	259400
8	158300	189500	193900	197900	214400	210700	214900	188400	249300	275500	269700	259900
9	158800	189500	193700	197900	214700	210900	213700	188000	251200	274600	269400	260800
10	159200	189500	192500	197900	214700	211200	212400	187700	253700	273800	269100	261400
11	159800	189300	191800	197900	214400	211400	211200	187300	257400	273500	268500	261600
12	160600	189100	190900	198100	214900	212400	210000	187300	259100	273500	268200	262200
13	161000	188900	198900	198400	217200	218500	208200	187700	260800	274100	268200	262800
14	161600	188600	189100	198400	217700	220800	206800	188000	262800	274900	268500	263600
15	162200	188600	188400	198600	217700	221500	205100	188600	264800	275200	268500	264200
16	162800	188200	187500	198100	217700	222000	203600	189300	266200	275500	268000	264800
17	162800	188000	187700	198400	217200	222000	202700	189800	267700	275800	267100	265600
18	163400	190700	187000	199100	217200	221800	201200	190900	268200	276400	265900	265600
19	163800	190900	186400	199600	216200	221300	200300	192500	268500	276100	265400	266200
20	164400	191200	186800	200000	214900	221000	200000	194600	268800	275800	265100	266800
21	165000	191400	190500	200000	213700	220800	199600	197000	269400	275200	265100	267400
22	165700	192300	193700	201200	212700	220500	199100	199800	270300	274900	264500	267400
23	167100	192300	195800	201500	211700	220500	198800	202700	270900	274400	264200	267400
24	167700	192100	197900	203900	210700	220500	197900	205600	271400	273800	264200	268000
25	171900	191600	198400	205300	210200	220000	197000	208700	272000	273200	263600	267400
26	176900	190900	199800	206500	209700	219500	195800	212200	272300	273200	262800	267400
27	178400	190000	200500	207500	209200	219500	194600	215700	272600	272900	261900	267400
28	179500	190000	200500	208500	209000	219000	194600	219500	272600	272300	261100	267700
29	180600	190900	200300	209700	---	218500	194600	223600	272600	271700	260200	268000
30	184800	192800	199600	210500	---	218700	194400	226700	272600	271100	259400	268000
31	186100	---	198800	211200	---	220200	---	229600	---	270600	258800	---
MAX	186100	192800	200500	211200	217700	222000	220800	229600	272600	276700	270300	268000
MIN	155600	187000	186400	197000	209000	210500	194400	187300	231900	270600	258800	258200
a	4835.1	4838.0	4840.6	4845.7	4844.8	4849.3	4838.7	4852.9	4868.4	4867.7	4863.6	4866.8
b	+30100	+6700	+6000	+12400	-2200	+11200	-25800	+35200	+43000	-2000	-11800	+9200

CAL YR 1982 b +3000

WTR YR 1983 b +112000

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

b Change in contents, in acre-feet.

11441100 ICE HOUSE RESERVOIR NEAR KYBURZ, CA

LOCATION.--Lat 38°49'26", long 120°21'34", in SE 1/4 SW 1/4 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 upstream from Peavine Creek, and 4.8 mi northwest of Kyburz.

DRAINAGE AREA.--27.2 mi².

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 between elevations 5,327.5 ft, centerline of fishwater outlet, and 5,450.0 ft, top of spillway gates. Dead storage, 160 acre-ft. 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 June 27, 1971, elevation, 5,450.6 ft; minimum since reservoir first filled, 1,740 acre-ft Oct. 5-9, 1962, elevation, 5,349.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,700 acre-ft July 15, elevation, 5,449.7 ft; minimum, 1,900 acre-ft Sept. 29, elevation, 5,350.9 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42700	33900	32700	30300	24600	24600	23600	8620	29000	43900	39100	21800
2	42200	33600	32800	30300	24700	24600	23900	8900	29900	44600	38300	22000
3	41800	33400	33000	30400	24800	24600	24000	9140	30900	45000	37600	21800
4	41400	33200	32800	30300	24800	24600	24300	9390	32100	45300	36700	21000
5	41000	33000	32700	29900	24900	24600	24200	9670	33600	45500	35900	20000
6	40600	32800	32500	29400	25000	24500	23800	9880	35000	45400	35100	19100
7	40200	32700	32200	29000	25300	24600	23200	10200	36100	45100	34300	18300
8	39800	32500	31900	28600	25400	24500	22400	10400	36800	44800	33400	17300
9	39400	32300	31600	28200	25600	24600	21600	10700	37800	44600	32700	16500
10	39000	32200	31300	27800	25600	24800	20800	10700	38800	44400	31800	15700
11	38500	32000	31000	27400	25600	25000	20000	10200	40200	44500	31000	14900
12	38000	31800	30800	27100	25500	25300	19100	9670	41100	44900	30200	14100
13	37600	31700	30500	26700	25400	25900	18400	9250	41800	45200	29700	13300
14	37100	31500	30200	26300	25400	26300	17600	8830	42600	45600	29500	12500
15	36600	31300	29800	25900	25400	26700	16800	8550	43300	45700	28800	11600
16	36200	31100	29600	25400	25300	27000	16200	8660	43700	45400	28000	10800
17	35700	30900	29300	25100	25200	27300	15700	9250	44100	45000	27200	9950
18	35200	31000	29100	24800	25200	27600	15800	9880	44400	44700	26400	9140
19	34800	31200	28800	24400	25100	27800	15700	10700	44400	44600	25600	8340
20	34300	31300	28700	24000	25000	27900	15100	11700	44400	44400	24700	7600
21	33900	31300	29000	23600	25000	28100	14500	12800	44400	44200	23800	6880
22	33500	31500	29300	23400	24900	28200	13900	14100	44600	43900	23000	6130
23	33200	31600	29400	23600	24800	28200	13300	15300	44900	43700	22200	5480
24	33000	31700	29600	23800	24700	27800	12700	16600	44900	43500	21600	4870
25	33700	31800	29700	24000	24700	27200	12100	18200	44800	43200	21600	4250
26	34700	31800	29800	24100	24600	26400	11400	19800	44500	42600	21500	3550
27	34600	31900	29900	24200	24600	25700	10800	21400	44400	42000	21400	2830
28	34300	32100	29900	24300	24600	24900	10100	23200	44300	41500	21400	2140
29	34000	32300	30000	24400	---	24200	9530	25000	44200	40900	21300	1900
30	34300	32600	30200	24500	---	23400	8970	26600	44100	40400	21300	2010
31	34100	---	30200	24600	---	23400	---	27900	---	39800	21300	---
MAX	42700	33900	33000	30400	25600	28200	24300	27900	44900	45700	39100	22000
MIN	33000	30900	28700	23400	24600	23400	8970	8550	29000	39800	21300	1900
a	5432.0	5429.5	5425.3	5414.3	5414.4	5411.9	5378.2	5421.0	5447.4	5440.8	5407.8	5351.5
b	-8700	-1500	-2400	-5600	0	-1200	-14430	+18930	+16200	-4300	-18500	-19290

CAL YR 1982 b -900

WTR YR 1983 b -40790

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

b 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 NW 1/4 NW 1/4 sec.12, T.11 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 300 ft upstream from Peavine Creek, 0.4 mi downstream from Ice House Dam, and 4.8 mi northwest of Kyburz.

DRAINAGE AREA.--27.5 mi².

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, from topographic map. Prior to Oct. 1, 1959, at site 0.3 mi 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).--59 years, 77.4 ft³/s, 56,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,940 ft³/s Dec. 23, 1955, gage height, 6.71 ft site and datum then in use, from rating curve extended above 540 ft³/s on basis of slope-area measurement at gage height 6.69 ft; no flow Oct. 31 to Nov. 9, 1958. Maximum discharge since construction of Ice House Dam in 1959, 1,930 ft³/s May 26, 1982, gage height, 5.74 ft, from rating curve extended above 730 ft³/s on basis of computation of flow over dam at gage height 5.66 ft; minimum daily, 1.2 ft³/s Mar. 17-19, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 783 ft³/s June 24, gage height, 4.83 ft; minimum daily, 3.4 ft³/s Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	221	6.1	5.3	5.5	106	6.8	279	11	486	470	53
2	227	185	6.0	5.2	5.5	105	7.0	8.7	11	411	511	53
3	227	185	42	5.3	5.5	103	6.1	10	11	412	508	177
4	227	185	105	101	5.5	103	5.8	9.8	11	412	505	482
5	227	156	105	260	5.5	103	114	9.9	11	504	502	478
6	227	133	147	260	5.9	104	321	10	11	584	500	473
7	225	132	203	260	10	105	426	11	129	584	498	469
8	224	133	202	257	7.9	105	491	11	217	460	496	464
9	224	132	201	256	6.8	53	488	10	219	368	496	459
10	224	132	200	256	53	7.7	483	161	218	367	492	453
11	229	132	200	256	101	8.3	479	417	219	261	492	447
12	234	130	200	254	103	9.4	475	413	220	167	491	442
13	233	129	202	255	103	17	470	409	283	164	306	436
14	233	129	204	256	102	9.3	465	405	324	162	197	430
15	232	135	204	256	103	8.5	461	402	381	279	517	424
16	231	139	203	254	103	8.3	456	190	519	369	519	417
17	231	139	203	253	103	7.6	373	10	574	368	515	411
18	231	110	201	253	103	6.6	6.7	10	576	336	511	405
19	231	18	200	253	103	6.5	155	11	576	281	506	397
20	231	17	130	252	103	6.4	453	11	576	281	503	389
21	232	17	6.5	252	103	6.3	448	11	576	280	497	381
22	244	18	7.5	155	103	6.2	444	10	576	280	494	374
23	255	17	5.7	5.8	103	165	440	10	578	279	489	366
24	253	17	4.6	7.7	103	313	437	10	693	279	337	358
25	153	17	4.4	5.8	103	395	432	10	766	334	53	349
26	20	13	4.3	5.8	103	507	426	10	760	429	53	339
27	189	6.5	4.1	6.1	103	503	421	10	660	428	53	329
28	256	7.4	3.6	5.7	103	501	417	10	581	426	53	317
29	256	7.0	3.4	5.6	---	499	413	10	581	424	53	151
30	256	6.6	4.1	5.5	---	496	407	10	580	423	53	73
31	256	---	4.9	5.5	---	212	---	10	---	422	53	---
TOTAL	6811	2798.5	3217.2	4668.3	1962.1	4586.1	10427.4	2909.4	11448	11260	11723	10796
MEAN	220	93.3	104	151	70.1	148	348	93.9	382	363	378	360
MAX	256	221	204	260	103	507	491	417	766	584	519	482
MIN	20	6.5	3.4	5.2	5.5	6.2	5.8	8.7	11	162	53	53
AC-FT	13510	5550	6380	9260	3890	9100	20680	5770	22710	22330	23250	21410

CAL YR 1982 TOTAL 53108.9 MEAN 146 MAX 928 MIN 3.4 AC-FT 105300 MEAN a 144 AC-FT a 104400
WTR YR 1983 TOTAL 82607.0 MEAN 226 MAX 766 MIN 3.4 AC-FT 163900 MEAN a 170 AC-FT a 123100

a 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 downstream from Round Tent Canyon, 0.4 mi downstream from diversion dam, and 5 mi northeast of Pollock Pines.

DRAINAGE AREA.--171 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 2,754.06 ft 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).--23 years, 95.0 ft³/s, 68,830 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s Jan. 31, 1963, gage height, 11.28 ft in gage well, 11.9 ft from floodmarks, from rating curve extended above 1,500 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 1.0 ft³/s Nov. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,660 ft³/s Mar. 13, gage height, 8.75 ft; minimum daily, 9.6 ft³/s Dec. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	28	49	18	32	653	655	1310	380	1180	22	20
2	21	20	39	17	29	731	668	618	241	829	22	20
3	21	12	34	16	27	497	566	641	184	820	22	20
4	21	11	31	15	25	557	469	600	292	809	22	20
5	21	11	29	15	23	342	515	557	160	998	22	20
6	21	10	27	14	29	569	656	579	144	1430	21	20
7	22	10	26	14	79	861	704	565	204	1390	21	20
8	21	10	24	13	98	752	817	540	584	1370	20	20
9	21	9.8	22	13	80	638	815	526	607	1140	22	20
10	21	10	18	12	66	633	798	518	558	1120	22	20
11	21	10	9.6	12	55	752	843	865	621	875	21	20
12	21	10	10	12	59	787	772	881	605	414	21	20
13	21	11	15	12	84	3800	739	919	621	40	22	20
14	21	11	12	11	68	1620	729	906	696	14	19	19
15	21	11	11	11	58	1010	791	898	821	15	20	20
16	21	11	13	12	49	841	723	885	1030	12	20	20
17	21	11	32	12	42	713	422	453	1320	12	20	19
18	21	40	29	13	123	636	340	501	1410	12	20	19
19	21	38	27	15	240	543	308	509	1410	12	20	19
20	22	28	35	14	235	502	814	560	1390	12	20	20
21	22	22	155	14	298	502	843	530	1380	13	20	20
22	22	24	818	36	251	412	827	564	1390	21	20	20
23	22	24	411	36	294	427	846	519	1400	28	20	19
24	22	21	66	78	136	684	947	508	1440	27	20	19
25	33	18	48	61	208	811	855	500	1560	27	20	20
26	38	17	39	52	351	803	794	469	1520	27	20	20
27	27	15	33	62	457	824	804	428	1470	27	20	20
28	26	19	29	52	640	814	1110	421	1370	22	20	20
29	25	36	25	47	---	840	1250	383	1400	21	20	20
30	36	84	22	40	---	802	1130	325	1380	22	20	20
31	31	---	20	35	---	1210	---	297	---	21	20	---
TOTAL	726	592.8	2158.6	784	4136	25566	22550	18775	27588	12760	639	594
MEAN	23.4	19.8	69.6	25.3	148	825	752	606	920	412	20.6	19.8
MAX	38	84	818	78	640	3800	1250	1310	1560	1430	22	20
MIN	21	9.8	9.6	11	23	342	308	297	144	12	19	19
AC-FT	1440	1180	4280	1560	8200	50710	44730	37240	54720	25310	1270	1180
CAL YR 1982	TOTAL	89236.3	MEAN	244	MAX	5010	MIN	7.9	AC-FT	177000		
WTR YR 1983	TOTAL	116869.4	MEAN	320	MAX	3800	MIN	9.6	AC-FT	231800		

11442500 SOUTH FORK AMERICAN RIVER BELOW SILVER CREEK, NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°47'37", long 120°37'02", in NE 1/4 NE 1/4 sec.22, T.11 N., R.12 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 350 ft upstream from El Dorado powerhouse, 2.4 mi downstream from Silver Creek, and 2.8 mi northwest of Pollock Pines.

DRAINAGE AREA.--449 mi².

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 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).--13 years, 536 ft³/s, 388,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft³/s Jan. 13, 1980, gage height, 17.83 ft; minimum daily, 9.6 ft³/s Oct. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge observed, 16,800 ft³/s Mar. 13, gage height, 14.5 ft, from outside gage; minimum daily, 42 ft³/s several days in October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	641	773	372	725	3270	2270	2950	4910	3900	696	745
2	49	696	541	350	677	3120	2220	2070	4070	4150	674	729
3	44	776	446	326	629	2360	2020	2060	3820	3750	626	609
4	42	737	422	307	589	2200	1770	2230	4120	3700	610	374
5	42	843	404	297	556	1800	1700	2070	4340	4000	570	310
6	44	811	372	289	620	1880	1750	1970	4550	4460	519	306
7	52	492	348	285	1470	2280	1760	1960	4610	4190	505	299
8	52	429	305	289	2090	2190	1880	2040	4690	3720	500	293
9	54	384	299	291	1470	1970	1710	2070	4590	3170	498	286
10	44	394	279	281	1200	1960	1910	2040	4890	2970	434	342
11	42	267	263	276	1030	1960	1890	2270	5960	2710	433	416
12	42	208	260	278	994	2170	1780	2400	4880	2270	420	429
13	42	178	316	278	1630	10300	1690	2460	4510	1870	383	437
14	43	157	266	272	1250	5150	1660	2560	4760	1720	376	437
15	42	118	263	269	1050	3680	1660	2780	5110	1610	474	436
16	43	114	237	279	906	2870	1600	2990	5330	1400	400	432
17	45	225	391	290	800	2490	1390	2460	5790	1290	356	437
18	45	817	403	297	1100	2220	1220	2710	5770	1090	346	437
19	51	1090	348	406	1150	1920	1280	3160	5120	977	351	433
20	47	525	424	333	1070	1780	1980	3580	4840	893	414	439
21	45	372	1930	307	1040	1730	2040	4090	4730	855	354	441
22	48	386	3870	672	957	1580	2060	4450	4820	881	330	457
23	189	453	2890	762	1020	1540	2230	4710	5070	886	299	482
24	257	346	1310	2010	876	1820	2330	5030	4900	842	273	469
25	1110	290	957	1260	1050	1910	2210	5480	4840	838	263	466
26	2380	253	791	1090	1350	1810	2010	5660	4720	802	279	450
27	791	229	670	1600	1490	1870	1980	5950	4530	775	271	478
28	415	275	576	1150	1940	1820	2580	6230	4320	705	259	467
29	324	639	578	1060	---	1780	3230	6380	4380	669	246	481
30	1520	1360	572	921	---	1730	2980	5890	4170	717	240	684
31	984	---	445	812	---	3050	---	5450	---	721	237	---
TOTAL	8987	14505	21949	17709	30729	78210	58790	108150	143140	62531	12636	13501
MEAN	290	484	708	571	1097	2523	1960	3489	4771	2017	408	450
MAX	2380	1360	3870	2010	2090	10300	3230	6380	5960	4460	696	745
MIN	42	114	237	269	556	1540	1220	1960	3820	669	237	286
AC-FT	17830	28770	43540	35130	60950	155100	116600	214500	283900	124000	25060	26780
a	17780	49100	64060	52180	67520	84670	81450	82980	80000	81360	60800	34060
b	9450	8510	8790	9470	8910	1700	641	726	0	0	12	0

CAL YR 1982 TOTAL 421120 MEAN 1154 MAX 15900 MIN 36 AC-FT 835300
WTR YR 1983 TOTAL 570837 MEAN 1564 MAX 10300 MIN 42 AC-FT 1132000

a Diversions, in acre-feet, to Camino powerplant, furnished by Sacramento Municipal Utility District.
b Diversions, in acre-feet, to El Dorado powerplant, furnished by Pacific Gas and Electric Company.

NOTE:--No gage-height record Mar. 10-16.

SACRAMENTO RIVER BASIN

11443500 SOUTH FORK AMERICAN RIVER NEAR CAMINO, CA

LOCATION.--Lat 38°46'23", long 120°42'02", in NE 1/4 SW 1/4 sec.25, T.11 N., R.11 E., El Dorado County, Hydrologic Unit 18020129, on right bank 500 ft downstream from Slab Creek Dam, 500 ft upstream from Iowa Canyon Creek, and 2.8 mi northwest of Camino.

DRAINAGE AREA.--493 mi².

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.

REVISED RECORDS.--WSP 931: 1928, 1938, 1940(M). WSP 1931: Drainage area at former site.

GAGE.--Water-stage recorder. Altitude of gage is 1,620 ft, from topographic map. See WSP 2131 for history of changes prior to Oct. 12, 1966.

REMARKS.--Records fair. Flow regulated by six reservoirs, total usable capacity, 347,000 acre-ft. Since 1967 diversion from Slab Creek Dam to White Rock powerplant bypasses this station. Echo Lake conduit (station 11434500) imports up to 1,900 acre-ft each year from Truckee River basin. Variable amounts of El Dorado Canal water, up to 40 ft³/s May to October, and about 7 ft³/s remainder of the year, diverted for irrigation and domestic use between Pollock Pines and Placerville. Water from Jenkinson Lake in North Fork Consumnes River basin diverted to Camino and substituted for flow from El Dorado Canal in some years. Since October 1962 water is imported from the Upper Rubicon River basin by way of Robbs Peak tunnel (station 11429800). See schematic diagram of South Fork American River basin.

AVERAGE DISCHARGE.--37 years (water years 1923-59, prior to extensive regulation and transbasin diversion in South Fork American River basin), 961 ft³/s, 695,700 acre-ft/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, 769,400 acre-ft/yr; 16 years (water years 1968-83), 156 ft³/s, 113,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,800 ft³/s Dec. 23, 1955, gage height, 32.6 ft from floodmarks, site and datum then in use, from rating curve extended above 24,000 ft³/s on basis of computation of maximum flow over dam; minimum daily, 1.3 ft³/s Aug. 24, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,000 ft³/s Mar. 13, gage height, 15.42 ft; minimum daily, 17 ft³/s Mar. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	38	38	45	32	37	235	48	2870	1610	43	37
2	36	36	35	45	32	1410	74	49	1850	1750	38	126
3	36	36	37	44	32	577	58	50	1490	1410	39	40
4	36	36	38	44	32	392	30	50	1730	1280	43	41
5	36	36	38	44	32	83	32	49	2040	1590	43	41
6	36	36	38	40	32	33	38	49	2330	2140	43	41
7	36	36	38	37	412	255	38	50	2410	1900	43	41
8	36	36	38	37	2930	207	38	50	2490	1630	42	40
9	36	36	38	37	1740	58	37	50	2370	863	43	41
10	36	36	38	37	1330	33	37	50	2700	650	43	43
11	36	36	38	37	1080	147	36	50	3940	459	43	42
12	36	38	38	37	1060	186	36	50	2790	98	43	42
13	36	44	38	37	2160	8880	35	50	2280	51	43	41
14	36	44	38	37	1430	4240	36	50	2530	51	43	40
15	36	44	38	37	1110	1650	38	50	2910	51	44	40
16	36	53	38	37	838	941	38	50	3240	51	41	40
17	36	65	38	37	42	524	37	50	3930	51	40	40
18	36	75	38	37	32	397	39	51	3790	51	39	40
19	36	59	38	37	32	60	40	365	3020	52	41	39
20	36	39	39	37	32	23	43	1430	2650	52	43	39
21	36	39	37	37	32	20	47	1810	2510	51	42	39
22	36	39	4580	37	32	18	47	2220	2560	51	42	38
23	36	39	3800	36	32	18	48	2580	2870	51	43	36
24	36	38	797	42	32	17	47	2860	2700	52	40	35
25	37	38	197	724	32	18	47	3440	2600	64	38	36
26	389	38	55	380	31	19	46	3580	2480	46	38	36
27	37	38	40	1070	31	19	47	3810	2260	45	38	37
28	36	38	45	246	32	20	48	4130	2020	43	38	37
29	36	38	45	185	---	20	49	4280	2100	42	38	37
30	36	38	45	70	---	20	48	3830	1850	43	38	36
31	36	---	45	32	---	326	---	3330	---	43	36	---
TOTAL	1471	1242	10443	3639	14674	20648	1469	38561	77310	16321	1271	1261
MEAN	47.5	41.4	337	117	524	666	49.0	1244	2577	526	41.0	42.0
MAX	389	75	4580	1070	2930	8880	235	4280	3940	2140	44	126
MIN	36	36	35	32	31	17	30	48	1490	42	36	35
AC-FT	2920	2460	20710	7220	29110	40960	2910	76490	153300	32370	2520	2500
CAL YR 1982	TOTAL	132351	MEAN	363	MAX	16900	MIN	11	AC-FT	262500		
WTR YR 1983	TOTAL	188310	MEAN	516	MAX	8880	MIN	17	AC-FT	373500		

11444500 SOUTH FORK AMERICAN RIVER NEAR PLACERVILLE, CA

LOCATION.--Lat 38°46'16", long 120°48'55", in NE 1/4 SW 1/4 sec.25, T.11 N., R.10 E., El Dorado County, Hydrologic Unit 18020129, on right bank 700 ft downstream from Chili Bar Dam, 0.5 mi upstream from Big Canyon, and 2.5 mi north of Placerville.

DRAINAGE AREA.--598 mi².

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 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 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, 820,100 acre-ft/yr; 19 years (water years 1965-83), 1,557 ft³/s, 1,128,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,300 ft³/s Dec. 23, 1964, gage height, 17.4 ft from floodmarks, from rating curve extended above 18,000 ft³/s on basis of computations of flow over dam of maximum flow; minimum daily, 0.2 ft³/s Nov. 12, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,800 ft³/s Mar. 13, gage height, 13.79 ft; minimum daily, 324 ft³/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	762	1770	3220	2090	2450	5260	5110	4900	6880	5720	2190	1100
2	448	1860	2290	2080	2340	6710	4740	4590	6010	5640	2080	1970
3	511	1740	2160	2070	2290	5870	4660	4590	5560	5530	2240	1880
4	612	1710	2090	2020	2240	5380	4570	4510	5760	5310	2090	957
5	631	1680	2060	1750	2190	4900	4500	4490	5980	5560	1840	1070
6	691	1090	2040	1730	2300	4720	4480	4330	6290	6090	1970	1200
7	403	783	2020	1720	3800	5050	4480	4450	6370	5970	1080	562
8	324	1330	2000	1440	7230	5080	4480	4440	6390	5650	1320	457
9	465	1920	2000	1330	5090	4700	4480	4410	6310	4990	1740	586
10	496	1920	2000	1680	4270	4580	4450	4400	6570	4730	2240	1090
11	505	1290	2000	1680	3850	4710	4220	4270	7600	4550	1940	1160
12	499	1150	2000	1370	3680	4890	4150	4320	6760	4080	1390	806
13	500	1310	2000	1700	5370	15800	4180	4320	6200	3950	1190	856
14	475	1130	2000	1850	4360	9740	3960	4320	6380	3830	636	1130
15	528	1460	2000	1740	3860	6890	3950	4320	6710	3620	1400	1190
16	520	1390	2000	1700	3600	6000	4060	4320	7020	3620	1950	1250
17	590	1620	2030	1280	4050	5570	2610	4320	7490	3090	1960	1360
18	482	1660	2010	1980	3570	5400	2140	4260	7580	3840	1970	1020
19	442	2700	1830	2120	4170	4860	3760	4430	6900	2700	2280	1140
20	475	2150	1750	2030	3460	4650	4180	5560	6560	1940	1790	983
21	527	1810	4500	1950	3460	4750	3940	5910	6470	2130	1360	1110
22	521	1700	7600	1720	3530	4700	3890	6300	6440	1940	1130	1010
23	1190	1800	6600	1880	4130	4740	4100	6630	6770	1890	1490	1110
24	457	1900	4200	4220	4150	5080	4660	6870	6650	1320	1230	1220
25	1630	1720	2800	3490	3640	5180	4870	7380	6520	2130	806	1050
26	3440	1760	2430	2860	4590	4950	4490	7520	6450	2380	870	1210
27	2140	1680	2320	5140	3930	4870	4380	7640	6230	1890	779	1260
28	2050	1800	2270	3200	4530	4800	4720	7940	6030	2610	710	1310
29	1660	2500	2210	3200	---	3640	5080	8020	6100	2130	864	1410
30	1390	7070	2120	3180	---	3770	5070	7770	5900	2090	769	1220
31	1860	---	2110	2650	---	5160	---	7230	---	2180	681	---
TOTAL	27214	55403	80660	68850	106130	172400	128360	168760	194880	113100	45985	33677
MEAN	878	1847	2602	2221	3790	5561	4279	5444	6496	3648	1483	1123
MAX	3440	7070	7600	5140	7230	15800	5110	8020	7600	6090	2280	1970
MIN	324	783	1750	1280	2190	3640	2140	4260	5560	1320	636	457
AC-FT	53980	109900	160000	136600	210500	342000	254600	334700	386500	224300	91210	66800

CAL YR 1982 TOTAL 1020537 MEAN 2796 MAX 21700 MIN 324 AC-FT 2024000
WTR YR 1983 TOTAL 1195419 MEAN 3275 MAX 15800 MIN 324 AC-FT 2371000

Note.--No gage-height record Nov. 21-25.

SACRAMENTO RIVER BASIN

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA

LOCATION.--Lat 38°49'07", long 120°56'45", in NW 1/4 SW 1/4 sec.11, T.11 N., R.9 E., El Dorado County, Hydrologic Unit 18020129, on left bank 0.4 mi downstream from Greenwood Creek, 2.4 mi northwest of Lotus, and 3.3 mi northwest of Coloma.

DRAINAGE AREA.--673 mi².

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, 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, 802,900 acre-ft/yr; 21 years (water years 1963-83), 1,580 ft³/s, 1,145,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,800 ft³/s Dec. 23, 1955, gage height, 21.37 ft; minimum daily, 14 ft³/s on several days during July 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1862 and prior to beginning of record, 20.4 ft from floodmarks, Nov. 21, 1950, discharge, 64,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,600 ft³/s Mar. 13, gage height, 15.57 ft; minimum daily, 364 ft³/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	839	1730	3300	2030	2640	6220	5330	5630	6890	5640	2100	828
2	439	1780	2380	2020	2470	7520	4930	5050	6030	5530	1930	1490
3	529	1690	2160	2010	2350	6530	4760	4870	5510	5460	2270	1630
4	583	1630	2060	1950	2270	5770	4600	4730	5690	5160	2040	1090
5	638	1590	2010	1740	2210	5180	4520	4720	5920	5410	2010	1060
6	692	1270	1980	1680	2420	4880	4480	4600	6220	5940	1910	1040
7	420	843	1950	1670	4730	5480	4470	4630	6290	5880	1360	773
8	364	999	1950	1550	8600	5370	4460	4560	6280	5610	1060	465
9	500	1840	1950	1360	5710	4830	4420	4500	6240	4850	1640	514
10	508	1850	1930	1720	4540	4680	4390	4450	6430	4560	2230	1020
11	519	1470	1930	1670	3990	4880	4200	4410	7460	4410	2010	1020
12	508	1050	1930	1320	3960	5320	4120	4390	6770	3920	1590	920
13	513	1450	1970	1680	5890	21000	4160	4370	6120	3790	1040	734
14	487	965	1950	1680	4640	11200	3960	4360	6250	3660	811	1080
15	534	1340	1950	1710	4000	7400	3980	4340	6570	3490	1140	1100
16	516	1330	1930	1670	3610	6410	4180	4330	6900	3470	1630	1110
17	553	1580	2120	1260	4080	6060	2890	4330	7280	3000	1820	1360
18	495	1710	2020	1920	3740	5940	2220	4250	7550	3680	1860	1100
19	433	3010	1880	2120	4250	5140	3500	4330	6810	2730	2140	984
20	473	2180	1960	1800	3500	4880	4470	5550	6440	1930	1820	1020
21	516	1830	8350	1700	3460	5190	4100	5920	6320	2150	1250	971
22	518	1730	11500	2100	3500	5110	3990	6250	6260	1880	1060	1020
23	897	1830	9560	3200	4090	5120	4190	6600	6600	1870	1550	1040
24	586	1960	4320	7800	4120	5810	5090	6760	6530	1390	1050	1080
25	1110	1830	2970	4000	3680	5980	5480	7270	6390	1900	971	1160
26	3530	1750	2560	3270	4670	5370	4770	7480	6330	2340	786	1050
27	2070	1750	2320	6960	4160	5230	4600	7500	6130	2050	775	1230
28	1900	1820	2260	3850	5050	5000	5790	7880	5920	2520	742	1280
29	1690	3000	2180	4040	---	3880	6380	7900	5980	2090	801	1350
30	1510	7460	2090	4010	---	3900	6100	7830	5800	1960	799	1170
31	1770	---	2060	3000	---	5340	---	7210	---	2100	678	---
TOTAL	26640	56267	91480	78490	112330	190620	134530	171000	191910	110370	44873	31689
MEAN	859	1876	2951	2532	4012	6149	4484	5516	6397	3560	1448	1056
MAX	3530	7460	11500	7800	8600	21000	6380	7900	7550	5940	2270	1630
MIN	364	843	1880	1260	2210	3880	2220	4250	5510	1390	678	465
AC-FT	52840	111600	181500	155700	222800	378100	266800	339200	380700	218900	89010	62860
CAL YR 1982	TOTAL	1106599	MEAN	3032	MAX	33900	MIN	364	AC-FT	2195000		
WTR YR 1983	TOTAL	1240199	MEAN	3398	MAX	21000	MIN	364	AC-FT	2460000		

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 November 1980.

BIOLOGICAL DATA: Water years 1979-80.

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, 19.0°C several days in September; minimum recorded, 4.0°C Jan. 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11446200 FOLSOM LAKE NEAR FOLSOM, CA

LOCATION.--Lat 38°42'29", long 121°09'22", in NW 1/4 NE 1/4 sec.24, T.10 N., R.7 E., Sacramento County, Hydrologic Unit 18020128, near center of dam on American River, 0.7 mi downstream from South Fork American River, and 2.3 mi northeast of Folsom.

DRAINAGE AREA.--1,861 mi².

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 Bureau of Reclamation).

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 between elevations 205.5 ft invert of lower tier of river outlets and 466.0 ft gross pool elevation, all of which is available for release. Spillway design flood pool elevation, 475.4 ft, capacity, 1,120,200 acre-ft. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of South Fork American River basin.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,024,400 acre-ft June 15, 1963, elevation, 467.23 ft; minimum since storage pool first filled, 140,600 acre-ft Nov. 20, 21, 1977, elevation, 347.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 999,900 acre-ft June 26, elevation, 465.09 ft; minimum, 616,400 acre-ft Dec. 16, elevation, 427.72 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	755100	728200	668300	635200	628100	666900	665800	774300	826200	984600	943600	835900
2	753000	725300	653700	634000	625500	679200	678000	777700	826600	984800	942500	833300
3	751200	721800	639400	632100	623400	674800	687700	778900	826400	985800	941700	830400
4	749300	718000	634000	630300	620500	662500	695200	779600	829600	985400	940200	826200
5	747500	714200	628200	628200	623800	654300	694200	780300	833500	985700	938900	821900
6	746200	706300	627600	626800	628900	643700	691800	781000	838200	987500	937400	817700
7	743700	697000	627200	626100	647900	637100	688700	779800	843100	989000	935100	813000
8	741400	687400	626300	623600	666100	631300	685700	778100	847300	988200	931800	807300
9	739400	683000	625200	621200	655700	632000	685800	775500	853600	983800	932100	801800
10	737600	679000	623900	620700	645200	636500	685700	772400	861500	981600	936800	798000
11	735600	674100	622400	621000	637100	643100	684400	768300	875700	978800	935500	794400
12	733700	667400	621000	620500	637700	647000	682700	764300	888700	974900	932600	790200
13	731700	656800	619800	622000	658100	728800	680300	760600	895100	970700	927800	785700
14	729700	644500	618100	623300	653800	741600	677200	756800	902500	966100	922900	782300
15	729800	638300	617500	625700	641800	718000	674200	753400	914100	964700	918200	779100
16	725600	636400	616400	628000	631600	686600	674000	750700	925400	965300	914900	776700
17	723600	635900	617200	630000	631700	658100	672000	746700	936400	965200	911800	774500
18	721000	645000	619400	633400	635200	650400	668300	742900	950800	966200	908500	772000
19	718900	659500	619900	638600	639500	639800	667900	740200	960300	965300	905900	768500
20	716800	661500	621700	642600	640600	635400	671500	741200	966800	962500	903200	765900
21	714800	660900	677900	645900	640400	635200	674200	744600	973100	959900	899200	763000
22	712600	660200	696800	652500	639600	634500	675800	749300	979500	957100	894200	761600
23	711600	663000	699700	653700	639300	634100	679300	755000	987700	955100	890300	760000
24	711600	657400	674300	683300	638800	638100	686600	761000	994400	952100	884800	758300
25	716200	649100	665200	682300	643000	642500	696400	767400	999100	949500	879300	756900
26	736700	640200	652400	676000	650800	641300	703000	775800	999900	949100	873000	755100
27	738400	631500	637700	685500	649400	639100	708200	783700	998700	947900	866900	753600
28	735800	624000	633500	664200	655000	635100	729000	793500	995900	947400	860100	752700
29	732900	637000	635500	646600	---	630200	751800	804000	992600	947400	853700	751900
30	732300	675000	636300	645500	---	634500	765700	814500	989000	945800	847500	751800
31	731200	---	635900	636900	---	651600	---	821500	---	944700	841300	---
MAX	755100	728200	699700	685500	666100	741600	765700	821500	999900	989000	943600	835900
MIN	711600	624000	616400	620500	620500	630200	665800	740200	826200	944700	841300	751800
a	439.83	434.02	429.85	429.96	431.90	431.54	443.29	448.74	464.13	460.18	450.63	441.90
b	-24900	-56200	-39100	-1000	+18100	-3400	+114000	+55800	+167500	-44300	-103400	-89500
c	2470	580	550	120	580	550	2280	4640	6170	7030	6690	5020

CAL YR 1982 b +47400

WTR YR 1983 b -4300

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

b Change in contents, in acre-feet.

c Evaporation, in acre-feet.

11446500 AMERICAN RIVER AT FAIR OAKS, CA

LOCATION.--Lat 38°38'08", long 121°13'36", in SE 1/4 NE 1/4 sec.17, T.9 N., R.7 E., Sacramento County, Hydrologic Unit 18020111, on right bank 2,100 ft downstream from Nimbus Dam, 2.4 mi east of Fair Oaks, 8.1 mi downstream from South Fork, and at mile 22.2.

DRAINAGE AREA.--1,888 mi².

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 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 between normal operating elevations, 118.5 ft and 125.0 ft and by Nimbus powerplant. Many diversions above station for irrigation, municipal, and domestic water supply. Diversions of San Juan Suburban Water District, 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).--79 years, 3,865 ft³/s, 2,800,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s Nov. 21, 1950, gage height, 31.85 ft, site and datum then in use; minimum, 3.6 ft³/s Aug. 16, 1924. Maximum discharge since construction of Folsom Dam in 1953, 115,000 ft³/s Dec. 23-25, 1964, gage height, 27.65 ft, present datum; minimum, 86 ft³/s Apr. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,200 ft³/s Dec. 22, gage height, 16.14 ft; minimum daily, 1,120 ft³/s Aug. 10.

REVISIONS.--The revised average discharge superseding that published in the report for 1982 is 3,799 ft³/s, 2,752,000 acre-ft/yr.

CORRECTIONS.--The adjusted mean and the adjusted acre-ft total for the water year 1982 published in the report for 1982 are corrected to 8,379 ft³/s and 6,066,000 acre-ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2370	5000	15500	6100	13000	21900	8570	12300	11800	12200	4230	4750		
2	2400	4990	15100	6100	9160	22700	8600	12300	12000	10400	4220	4680		
3	2370	4990	13200	6290	8310	24900	8610	12300	11300	10300	4230	4650		
4	2330	5010	8550	5640	8040	24200	8700	12300	10300	10200	4230	4600		
5	2540	5000	8320	5490	5440	20000	11900	12300	10400	10100	4210	4640		
6	2530	6510	5890	5470	5050	20000	12000	12400	10400	10000	4190	4600		
7	2550	6630	5350	5320	8060	20000	11900	12300	10300	9980	4180	4610		
8	2540	7180	5370	4980	20600	19000	11800	12300	10200	10100	4130	4520		
9	2490	5580	5370	4950	24100	13900	10200	12400	9320	10100	2840	4520		
10	2510	5550	5380	4880	20100	11900	10100	12400	8570	8590	1120	4280		
11	2510	5560	5460	4060	16800	12200	10200	12400	7570	8540	4090	4240		
12	2490	5840	5450	4020	14800	14700	10100	12300	7640	8430	4740	4110		
13	2480	8480	5420	3470	16000	27000	10100	12300	8690	8470	4690	4330		
14	2530	8470	5430	3410	19800	34400	10100	12300	8650	8420	4680	4320		
15	2540	5980	5090	3010	19700	34100	10100	12300	8550	7020	4700	4230		
16	2530	3820	5100	2960	16800	33900	8670	12300	8510	5250	4690	3680		
17	2530	3600	5140	2960	10700	31200	8620	12400	8560	5220	4700	3700		
18	2530	4330	5130	3000	9830	21500	8630	12300	8490	5210	4700	3700		
19	2530	5640	5110	3070	9750	20300	8780	12300	8420	5200	4710	3700		
20	2520	5800	5110	3060	9650	16600	8700	12300	8500	5200	4710	3700		
21	2520	5800	11600	3020	9680	15500	8510	12300	8480	5210	4710	3640		
22	2520	5810	33400	3270	9710	15400	8580	12300	8590	5170	4710	3140		
23	2520	3600	34800	8100	9780	15300	8590	12300	8650	4730	4760	3170		
24	2520	8470	27100	10900	9580	15500	8600	12400	9640	4730	5250	3170		
25	2530	8500	14800	15000	8420	15400	8610	12500	10100	4670	5150	3160		
26	2570	8500	14800	14900	10400	15500	8420	12700	12000	4200	5080	3160		
27	4830	8500	14700	20600	14700	15500	8460	12600	12300	4210	5140	3170		
28	4930	8500	9150	25400	16000	15400	8640	12400	12300	4220	5170	3200		
29	4980	5900	6060	23900	---	13800	9480	12100	12300	4230	5150	3170		
30	5010	9740	6060	15300	---	9200	12100	11800	12300	4180	5200	3180		
31	5000	---	6060	15000	---	8630	---	11700	---	4220	5180	---		
TOTAL	89750	187280	319000	243630	353960	599530	286370	381600	294830	218700	139490	117720		
MEAN	2895	6243	10290	7859	12640	19340	9546	12310	9828	7055	4500	3924		
MAX	5010	9740	34800	25400	24100	34400	12100	12700	12300	12200	5250	4750		
MIN	2330	3600	5090	2960	5050	8630	8420	11700	7570	4180	1120	3140		
AC-FT	178000	371500	632700	483200	702100	1189000	568000	756900	584800	433800	276700	233500		
MEAN a	2667	5410	9740	7964	13050	19340	11580	13420	12950	6678	3171	2719		
AC-FT a	164000	321900	598900	489700	724700	1189000	689200	825400	770400	410600	195000	161800		
b	8419	6033	4729	5383	3945	2958	4798	8013	11913	14070	14996	12775		
CAL YR 1982	TOTAL	2971613	MEAN	8141	MAX	84200	MIN	261	AC-FT	5894000	MEAN a	8254	AC-FT a	5976000
WTR YR 1983	TOTAL	3231860	MEAN	8854	MAX	34800	MIN	1120	AC-FT	6410000	MEAN a	9033	AC-FT a	6540000

a Adjusted for change in contents, diversions, and evaporation from Folsom Lake.

b Diversions, in acre-feet, from Folsom-Nimbus Dam complex furnished by Bureau of Reclamation.

11447650 SACRAMENTO RIVER AT FREEPORT, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°27'15", long 121°29'54", T.7 N., R.4 E., Sacramento County, Hydrologic Unit 18020109, on left bank .630 ft downstream from drawbridge at Freeport, and 11 mi south of Sacramento.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1904 to July 1905 (gage heights only), June to November 1921, October 1948 to current year. Prior to October 1979, published as Sacramento River at Sacramento (station 11447500). Gage heights collected in the vicinity of "at Sacramento" gage November 1879 to May 1888, December 1890 to September 1963 are contained in reports of National Weather Service.

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. All at datum of low-water mark of Oct. 23, 1856, 0.12 ft NGVD. Nov. 17, 1956, to Sept. 30, 1979, at site 1,000 ft upstream from I Street Bridge. Auxiliary water-stage recorder on right bank 2.6 mi upstream.

REMARKS.--Records good. 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). Streamflow records are considered equivalent to those obtained at I Street Bridge.

AVERAGE DISCHARGE.--35 years (water years 1949-83), 24,630 ft³/s, 17,844,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (since 1949).--Maximum discharge, 104,000 ft³/s Nov. 21, 1950, elevation, 30.14 ft site and datum then in use; minimum daily, 3,970 ft³/s Oct. 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known prior to Nov. 21, 1950, 103,000 ft³/s Jan. 17, 1909, elevation, 29.6 ft site then in use at present datum, from reports of California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 97,800 ft³/s Dec. 24, elevation, 21.13 ft; maximum elevation, 21.29 ft Jan. 29; minimum daily, 15,100 ft³/s Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22700	25600	66400	57400	83800	86800	70700	71600	53000	40300	24800	27100
2	22000	25800	70800	51100	79100	82000	70600	72100	53900	39300	24800	26600
3	21100	24500	70000	46200	76100	83100	70600	71800	54600	39200	24800	26800
4	21000	23200	64500	43300	75000	83100	70400	71200	54900	39500	24700	27200
5	20200	22600	60400	40800	73000	81700	71000	71100	55600	38400	24700	27600
6	19700	23600	55800	39000	71000	80300	71500	71400	56500	37700	24500	27600
7	20000	24000	52100	37400	72400	80000	71100	71900	56300	37400	24500	27800
8	19800	24700	48400	35500	83100	79300	70400	71700	55800	37400	24400	27800
9	19700	23000	46300	33700	90400	77100	68800	71100	55200	36500	23800	27000
10	20400	22600	43200	32000	88400	75400	68200	70900	53700	34700	22600	25600
11	20700	22700	39300	30300	85800	75200	67400	70700	52900	33400	23100	24600
12	20200	22300	35700	29200	82600	76000	66500	70600	52500	32800	24500	23200
13	18900	23800	33400	28500	84200	80900	64700	70500	53200	32400	24700	23100
14	18000	24600	32400	27700	87200	85300	61800	70400	52000	32400	24800	23000
15	17000	23200	31500	26800	87600	84500	58400	70100	50200	31400	25000	22900
16	15800	20300	30600	26000	85000	84000	54600	69400	49100	29000	25000	22900
17	15300	19800	33600	25800	77600	83500	51500	67400	47400	28100	25000	23000
18	15100	24200	39300	25600	75400	80100	50100	62900	46400	27500	24600	23100
19	15300	32700	43900	28300	75000	78100	49400	56300	45800	27100	24900	24100
20	15900	44200	46000	33400	74600	76500	48900	52400	45200	26900	25000	23600
21	16000	46900	51300	38500	74200	75500	48700	51200	43500	26400	24800	22800
22	16000	45200	79500	38400	73600	74600	49100	50400	40700	26000	24900	22500
23	16500	43500	96100	45300	73600	74900	49100	50100	38400	25700	25100	22700
24	16700	44400	96200	58400	73600	75100	49500	50100	38300	25400	24700	22000
25	17400	46300	85100	71900	73800	74900	50800	49700	39800	25700	25000	22700
26	19600	44800	81500	76800	74600	74600	53400	48800	40500	25500	26000	24300
27	21300	42900	79200	83900	80200	74400	55000	49100	41500	25100	26900	25000
28	23900	41700	75900	90900	82200	74300	56300	50200	41800	25200	27000	23500
29	23200	41800	70300	93600	---	73800	59800	51300	41700	25000	27200	23300
30	23200	50800	67100	90500	---	71500	67000	51900	41000	24800	27200	25100
31	23500	---	63100	86700	---	70500	---	52500	---	24800	27200	---
TOTAL	596100	945700	1788900	1472900	2213100	2427000	1815300	1930800	1451400	961000	776200	738500
MEAN	19230	31520	57710	47510	79040	78290	60510	62280	48380	31000	25040	24620
MAX	23900	50800	96200	93600	90400	86800	71500	72100	56500	40300	27200	27800
MIN	15100	19800	30600	25600	71000	70500	48700	48800	38300	24800	22600	22000
AC-FT	1182000	1876000	3548000	2921000	4390000	4814000	3601000	3830000	2879000	1906000	1540000	1465000
CAL YR 1982	TOTAL	15260900	MEAN	41810	MAX	98000	MIN	15000	AC-FT	30270000		
WTR YR 1983	TOTAL	17116900	MEAN	46900	MAX	96200	MIN	15100	AC-FT	33950000		

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

CHEMICAL ANALYSES: Water years 1959 to current year.

BIOLOGICAL DATA: Water years 1974-81.

WATER TEMPERATURES: Water years 1960 to current year.

SEDIMENT RECORDS: Water years 1957 to current year (prior to water year 1980 published as 11447500 Sacramento River at Sacramento).

TURBIDITY: Water years 1972-82. Prior to water year 1980 published as 11447500 Sacramento River at Sacramento.

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.

SEDIMENT RECORDS: October 1956 to current year.

INSTRUMENTATION.--Temperature recorder since June 1960.

REMARKS.--Temperature recorder located on right bank 1.9 mi northwest of Freeport, and 7.4 mi southwest of State Capitol Building in Sacramento. Records of sediment discharge from 1957 to 1979 were obtained at Sacramento and are considered equivalent.

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.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,960 mg/L Dec. 24, 1964; minimum daily mean, 8 mg/L Dec. 29, 30, 1976, and several days during May and June 1981.

SEDIMENT DISCHARGE: Maximum daily, 525,000 tons Dec. 24, 1964; minimum daily, 151 tons Oct. 21, 22, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 21.5°C several days in August; minimum recorded, 7.5°C Jan. 1-3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 367 mg/L Dec. 20; minimum daily mean, 12 mg/L Oct. 17.

SEDIMENT DISCHARGE: Maximum daily, 50,400 tons Dec. 22; minimum daily, 496 tons Oct. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
DEC 20...	1045	43800	108	7.8	9.5	765	95	10.8	94	340	600
MAR 09...	1045	77400	80	7.5	11.0	770	45	10.8	97	K130	K97
JUN 08...	1015	56200	93	7.7	17.0	765	16	9.6	99	K34	K7
SEP 21...	1010	24600	131	8.1	20.0	770	12	8.8	96	90	48

DATE	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)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LILITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
DEC 20...	46	0	10	5.1	5.8	21	.4	1.1	48	11	4.1
MAR 09...	36	0	8.0	3.9	3.6	17	.3	1.0	38	10	2.3
JUN 08...	37	0	8.5	3.9	4.5	20	.3	.80	39	4.5	3.1
SEP 21...	53	0	11	6.2	8.3	25	.5	1.0	55	7.1	5.1

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
DEC 20...	<.10	16	81	82	.11	.16	.06	1.2	.38	.08	.02
MAR 09...	<.10	15	71	67	.10	.10	<.06	.80	.12	.04	.02
JUN 08...	<.10	15	61	64	.08	<.10	<.06	.80	.07	.02	.02
SEP 21...	<.10	17	88	89	.12	.12	.01	.30	.05	.02	.03

See footnotes at end of table.

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC 20...	1045	60	1	19	<.5	<1	<1	<3	5	96	4
MAR 09...	1045	50	1	21	<.5	<1	<1	<3	1	98	<1
JUN 08...	1015	30	1	18	<.5	<1	<1	<3	2	34	<1
SEP 21...	1010	20	1	26	<.5	<1	<1	<3	2	9	<1

DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 20...		<4	5	<.1	<10	2	<1	<1	74	<6	11
MAR 09...		<4	5	<.1	<10	1	<1	<1	54	<6	8
JUN 08...		5	4	<.1	<10	<1	<1	<1	58	<6	12
SEP 21...		<4	2	<.1	<10	1	<1	<1	89	<6	<3

DATE	TIME	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 SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
AUG 27...	0930	<2.0	<1.0	<1.3	<.9	<1.2	<.8	.09	.18

DATE	TIME	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 SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
APR 01...	1100	<1.5	4.7	1.2	2.1	1.2	2.0	.05	.08

DATE	TIME	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 SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
JUN 08...	1015	<1.4	.8	1.0	<.7	.9	<.6	.06	.07

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.

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	22700	34	2080	25600	43	2970	66400	151	27100
2	22000	32	1900	25800	61	4250	70800	137	26200
3	21100	32	1820	24500	58	3840	70000	112	21200
4	21000	35	1980	23200	46	2880	64500	92	16000
5	20200	44	2400	22600	39	2380	60400	81	13200
6	19700	46	2450	23600	35	2230	55800	89	13400
7	20000	39	2110	24000	33	2140	52100	84	11800
8	19800	28	1500	24700	31	2070	48400	99	12900
9	19700	18	957	23000	28	1740	46300	107	13400
10	20400	16	881	22600	27	1650	43200	87	10100
11	20700	14	782	22700	25	1530	39300	71	7530
12	20200	13	709	22300	23	1380	35700	60	5780
13	18900	14	714	23800	24	1540	33400	49	4420
14	18000	15	729	24600	27	1790	32400	38	3320
15	17000	14	643	23200	27	1690	31500	29	2470
16	15800	13	555	20300	28	1530	30600	24	1980
17	15300	12	496	19800	28	1500	33600	38	3450
18	15100	13	530	24200	28	1830	39300	75	7960
19	15300	14	578	32700	70	6180	43900	133	15800
20	15900	15	644	44200	130	15500	46000	367	45600
21	16000	15	648	46900	146	18500	51300	347	48100
22	16000	15	648	45200	142	17300	79500	235	50400
23	16500	15	668	43500	130	15300	96100	165	42800
24	16700	14	631	44400	118	14100	96200	118	30600
25	17400	13	611	46300	106	13300	85100	107	24600
26	19600	17	900	44800	95	11500	81500	103	22700
27	21300	32	1840	42900	87	10100	79200	99	21200
28	23900	41	2650	41700	91	10200	75900	95	19500
29	23200	41	2570	41800	106	12000	70300	93	17700
30	23200	38	2380	50800	122	16700	67100	89	16100
31	23500	36	2280	---	---	---	63100	86	14700
TOTAL	596100	---	40284	945700	---	199620	1788900	---	572010

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	57400	82	12700	83800	124	28100	86800	142	33300
2	51100	74	10200	79100	158	33700	82000	114	25200
3	46200	66	8230	76100	122	25100	83100	110	24700
4	43300	56	6550	75000	103	20900	83100	90	20200
5	40800	47	5180	73000	94	18500	81700	67	14800
6	39000	50	5260	71000	90	17300	80300	69	15000
7	37400	51	5150	72400	92	18000	80000	92	19900
8	35500	47	4500	83100	116	26000	79300	99	21200
9	33700	42	3820	90400	112	27300	77100	87	18100
10	32000	38	3280	88400	69	16500	75400	78	15900
11	30300	35	2860	85800	62	14400	75200	75	15200
12	29200	31	2440	82600	70	15600	76000	77	15800
13	28500	26	2000	84200	82	18600	80900	81	17700
14	27700	21	1570	87200	86	20200	85300	87	20000
15	26800	20	1450	87600	78	18400	84500	82	18700
16	26000	18	1260	85000	62	14200	84000	76	17200
17	25800	16	1110	77600	60	12600	83500	68	15300
18	25600	21	1450	75400	56	11400	80100	56	12100
19	28300	34	2600	75000	58	11700	78100	52	11000
20	33400	66	5950	74600	55	11100	76500	61	12600
21	38500	133	13800	74200	50	10000	75500	76	15500
22	38400	156	16200	73600	78	15500	74600	66	13300
23	45300	150	18300	73600	76	15100	74900	68	13800
24	58400	184	25900	73600	58	11500	75100	78	15800
25	71900	174	33800	73800	82	16300	74900	84	17000
26	76800	145	30100	74600	98	19700	74600	70	14100
27	83900	160	36200	80200	81	17500	74400	68	13700
28	90900	167	41000	82200	84	18600	74300	67	13400
29	93600	181	45700	---	---	---	73800	60	12000
30	90500	156	38100	---	---	---	71500	60	11600
31	86700	123	28800	---	---	---	70500	54	10300
TOTAL	1472900	---	415460	2213100	---	503800	2427000	---	514400

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	70700	60	11500	71600	104	20100	53000	99	14200
2	70600	57	10900	72100	95	18500	53900	96	14000
3	70600	70	13300	71800	80	15500	54600	99	14600
4	70400	79	15000	71200	70	13500	54900	99	14700
5	71000	80	15300	71100	62	11900	55600	98	14700
6	71500	74	14300	71400	62	12000	56500	79	12100
7	71100	67	12900	71900	56	10900	56300	69	10500
8	70400	59	11200	71700	58	11200	55800	68	10200
9	68800	57	10600	71100	62	11900	55200	69	10300
10	68200	59	10900	70900	62	11900	53700	67	9710
11	67400	56	10200	70700	65	12400	52900	68	9710
12	66500	56	10100	70600	57	10900	52500	70	9920
13	64700	56	9780	70500	61	11600	53200	68	9770
14	61800	56	9340	70400	67	12700	52000	59	8280
15	58400	55	8670	70100	67	12700	50200	54	7320
16	54600	54	7960	69400	67	12600	49100	53	7030
17	51500	55	7650	67400	67	12200	47400	77	9850
18	50100	103	13900	62900	65	11000	46400	83	10400
19	49400	74	9870	56300	61	9270	45800	73	9030
20	48900	64	8450	52400	59	8350	45200	67	8180
21	48700	59	7760	51200	52	7190	43500	61	7160
22	49100	56	7420	50400	62	8440	40700	66	7250
23	49100	54	7160	50100	75	10100	38400	66	6840
24	49500	52	6950	50100	82	11100	38300	71	7340
25	50800	52	7130	49700	84	11300	39800	68	7310
26	53400	62	8940	48800	81	10700	40500	60	6560
27	55000	78	11600	49100	91	12100	41500	54	6050
28	56300	83	12600	50200	105	14200	41800	47	5300
29	59800	79	12800	51300	104	14400	41700	40	4500
30	67000	92	16600	51900	105	14700	41000	35	3870
31	---	---	---	52500	106	15000	---	---	---
TOTAL	1815300	---	320780	1930800	---	380350	1451400	---	276680
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	40300	38	4130	24800	40	2680	27100	35	2560
2	39300	47	4990	24800	39	2610	26600	34	2440
3	39200	50	5290	24800	40	2680	26800	38	2750
4	39500	44	4690	24700	38	2530	27200	36	2640
5	38400	36	3730	24700	35	2330	27600	35	2610
6	37700	33	3360	24500	31	2050	27600	32	2380
7	37400	30	3030	24500	28	1850	27800	27	2030
8	37400	30	3030	24400	28	1840	27800	26	1950
9	36500	32	3150	23800	28	1800	27000	29	2110
10	34700	47	4400	22600	28	1710	25600	33	2280
11	33400	49	4420	23100	27	1680	24600	36	2390
12	32800	43	3810	24500	29	1920	23200	35	2190
13	32400	35	3060	24700	30	2000	23100	38	2370
14	32400	32	2800	24800	31	2080	23000	40	2480
15	31400	31	2630	25000	31	2090	22900	40	2470
16	29000	29	2270	25000	29	1960	22900	46	2840
17	28100	28	2120	25000	26	1760	23000	42	2610
18	27500	35	2600	24600	28	1860	23100	40	2490
19	27100	39	2850	24900	28	1880	24100	39	2540
20	26900	39	2830	25000	30	2030	23600	37	2360
21	26400	36	2570	24800	31	2080	22800	35	2150
22	26000	34	2390	24900	33	2220	22500	33	2000
23	25700	33	2290	25100	32	2170	22700	33	2020
24	25400	35	2400	24700	31	2070	22000	33	1960
25	25700	37	2570	25000	33	2230	22700	34	2080
26	25500	34	2340	26000	33	2320	24300	36	2360
27	25100	31	2100	26900	34	2470	25000	33	2230
28	25200	33	2250	27000	35	2550	23500	29	1840
29	25000	33	2230	27200	40	2940	23300	27	1700
30	24800	40	2680	27200	36	2640	25100	31	2100
31	24800	42	2810	27200	35	2570	---	---	---
TOTAL	961000	---	95820	776200	---	67600	738500	---	68930
YEAR 17116900			3455734						

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
DEC										
20...	1010	45100	10.0	380	46300	94	98	100	--	--
20...	1045	43800	9.5	385	45500	--	--	--	--	--
FEB										
02...	0935	79500	10.0	160	34300	75	80	95	100	--
MAR										
09...	1015	77300	12.0	89	18600	51	57	79	98	100
APR										
18...	1015	49500	13.0	101	13500	79	91	98	100	--
JUN										
08...	1000	56200	17.5	72	10900	66	81	94	100	--
SEP										
21...	0935	23900	19.0	35	2260	93	--	--	--	--

SACRAMENTO RIVER BASIN

11449500 KELSEY CREEK NEAR KELSEYVILLE, CA

LOCATION.--Lat 38°55'39", long 122°50'33", in SE 1/4 SE 1/4 sec.34, T.13 N., R.9 W., Lake County, Hydrologic Unit 18020116, on left bank 1.6 mi downstream from Widow Creek, and 3.5 mi south of Kelseyville.

DRAINAGE AREA.--36.6 mi².

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 National Geodetic Vertical Datum of 1929. Prior to July 16, 1955, at site 600 ft upstream at different datum.

REMARKS.--Records fair except those for periods of no gage height record, Feb. 3 to March 15, and April 24 to June 1, which are poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--37 years, 76.9 ft³/s, 55,710 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,200 ft³/s Jan. 26, 1983, gage height, 13.31 ft; maximum gage height, 13.48 ft Jan. 5, 1965; minimum daily, 0.18 ft³/s Aug. 15-23, 25, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	2245	2,730	9.65	Jan. 26	1600	*9,200	13.31
Dec. 21	1400	3,360	10.27	Feb. 28	Unknown	5,540	11.69
Jan. 23	2315	4,710	11.22	Mar. 13	Unknown	2,900	Unknown

Minimum daily discharge, 6.1 ft³/s Sept. 17, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	21	266	70	239	2710	480	490	48	21	11	13
2	7.3	17	178	64	205	1890	409	416	47	24	10	10
3	7.1	14	137	60	183	1250	348	355	45	21	10	9.1
4	7.1	12	110	56	155	890	297	330	43	20	10	8.4
5	7.3	11	94	53	166	695	263	312	41	18	9.8	8.2
6	7.7	10	83	50	330	585	232	289	39	18	8.9	7.9
7	8.7	9.4	70	47	892	522	205	265	37	18	8.6	7.8
8	8.3	8.8	60	45	958	601	188	238	36	19	8.8	8.3
9	7.5	8.5	55	43	860	415	174	217	36	18	8.5	8.1
10	6.7	8.2	50	41	650	352	161	200	35	17	8.5	7.7
11	6.8	7.9	44	39	500	294	149	184	36	16	8.4	7.4
12	6.8	7.7	42	37	800	373	138	168	35	15	8.7	7.3
13	6.8	7.5	42	36	892	1590	127	152	33	15	8.4	7.1
14	7.2	7.2	37	35	701	720	117	136	31	14	8.3	6.8
15	6.9	7.0	43	34	578	360	109	123	31	14	8.1	6.7
16	6.8	7.0	521	35	459	359	105	112	30	14	7.8	6.4
17	7.2	14	711	34	395	387	98	103	29	14	7.9	6.1
18	7.6	654	243	273	962	325	94	97	29	15	7.8	6.2
19	7.5	199	165	230	750	270	90	91	29	15	8.1	6.2
20	7.9	99	274	132	585	294	87	86	28	15	9.1	6.1
21	9.2	65	1280	105	478	300	83	81	27	14	9.5	6.3
22	11	215	1330	355	430	409	84	77	25	13	9.8	7.3
23	22	178	634	825	386	312	514	73	25	13	9.7	7.7
24	14	100	322	1390	350	518	442	69	25	12	9.2	8.3
25	12	73	229	438	515	425	400	66	24	13	8.8	7.9
26	27	56	181	3920	683	340	380	63	23	13	8.8	7.6
27	18	63	146	1310	970	575	610	60	22	12	8.7	7.4
28	15	430	119	553	1720	470	675	57	22	12	8.4	7.4
29	12	514	102	646	---	388	639	55	22	11	8.3	7.4
30	41	694	89	413	---	595	618	53	22	11	8.5	8.4
31	25	---	79	297	---	625	---	50	---	11	10	---
TOTAL	352.8	3518.2	7736	11666	16792	19839	8316	5068	955	476	276.4	230.5
MEAN	11.4	117	250	376	600	640	277	163	31.8	15.4	8.92	7.68
MAX	41	694	1330	3920	1720	2710	675	490	48	24	11	13
MIN	6.7	7.0	37	34	155	270	83	50	22	11	7.8	6.1
AC-FT	700	6980	15340	23140	33310	39350	16490	10050	1890	944	548	457

CAL YR 1982	TOTAL	47457.4	MEAN	130	MAX	2400	MIN	4.2	AC-FT	94130
WTR YR 1983	TOTAL	75225.9	MEAN	206	MAX	3920	MIN	6.1	AC-FT	149200

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 downstream from Clear Lake Dam, 1.9 mi downstream from Copsey Creek, and 2.5 mi northeast of Lower Lake.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder and rain gage. Datum of gage is 1,280.34 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow completely regulated by Clear Lake (station 11450000) 500 ft upstream.

AVERAGE DISCHARGE (unadjusted).--39 years, 381 ft³/s, 276,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s Feb. 24, 1958, gage height, 9.40 ft; no flow Nov. 8-20, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,070 ft³/s Mar. 17, gage height, 8.49 ft; minimum daily, 2.6 ft³/s Nov. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	4.7	3.8	1920	3250	4820	4710	3080	319	427	440	298
2	6.2	4.7	3.9	1870	3230	5140	4680	3050	313	418	452	277
3	6.3	4.7	3.9	1850	3200	5060	4510	2990	284	405	451	267
4	6.4	4.6	3.9	1780	3150	5060	4330	2940	264	403	426	285
5	6.4	4.6	3.9	1790	3160	5040	4210	2910	259	432	400	303
6	6.4	4.5	3.9	1740	3280	5050	4120	2840	253	436	385	303
7	6.3	4.5	3.8	1500	3430	5110	4040	2790	280	389	396	303
8	6.3	4.3	3.4	1020	3520	5090	3850	2770	326	376	439	290
9	6.1	4.2	3.4	992	3490	4990	3820	1630	359	379	472	276
10	6.1	4.1	3.3	996	3440	4940	3780	644	347	373	471	274
11	6.2	4.2	3.3	728	3400	4850	3680	297	292	398	451	273
12	6.0	4.2	3.4	220	3580	4860	3710	169	265	466	429	259
13	6.0	4.0	3.4	219	3520	5230	3500	313	291	521	429	232
14	6.0	3.9	3.4	89	3530	5050	3440	493	355	546	439	220
15	6.0	3.8	3.4	5.6	3570	4970	3310	186	390	547	439	110
16	6.0	3.8	3.5	5.6	3580	4980	3220	8.3	392	531	412	14
17	5.9	3.8	4.3	5.4	3520	4830	3160	8.1	381	518	413	15
18	5.8	4.0	4.1	5.7	3670	4870	3110	8.1	392	489	422	15
19	5.9	3.9	4.1	5.6	3590	4790	3030	8.1	392	426	345	14
20	6.2	3.7	4.3	5.6	3550	4720	3000	8.1	363	386	201	18
21	6.0	3.1	824	5.6	3260	4750	2950	34	366	399	185	14
22	5.8	2.9	2100	6.3	3470	4820	2830	47	396	417	281	14
23	5.7	2.8	2200	287	3430	4740	2980	112	431	416	367	14
24	5.5	2.6	2120	2590	3450	4920	2960	172	443	417	343	13
25	5.5	2.6	2120	2450	3590	4860	2970	183	426	416	327	12
26	5.3	2.6	2110	3290	3600	4830	2930	196	418	416	327	11
27	5.0	2.7	2090	3140	3940	4940	3310	269	426	441	338	8.9
28	5.1	3.3	2040	3120	4380	4830	3180	328	434	479	357	8.8
29	5.1	3.2	2000	3500	---	4790	3110	336	435	491	366	8.8
30	5.1	3.9	2000	3490	---	4780	3200	335	436	473	361	8.5
31	4.8	---	1950	3380	---	4770	---	325	---	450	332	---
TOTAL	181.4	113.9	21628.4	42006.4	97780	152480	105630	29479.7	10728	13681	11896	4159.0
MEAN	5.85	3.80	698	1355	3492	4919	3521	951	358	441	384	139
MAX	6.4	4.7	2200	3500	4380	5230	4710	3080	443	547	472	303
MIN	4.8	2.6	3.3	5.4	3150	4720	2830	8.1	253	373	185	8.5
AC-FT	360	226	42900	83320	193900	302400	209500	58470	21280	27140	23600	8250
a	4.03	6.81	5.88	12.79	10.76	11.70	5.06	0.29	.08	0	.17	.63

CAL YR 1982 TOTAL 294777.8 MEAN 810 MAX 3810 MIN 2.3 AC-FT 584700
WTR YR 1983 TOTAL 489763.8 MEAN 1342 MAX 5230 MIN 2.6 AC-FT 971400

a Precipitation, in inches.

11451100 NORTH FORK CACHE CREEK AT HOUGH SPRINGS, NEAR CLEARLAKE OAKS, CA

LOCATION.--Lat 39°09'56", long 122°37'08", in SE 1/4 NW 1/4 sec.10, T.15 N., R.7 W., Lake County, Hydrologic Unit 18020116, on right bank 0.5 mi upstream from Spanish Creek, 0.9 mi upstream from Hough Springs, and 10 mi northeast of Clearlake Oaks.

DRAINAGE AREA.--60.2 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 1,840 ft, from topographic map. Prior to Jan. 13, 1980 at datum 2.0 ft higher. Recording rain gage 4.7 mi northwest of gage. Altitude of gage is 2,050 ft, from topographic map.

REMARKS.--Records good except those for periods of no gage height record, July 28 to Sept. 30, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--12 years, 112 ft³/s, 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,980 ft³/s Jan. 16, 1974, gage height, 11.23 ft present datum from floodmarks, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of maximum flow; no flow for many days in 1972, 1976-77.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	2400	1,810	6.14	Feb. 28	2215	4,850	9.08
Dec. 21	1445	3,270	7.69	Mar. 13	0400	3,870	8.25
Jan. 26	1715	*6,220	10.10	Mar. 27	0445	1,550	5.81
Feb. 18	1400	1,850	6.18				

Minimum daily, 1.5 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	15	510	146	446	3030	709	555	62	19	7.4	6.0
2	1.6	11	210	131	362	2530	592	453	60	21	7.2	5.4
3	1.6	7.6	180	116	301	2000	495	418	55	20	7.0	4.9
4	1.6	7.0	162	103	261	1250	411	362	51	18	6.8	4.7
5	1.7	6.9	138	102	258	925	362	372	48	17	6.7	4.5
6	1.8	6.7	114	102	647	736	304	345	44	16	6.6	4.3
7	1.8	6.3	94	95	1140	844	267	309	42	15	6.5	4.2
8	1.9	5.6	82	94	1280	692	245	271	40	17	6.3	4.1
9	1.9	5.6	73	83	1150	594	211	241	38	19	7.2	4.0
10	1.8	5.6	66	79	958	530	194	230	37	16	6.4	3.9
11	1.8	5.4	60	80	764	465	184	213	38	15	6.0	3.8
12	1.8	5.4	57	78	1030	734	172	191	36	14	5.9	3.8
13	1.8	5.3	60	77	1210	2950	150	161	34	13	5.7	3.8
14	1.8	5.2	53	74	927	1650	137	149	33	12	5.7	3.7
15	1.8	5.0	53	74	762	840	130	133	31	11	5.6	3.7
16	1.8	4.8	268	74	681	661	118	130	30	11	5.5	3.7
17	1.8	80	743	71	575	585	115	112	29	10	5.4	3.6
18	1.8	850	320	218	1340	510	116	111	28	11	5.3	3.6
19	1.9	285	219	311	965	445	115	101	28	11	5.2	3.6
20	2.0	158	428	209	733	445	118	97	28	11	5.2	3.6
21	2.2	113	1710	172	599	474	114	96	28	10	5.1	3.5
22	3.8	268	1770	490	531	680	100	95	26	9.3	5.0	3.5
23	7.6	215	1200	674	485	792	463	91	25	9.5	6.1	3.8
24	5.6	176	678	1830	460	1170	499	86	24	9.1	5.3	4.0
25	17	120	479	886	751	898	479	70	24	8.5	5.1	3.7
26	41	72	366	3180	905	736	371	71	23	8.8	4.9	3.6
27	12	55	307	2530	1520	1140	624	70	22	8.7	4.8	3.5
28	8.7	582	255	1260	2600	798	761	67	20	8.5	4.7	3.4
29	10	635	217	1060	---	711	673	56	20	8.1	4.6	3.6
30	86	940	189	747	---	846	639	57	19	7.8	5.5	7.2
31	26	---	164	566	---	943	---	56	---	7.6	7.4	---
TOTAL	255.4	4657.4	11225	15712	23641	31604	9868	5769	1023	392.9	182.1	122.7
MEAN	8.24	155	362	507	844	1019	329	186	34.1	12.7	5.87	4.09
MAX	86	940	1770	3180	2600	3030	761	555	62	21	7.4	7.2
MIN	1.5	4.8	53	71	258	445	100	56	19	7.6	4.6	3.4
AC-FT	507	9240	22260	31160	46890	62690	19570	11440	2030	779	361	243
a	5.50	12.93	9.27	13.63	17.90	17.54	7.16	0.75	0.53	0.07	0.83	0.74

CAL YR 1982 TOTAL 72724.8 MEAN 200 MAX 3300 MIN 1.2 AC-FT 144200
WTR YR 1983 TOTAL 104452.5 MEAN 286 MAX 3180 MIN 1.5 AC-FT 207200

a Precipitation, in inches.

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 upstream from highway bridge, 0.5 mi south of Yolo, and 7.3 mi downstream from Moore Dam.

DRAINAGE AREA.--1,139 mi².

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 upstream at same datum.

REMARKS.--Records good. Some regulation by Clear Lake (station 11450000) beginning in 1915 and Indian Valley Reservoir beginning in 1974, capacity, 296,000 acre-ft. Diversions for irrigation of about 30,000 acres between Capay and Yolo, from data furnished by Clear Lake Water Co.

AVERAGE DISCHARGE.--81 years, 545 ft³/s, 394,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,400 ft³/s Feb. 25, 1958, gage height, 85.35 ft present datum; maximum stage observed, 88.44 ft present datum, Mar. 10, 1904; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,000 ft³/s Jan. 27, gage height, 83.75 ft; minimum daily, 13 ft³/s Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	73	2640	2430	7060	24700	7530	4490	91	53	32	38
2	46	66	2110	2390	6690	17400	7310	4190	75	51	32	39
3	46	42	2160	2330	6490	19800	7070	3890	87	64	24	38
4	44	35	1570	1980	6280	17800	6730	3810	82	43	32	35
5	42	30	645	1830	5500	17000	6420	3970	67	52	23	35
6	41	27	556	1790	5520	14100	5420	3960	59	57	21	34
7	31	25	483	1740	6410	12000	5110	4940	66	54	27	38
8	22	24	355	1360	8060	11100	4950	5360	69	47	34	36
9	21	22	327	1040	7660	9200	4680	5080	71	50	33	32
10	21	23	311	1000	7490	7890	4640	2140	76	53	33	32
11	21	23	289	985	6980	7410	4490	1480	91	52	33	29
12	27	22	200	741	6890	7370	4370	1070	87	47	33	29
13	56	22	165	399	6220	13900	4280	841	67	43	43	32
14	72	21	148	364	6350	11200	4020	904	62	33	46	30
15	50	20	138	319	6590	11300	3880	1030	66	35	44	27
16	30	19	129	226	6580	9990	3780	692	73	47	41	25
17	26	20	160	196	6320	8690	3720	388	95	50	35	28
18	23	44	454	213	6590	7810	3640	263	84	54	35	27
19	22	473	270	981	5790	7400	3590	248	71	59	30	30
20	20	264	227	552	5970	7070	3530	214	75	56	31	42
21	18	215	392	392	6460	7770	3460	194	72	41	38	48
22	18	238	4500	1090	6340	7930	3370	157	75	31	44	49
23	16	523	8290	2230	5260	8400	3390	140	72	28	39	48
24	13	479	4560	9930	5110	10600	4090	105	76	31	37	51
25	14	297	4110	5690	5550	11000	4110	105	72	35	37	53
26	30	246	3850	6870	7480	9700	3680	114	70	34	37	52
27	38	235	3740	23000	8890	9480	3840	95	64	31	39	58
28	60	241	2490	11500	12900	8210	5730	95	61	32	41	68
29	50	1240	2260	9260	---	7560	4840	94	59	28	39	78
30	45	2330	2480	7980	---	7840	4580	104	56	32	37	82
31	48	---	2510	7500	---	7350	---	108	---	33	37	---
TOTAL	1056	7339	52519	108308	189430	338970	140250	50271	2191	1356	1087	1243
MEAN	34.1	245	1694	3494	6765	10930	4675	1622	73.0	43.7	35.1	41.4
MAX	72	2330	8290	23000	12900	24700	7530	5360	95	64	46	82
MIN	13	19	129	196	5110	7070	3370	94	56	28	21	25
AC-FT	2090	14560	104200	214800	375700	672300	278200	99710	4350	2690	2160	2470
CAL YR 1982	TOTAL	460960	MEAN	1263	MAX	12000	MIN	13	AC-FT	914300		
WTR YR 1983	TOTAL	894020	MEAN	2449	MAX	24700	MIN	13	AC-FT	1773000		

SACRAMENTO RIVER BASIN

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 upstream from Sacramento and Woodland railroad bridge, 6 mi upstream from Sacramento Bypass, 6 mi downstream from Fremont weir, and 7 mi 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 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 higher. Prior to Sept. 30, 1977, a supplementary water-stage recorder 6 mi downstream at different datum recorded low flow.

REMARKS.--Records fair. Flow is from Cache Creek and Knights Landing Ridge Cut plus floodwater passing over Fremont weir. Beginning October 1977, only flows above 1,000 ft³/s are computed.

AVERAGE DISCHARGE.--38 years (water years 1939-77), 3,765 ft³/s, 2,728,000 acre-ft/yr .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 272,000 ft³/s Feb. 8, 1942, gage height, 32.00 ft; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 240,000 ft³/s Mar. 4, gage height, 31.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4480	5480	85800	91400	43700	8550	1440			
2		---	4820	4720	71800	150000	45200	8500	1670			
3		---	5210	4330	61600	203000	45800	8100	1990			
4		---	5080	4020	52600	232000	42800	7100	2140			
5		---	4320	3600	45000	222000	39100	6450	2180			
6		---	3570	3410	36700	195000	36200	6430	2090			
7		---	2960	3280	35800	163000	29900	6430	2010			
8		---	2340	2990	47600	143000	23900	6500	1760			
9		---	1730	2220	67900	123000	18300	6690	1590			
10		---	1330	1750	71900	108000	13100	6510	1520			
11		---	1010	1520	65600	93700	8700	5120	1570			
12		---	---	1310	61100	80000	6740	3500	1710			
13		---	---	---	72900	92400	5950	2480	1910			
14		---	---	---	81400	145000	5490	2040	1910			
15		---	---	---	77700	158000	5230	1630	1690			
16		---	---	---	71300	146000	4970	1300	1550			
17		---	---	---	63000	128000	4770	---	1270			
18		---	---	---	55800	118000	4610	---	1050			
19		---	---	---	51400	88300	4560	---	---			
20		---	---	1350	47000	64600	4490	---	---			
21		---	---	1980	43800	52700	4420	---	---			
22		---	2500	2340	41900	46900	4420	---	---			
23		---	39600	4500	39200	49400	4430	---	---			
24	1260	62900	7640	36500	55700	4500	---	---	---			
25	1760	61600	15600	32700	60700	4700	---	---	---			
26	1800	53600	27800	35600	58900	5200	---	---	---			
27	1590	40400	63000	40600	53700	5550	---	---	---			
28	1340	31600	81400	55900	50800	5640	---	---	---			
29	1440	23500	124000	---	48700	6180	---	---	---			
30	3060	14000	137000	---	46400	7830	---	1120	---			
31	---	7360	113000	---	43100	---	---	1230	---			
TOTAL		---	---	---	1550100	3309400	446380	---	---			
MEAN		---	---	---	55360	106800	14880	---	---			
MAX		---	---	---	85800	232000	45800	---	---			
MIN		---	---	---	32700	43100	4420	---	---			
AC-FT		---	---	---	3075000	6564000	885400	---	---			

11453900 LAKE BERRYESSA NEAR WINTERS, CA

LOCATION.--Lat 38°30'48", long 122°06'13", in SE 1/4 NW 1/4 sec.29, T.8 N., R.2 W., Napa County, Hydrologic Unit 18020117, near center of Monticello Dam on Putah Creek, 7.4 mi west of Winters.

DRAINAGE AREA.--566 mi².

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 between elevations 253.25 ft invert of outlet valves, and 440 ft crest of glory-hole spillway. Dead storage, 10,340 acre-ft. Water is released down Putah Creek and is diverted into Putah South diversion canal for irrigation of about 46,000 acres in the lower Sacramento Valley. Total diverted during current year was 162,700 acre-ft. 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, 1,733,500 acre-ft Mar. 2, 1983, elevation, 446.67 ft; minimum since irrigation pool first filled, 738,600 acre-ft Nov. 20, 1977, elevation, 388.04 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,733,500 acre-ft Mar. 2, elevation, 446.67 ft; minimum, 1,421,500 acre-ft Oct. 24, elevation, 430.40 ft.

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

380	632,400
390	765,700
400	911,200
410	1,068,100
420	1,236,000
430	1,414,200
450	1,799,900

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1437300	1425000	1474100	1556300	1660000	1727300	1645000	1632300	1605200	1568300	1524900	1480000
2	1436800	1425000	1475600	1556600	1665400	1733500	1643400	1631300	1604600	1566900	1523600	1479100
3	1436200	1424800	1476300	1557000	1648900	1725300	1641200	1630200	1603800	1565800	1522500	1478200
4	1435500	1424600	1477600	1557400	1644400	1712000	1639100	1629000	1603100	1564600	1520200	1477000
5	1434900	1424300	1478200	1557800	1641100	1699900	1637400	1629000	1602300	1563300	1519100	1476100
6	1434200	1424100	1479100	1558200	1644600	1690300	1635400	1628200	1601500	1562000	1517600	1475000
7	1433100	1423700	1479500	1558700	1654700	1685700	1634300	1627100	1600200	1560500	1516300	1473500
8	1431600	1423900	1479500	1559100	1661800	1679200	1633100	1625100	1598800	1558700	1514900	1471800
9	1430700	1423700	1479500	1559300	1661200	1672200	1631700	1623800	1597700	1557400	1513600	1471100
10	1430000	1423500	1479500	1559300	1659000	1666100	1630200	1622000	1596500	1556100	1511700	1469600
11	1429200	1423400	1479800	1559500	1656300	1660000	1629000	1621000	1595000	1554900	1510400	1468700
12	1428700	1423000	1480000	1559900	1661600	1663500	1628000	1620100	1593800	1553800	1508900	1467700
13	1427900	1422600	1480200	1560300	1661000	1695000	1627300	1619300	1592800	1552500	1507400	1466400
14	1427200	1422400	1480600	1560600	1657100	1688900	1625900	1617800	1591700	1550700	1505700	1465900
15	1426700	1422400	1480600	1561800	1653700	1681400	1625100	1617400	1590300	1549000	1504400	1464400
16	1425900	1422300	1482300	1562400	1650000	1676100	1623600	1616000	1588800	1547500	1503400	1462900
17	1425400	1422400	1487900	1562600	1646500	1676500	1621800	1615000	1587700	1546000	1501600	1461800
18	1424100	1431400	1490100	1568700	1649600	1672700	1621200	1614300	1586500	1544600	1499500	1460500
19	1423400	1433100	1491100	1570600	1646900	1666500	1620800	1613300	1585000	1543100	1498600	1459200
20	1423000	1433500	1495400	1571900	1644000	1662700	1620100	1612700	1583800	1541600	1497100	1458100
21	1422600	1434000	1512700	1573700	1641100	1658600	1619300	1611900	1582800	1540700	1495800	1456800
22	1421900	1437200	1538000	1585300	1637900	1658800	1618900	1611400	1581500	1539000	1494400	1455700
23	1421700	1439400	1545000	1600000	1636600	1660200	1619700	1610800	1580200	1537200	1492800	1454700
24	1421500	1440500	1547300	1627600	1636200	1664100	1623600	1610400	1579000	1535700	1491100	1453600
25	1423200	1440900	1549600	1629800	1652000	1661200	1624700	1610200	1577300	1534400	1489400	1452500
26	1423900	1440900	1550900	1678600	1656300	1657500	1624300	1609800	1575400	1533100	1488200	1451400
27	1423900	1441600	1552500	1689900	1669000	1658800	1627400	1609600	1574200	1531600	1486900	1450600
28	1423900	1449700	1553400	1683700	1707000	1655900	1630000	1609000	1573100	1530200	1485600	1449500
29	1425000	1460700	1554200	1680000	---	1652400	1631300	1607900	1571400	1529300	1484300	1448600
30	1424800	1472000	1554900	1673700	---	1649100	1631700	1606900	1569600	1527800	1482800	1448400
31	1425000	---	1555900	1666500	---	1647100	---	1606000	---	1526400	1481700	---
MAX	1437300	1472000	1555900	1689900	1707000	1733500	1645000	1632300	1605200	1568300	1524900	1480000
MIN	1421500	1422300	1474100	1556300	1636200	1647100	1618900	1606000	1569600	1526400	1481700	1448400
a	430.59	433.13	437.58	443.30	445.36	442.31	441.52	440.19	438.30	436.03	433.65	431.86
b	-13500	+47000	+83900	+110600	+40500	-59900	-15400	-25700	-36400	-43200	-44700	-33300
c	4243	1351	1426	1079	1496	1950	5015	8990	11064	11453	10156	7549

CAL YR 1982 b +188800
WTR YR 1983 b +9900

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

SACRAMENTO RIVER BASIN

11454000 PUTAH CREEK NEAR WINTERS, CA

LOCATION.--Lat 38°30'55", long 122°04'51", in NE 1/4 NE 1/4 sec.28, T.8 N., R.2 W., Yolo County, Hydrologic Unit 18020109, on left bank 1 mi downstream from Cold Canyon, 1.3 mi downstream from Monticello Dam, and 6 mi west of Winters.

DRAINAGE AREA.--574 mi².

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 National Geodetic Vertical Datum of 1929 (river-profile survey). June 28, 1930, to Feb. 29, 1940, at datum about 1 ft 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).--53 years, 548 ft³/s, 397,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,000 ft³/s Feb. 27, 1940, gage height, 30.5 ft present datum, from rating curve extended above 30,000 ft³/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, 18,700 ft³/s Mar. 2, 1983, gage height, 19.55 ft; minimum daily, 6.1 ft³/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, 18,700 ft³/s Mar. 2, gage height, 19.55 ft; minimum daily, 8.5 ft³/s Jan. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	218	61	53	74	5660	15700	3370	1890	555	663	549	499		
2	201	71	69	74	4950	17700	2870	1850	594	633	560	500		
3	209	81	68	75	4390	17500	2670	1650	676	589	571	485		
4	219	71	68	69	3910	14500	2420	1490	622	564	606	476		
5	230	72	68	29	3530	11700	2160	1440	605	563	654	476		
6	228	81	67	8.5	3510	9760	1970	1530	615	554	619	464		
7	292	81	67	31	4210	8700	1810	1520	694	576	561	499		
8	300	62	67	65	5560	7890	1740	1550	714	591	572	525		
9	280	46	67	65	5620	7040	1690	1430	693	576	625	498		
10	281	46	67	41	5410	6180	1570	1330	687	537	631	476		
11	281	56	66	9.4	5010	5430	1480	1200	649	526	632	451		
12	268	64	66	21	5220	5030	1380	1110	621	589	637	434		
13	255	64	46	40	5550	8520	1330	1100	621	664	640	450		
14	269	64	23	40	5240	9420	1280	1060	617	693	615	479		
15	281	65	23	68	4820	8250	1250	1010	633	751	615	490		
16	268	65	45	69	4460	7280	1340	955	626	729	576	488		
17	226	45	68	41	4070	7070	1260	906	624	667	607	500		
18	201	37	67	33	4120	6970	1180	865	615	621	651	475		
19	201	36	65	52	4110	6300	1150	818	584	612	623	442		
20	216	60	66	49	3840	5670	1120	752	563	613	603	442		
21	209	73	82	39	3560	5320	1010	753	604	626	553	442		
22	197	59	125	65	3270	5090	968	714	646	631	546	432		
23	197	45	69	48	3040	5040	945	636	669	631	583	426		
24	184	68	66	1350	2320	5600	941	472	669	603	603	419		
25	136	68	62	2430	3200	5570	1150	409	640	584	608	398		
26	52	67	61	3920	4690	5180	1330	404	613	621	579	389		
27	19	68	41	9210	5580	5120	1370	460	661	616	549	376		
28	41	67	25	8730	8540	4980	1680	591	666	583	510	360		
29	61	46	54	8040	---	4620	1780	571	672	572	490	341		
30	62	65	74	7350	---	4310	1850	541	679	564	511	248		
31	61	---	75	6430	---	4090	---	542	---	534	510	---		
TOTAL	6143	1854	1930	48565.9	127390	241530	48064	31549	19127	18876	18189	13380		
MEAN	198	61.8	62.3	1567	4550	7791	1602	1018	638	609	587	446		
MAX	300	81	125	9210	8540	17700	3370	1890	714	751	654	525		
MIN	19	36	23	8.5	2320	4090	941	404	555	526	490	248		
AC-FT	12180	3680	3830	96330	252700	479100	95330	62580	37940	37440	36080	26540		
CAL YR 1982	TOTAL	282974	MEAN	775	MAX	9510	MIN	19	AC-FT	561300	MEAN a	1125	AC-FT a	814700
WTR YR 1983	TOTAL	576597.9	MEAN	1580	MAX	17700	MIN	8.5	AC-FT	1144000	MEAN a	1685	AC-FT a	1219700

a Adjusted for change in contents and evaporation from Lake Berryessa.

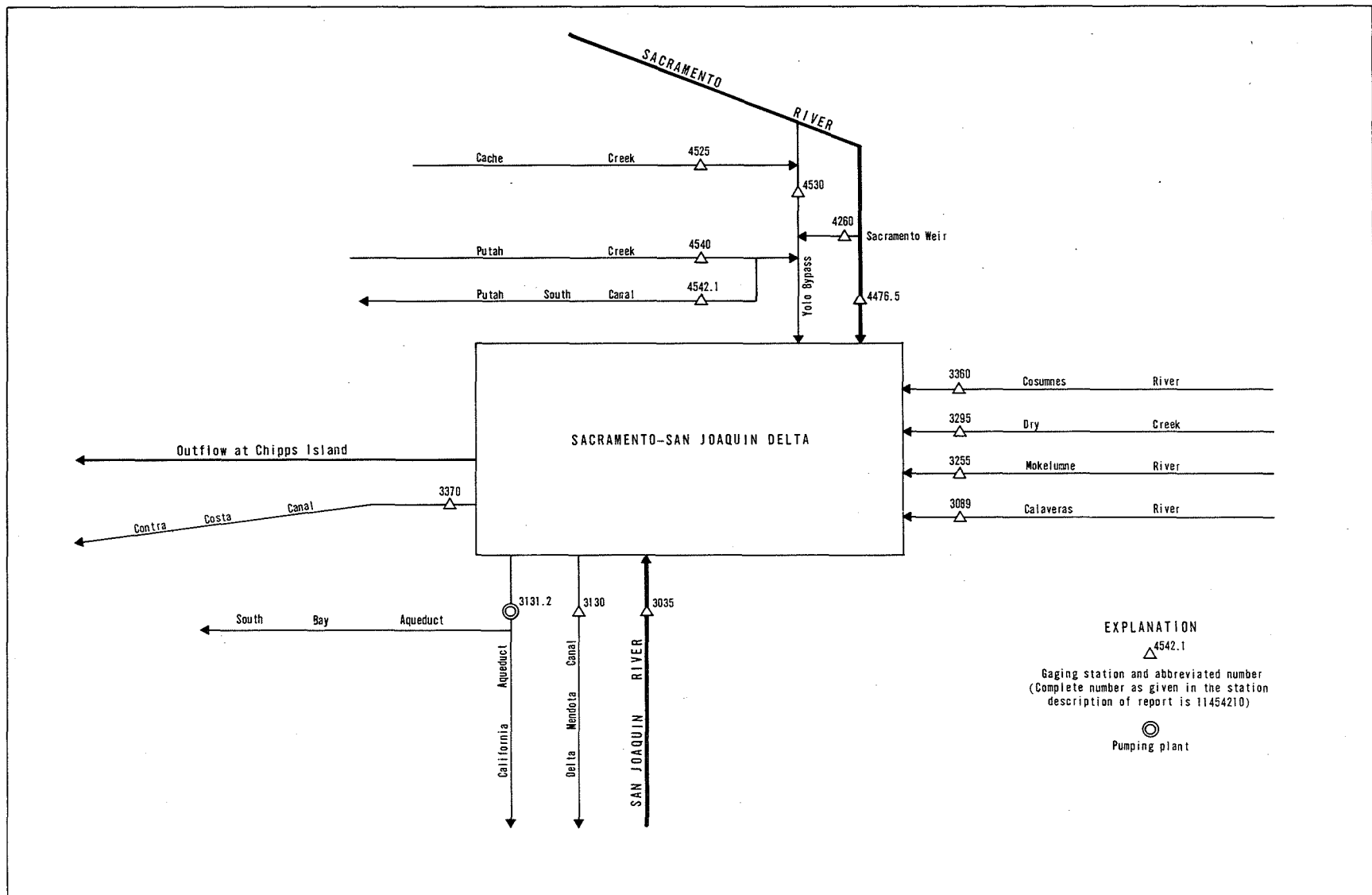


FIGURE 12. — Schematic diagram showing principal inflows and diversions, Sacramento-San Joaquin.

SACRAMENTO-SAN JOAQUIN DELTA, INFLOWS AND DIVERSIONS

LOCATION.--See schematic diagram of inflows and diversions, Sacramento-San Joaquin Delta.

DRAINAGE AREA.--Total drainage area of inflow streams tabulated below is 39,511 mi².

PERIOD OF RECORD.--October 1971 to current year. Data for periods prior to October 1971, can be obtained from published records for stations tabulated below.

COOPERATION.--Records for Delta-Mendota, Contra Costa, and Putah South Canals furnished by Bureau of Reclamation, California Aqueduct by California Department of Water Resources.

SUMMARY OF PRINCIPAL INFLOWS AND DIVERSIONS IN THE
SACRAMENTO-SAN JOAQUIN DELTA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Inflows, in thousands of acre-feet												
Month												
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water Year
11303500 SAN JOAQUIN RIVER NEAR VERNALIS												
502.9	415.0	1014	1172	1755	2462	2169	1954	1552	1182	555.2	673.0	15410
11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM												
5.59	47.32	108.4	75.16	80.73	175.3	3.30	6.14	12.70	14.49	15.00	9.99	554.1
11325500 MOKELUMNE RIVER AT WOODBRIDGE												
64.45	99.23	126.2	103.6	149.8	231.4	216.6	146.3	162.8	145.9	60.38	63.51	1570
11329500 DRY CREEK NEAR GALT												
.40	22.36	76.01	92.82	77.17	138.8	35.86	26.52	4.57	2.61	1.65	2.07	480.8
11335000 COSUMNES RIVER AT MICHIGAN BAR												
12.44	46.37	139.4	148.5	188.5	323.1	129.8	136.4	63.50	21.26	7.01	4.88	1221
11426000 SACRAMENTO WEIR SPILL												
0	0	10.87	12.02	79.67	1096	118.7	4.86	0	0	0	0	1322
11447650 SACRAMENTO RIVER AT FREEPORT												
1182	1876	3548	2921	4390	4814	3601	3830	2879	1906	1540	1465	33950
11453000 YOLO BYPASS NEAR WOODLAND ¹												
0	12.25	373.9	618.2	1550	3309	446.4	89.68	31.05	0	0	0	6430
11454000 PUTAH CREEK NEAR WINTERS												
12.18	3.68	3.83	96.33	252.7	479.1	95.33	62.58	37.94	37.44	36.08	26.54	1144
TOTAL												
1780	2522	5401	5240	8524	13030	6816	6257	4744	3310	2216	2245	62080

Diversions, in thousands of acre-feet												
Month												
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water Year
11313000 DELTA-MENDOTA CANAL												
137.7	198.5	193.0	237.6	219.2	242.0	217.9	179.7	177.3	244.2	262.4	199.1	2509
11313120 CALIFORNIA AQUEDUCT (DELTA PUMPING PLANT)												
185.1	154.4	322.6	376.7	348.2	82.72	7.27	23.78	108.2	70.42	167.7	39.98	1887
11337000 COSTRA COSTA CANAL												
5.10	4.09	3.78	2.43	5.05	9.22	3.54	5.86	10.16	10.54	10.69	9.15	79.61
11454210 PUTAH SOUTH CANAL												
11.39	1.86	1.97	1.75	1.56	1.56	7.03	14.69	33.41	32.17	31.50	23.79	162.7
TOTAL												
339.3	358.8	521.4	618.5	574.0	335.5	235.7	224.0	329.1	357.3	472.3	272.0	4638

1. Flow not computed below 1,000 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 1983

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 upstream from mouth, 0.5 mi southwest of Delta, and 25 mi north of Redding.	17.3	1975-83	1-24-83 3-3-83	500 1480

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN

UNNAMED CREEK BELOW SHELTER HAVEN COURT, CA (LAT 40 19 53 LONG 122 24 56)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR , 1983											
26...	1100	.79	84	6.8	12.5	9.8	26	5.1	3.2	4.5	1.1

DATE	ALKA- LITY FIELD (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)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
APR , 1983										
26...	29	6.3	2.4	<.10	19	53	60	.20	<.02	.20

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 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, 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)
APR , 1983										
26...	.20	.40	.18	.42	.60	.04	.02	.17	<10	160

SOUTH FORK COTTONWOOD CREEK AT FORD, CA (LAT 40 19 55 LONG 122 25 22)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
17...	1215	286	308	8.2	19.5	8.6	120	31	9.7	10	.90
OCT 07...	1000	7.6	355	8.3	12.5	11.5	150	39	13	17	1.1
APR , 1983											
26...	1000	660	297	8.1	9.5	10.8	140	34	13	12	.80

DATE	ALKA- LITY FIELD (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)	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)
MAY , 1982										
17...	110	20	6.9	.10	13	153	160	<.02	<.10	<.10
OCT 07...	113	21	35	<.10	11	214	210	<.02	<.10	<.10
APR , 1983										
26...	120	29	6.4	<.10	13	175	180	<.02	<.10	<.10

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

SOUTH FORK COTTONWOOD CREEK AT FORD, CA. (LAT 40 19 55 LONG 122 25 22)-Continued

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
17...	<.06	.08	.55	.63	.26	.02	.02	120	10	1.4
OCT										
07...	.07	.08	.32	.40	<.01	<.01	<.01	100	<3	.50
APR , 1983										
26...	.36	.18	.02	.20	.05	.02	.02	50	21	2.4

SOUTH FORK COTTONWOOD CREEK ABOVE PINE CREEK, CA (LAT 40 20 16 LONG 122 22 42)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
19...	0845	264	242	7.8	14.5	9.3	110	30	9.7	9.9	.90
OCT											
07...	1100	7.4	350	8.4	15.0	11.8	140	36	13	17	1.1
APR , 1983											
26...	1215	685	383	8.1	12.0	10.0	140	35	13	12	.90

DATE	ALKA- LINITY FIELD (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 CONSTITUENTS, DIS- SOLVED (MG/L)	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)
MAY , 1982										
19...	100	19	7.1	.20	13	105	150	<.02	<.10	<.10
OCT										
07...	111	21	34	.10	12	204	200	<.02	<.10	<.10
APR , 1983										
26...	120	30	6.5	.10	14	191	180	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
19...	<.06	.07	.43	.50	.03	.02	.02	50	<9	1.3
OCT										
07...	.06	.07	.23	.30	<.01	<.01	<.01	100	<3	1.7
APR , 1983										
26...	.37	.28	.32	.60	.08	.03	.02	50	11	2.6

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN --Continued

PINE CREEK AT BOWMAN ROAD (LAT 40 20 20 LONG 122 22 20)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR , 1983											
25...	1500	3.1	72	7.1	19.0	9.6	26	4.9	3.3	3.1	1.0

DATE	ALKA- LINITY FIELD (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)	NITRO- GEN, NITRATE, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
APR , 1983										
25...	25	2.8	1.4	<.10	15	43	47	.12	<.02	.10

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 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, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (MG/L AS B)	IRON, DIS- SOLVED (MG/L AS FE)
APR , 1983										
25...	.12	.44	.17	.63	.80	.07	.04	.03	<10	30

SOUTH FORK COTTONWOOD CREEK NEAR BOWMAN STORE (LAT 40 21 03 LONG 122 21 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
19...	1020	263	294	8.1	15.0	9.3	110	30	9.7	9.9	1.1
OCT											
07...	1215	7.0	350	8.0	16.5	10.6	140	36	13	16	1.1
APR , 1983											
26...	1320	689	393	8.1	12.0	10.5	140	35	13	12	.80

DATE	ALKA- LINITY FIELD (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)	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)
MAY , 1982										
19...	110	18	7.2	.20	13	137	160	<.02	<.10	<.10
OCT										
07...	107	22	32	.10	13	201	200	<.02	<.10	<.10
APR , 1983										
26...	120	31	6.4	.10	14	248	180	<.02	<.10	<.10

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

SOUTH FORK COTTONWOOD CREEK NEAR BOWMAN STORE (LAT 40 21 03 LONG 122 21 10)--Continued

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
19...	<.06	.06	.34	.40	<.01	.01	.02	50	<9	1.3
OCT										
07...	<.06	<.06	--	.40	<.01	<.01	<.01	100	<3	.80
APR , 1983										
26...	.38	.31	.19	.50	.06	.02	.02	40	<3	--

BOWMAN STORE CREEK, CA (LAT 40 21 08 LONG 122 20 59)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR , 1983											
25...	1415	.26	81	7.3	20.5	8.8	25	5.6	2.7	4.4	1.4

DATE	ALKA- LITY FIELD (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)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
APR , 1983										
25...	36	6.0	3.6	<.10	12	48	58	.18	.02	.20

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 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, 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)
APR , 1983										
25...	.18	.46	.19	.71	.90	.04	.03	.03	<10	110

LITTLE DRY CREEK AT PETERSON RANCH, CA (LAT 40 22 03 LONG 122 24 29)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
APR , 1983										
25...	1330	13	142	7.2	18.0	13.4	44	8.5	5.6	5.0

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SACRAMENTO RIVER BASIN--Continued

LITTLE DRY CREEK AT PETERSON RANCH, CA (LAT 40 22 03 LONG 122 24 29) -- Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (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 SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
APR , 1983										
25...	1.1	41	3.4	5.8	<.10	20	71	75	<.02	<.10

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHODIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHODIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (MG/L AS FE)
APR , 1983										
25...	<.10	.37	.19	.51	.70	.06	.03	.04	<10	54

HOOKER CREEK AT DRAPER ROAD (LAT 40 22 06 LONG 122 18 49)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1982											
07...	1530	2.0	107	7.9	19.5	11.7	40	8.6	4.6	5.5	1.3
APR , 1983											
25...	1245	34	77	6.8	15.5	9.7	26	5.4	3.1	3.6	1.3

DATE	ALKA- LITY FIELD (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 SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (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)
OCT , 1982											
07...	41	6.0	1.8	<.10	18	73	71	--	<.02	<.10	<.10
APR , 1983											
25...	28	4.2	2.6	<.10	15	47	53	.30	<.02	.30	.30

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHODIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHODIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT , 1982										
07...	.10	.07	.63	.70	.03	.01	<.01	50	16	2.2
APR , 1983										
25...	.39	.31	1.6	1.9	.06	.02	.02	40	120	--

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

UNNAMED TRIBUTARY BELOW SOUTH FORK CONFLUENCE, LEFT BANK (LAT 40 22 25 LONG 122 19 39)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
20...	1130	.39	111	6.7	19.5	7.3	40	8.6	4.5	6.0	1.3
OCT											
05...	1315	.22	112	6.8	19.5	7.1	44	9.4	4.9	6.6	1.0
APR , 1983											
22...	0915	25	86	7.4	12.0	--	34	6.7	4.3	3.8	1.1

DATE	ALKA- LINITY FIELD (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)	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)
MAY , 1982										
20...	58	6.0	1.8	.10	19	70	83	<.02	<.10	<.10
OCT										
05...	56	5.0	1.8	<.10	22	84	85	<.02	<.10	<.10
APR , 1983										
22...	33	7.2	1.5	<.10	15	50	61	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
20...	<.06	.08	.83	.91	.08	.04	.02	20	630	3.2
OCT										
05...	.06	.06	.54	.60	.04	<.01	.01	30	800	2.7
APR , 1983										
22...	.06	.06	.64	.70	.51	.45	.46	<10	140	1.6

UNNAMED CREEK AT HOLIDAY RANCH, CA (LAT 40 22 26 LONG 122 17 05)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
10...	1630	4.9	111	8.1	21.0	10.2	40	8.9	4.4	5.6	2.7
OCT											
08...	1430	1.5	115	6.9	16.0	9.3	49	9.9	5.9	6.7	2.4
APR , 1983											
19...	1445	.29	156	6.9	18.0	12.5	63	12	8.1	8.8	1.1

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SACRAMENTO RIVER BASIN--Continued

UNNAMED CREEK AT HOLIDAY RANCH, CA (LAT 40 22 26 LONG 122 17 05)-- Continued

DATE	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 SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (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)
MAY , 1982										
10...	5.0	2.5	<.10	16	80	75	.16	<.02	.24	.16
OCT										
08...	8.0	2.5	<.10	19	83	89	--	<.02	<.10	<.10
APR , 1983										
19...	8.0	3.4	<.10	13	82	98	--	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
10...	.12	.14	.73	.87	.03	.03	.01	30	74	3.5
OCT										
08...	.09	.06	.74	.80	.08	.04	.04	30	83	2.7
APR , 1983										
19...	.11	.08	.32	.40	.09	.03	.01	40	85	2.5

COTTONWOOD CREEK AT JOANNE ROAD, CA (LAT 40 22 27 LONG 122 23 09)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
12...	1315	423	223	8.2	18.0	9.6	95	20	11	5.5	.90
OCT											
06...	1200	28	285	8.3	16.5	10.3	130	27	16	11	1.3
APR , 1983											
20...	1315	1250	236	8.1	13.5	10.5	90	20	9.7	6.5	1.0

DATE	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	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)
MAY , 1982										
12...	98	7.0	3.0	<.10	20	142	130	<.02	<.10	<.10
OCT										
06...	125	9.0	12	.10	18	164	170	<.02	<.10	<.10
APR , 1983										
20...	79	20	3.1	<.10	18	120	130	.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
12...	<.06	.07	.63	.70	.03	.02	.02	30	13	1.0
OCT										
06...	.07	.08	.52	.60	.01	<.01	<.01	20	4	1.9
APR , 1983										
20...	.07	<.06	--	.30	.12	.03	.06	10	16	2.2

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

COTTONWOOD CREEK BELOW SOUTH FORK COTTONWOOD CREEK, CA (LAT 40 22 29 LONG 122 19 18)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
14...	0915	810	231	8.0	18.5	9.6	96	22	10	7.3	1.4
OCT											
06...	1330	34	273	7.8	17.0	10.2	130	27	15	11	1.3
APR , 1983											
22...	0900	1900	180	8.0	12.5	10.2	82	18	9.0	5.4	.90

DATE	ALKA- LINITY FIELD (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)	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)
MAY , 1982										
14...	97	11	4.3	<.10	18	137	130	<.02	<.10	<.10
OCT										
06...	121	10	11	.10	19	169	170	<.02	<.10	<.10
APR , 1983										
22...	77	13	2.3	<.10	19	107	110	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, ORTHOR, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOR, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
14...	<.06	.08	.62	.70	.16	.14	.14	30	13	1.1
OCT										
06...	.08	.08	.22	.30	.01	<.01	<.01	40	10	1.3
APR , 1983										
22...	<.06	<.06	--	.60	.08	.02	.05	10	64	1.1

COTTONWOOD CREEK AT STEELE RANCH, CA (LAT 40 22 32 LONG 122 25 44)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
13...	1030	409	214	8.1	16.0	9.8	95	20	11	5.7	<.10
OCT											
06...	1000	27	298	8.0	14.5	9.2	140	28	16	11	1.1
APR , 1983											
20...	1100	1260	240	7.7	11.5	10.6	94	21	10	6.7	1.0

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

COTTONWOOD CREEK AT STEELE RANCH, CA (LAT 40 22 32 Long 122 25 44) --Continued

DATE	ALKA- LINITY FIELD (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 CONSTITUENTS, DIS- SOLVED (MG/L)	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)
MAY , 1982										
13...	100	7.0	3.0	<.10	20	138	130	<.02	<.10	<.10
OCT										
06...	130	9.0	12	.10	17	162	170	<.02	<.10	<.10
APR , 1983										
20...	78	22	4.0	<.10	18	125	130	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
13...	.13	.17	.53	.70	.03	.02	.02	30	<9	.40
OCT										
06...	.07	.06	.24	.30	.01	<.01	<.01	20	<3	1.1
APR , 1983										
20...	.06	<.06	--	.40	.12	.02	.05	10	22	2.4

UNNAMED CREEK AT MOORE RANCH, CA (LAT 40 22 34 LONG 122 21 55)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
APR , 1983										
19...	1415	.96	98	7.3	16.5	9.6	33	7.1	3.8	5.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	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)
APR , 1983										
19...	1.1	3.8	1.7	<.10	16	50	67	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR , 1983										
19...	.06	.06	.44	.50	<.01	.01	.01	<10	40	5.5

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

ANTELOPE CREEK AT MEADOWOAK ROAD, CA (LAT 40 22 39 LONG 122 26 14)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR , 1983											
19...	1245	1.3	80	7.9	19.0	10.6	32	7.3	3.3	4.1	1.1

DATE	ALKA- LINITY FIELD (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)	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)
APR , 1983										
19...	40	2.5	1.5	<.10	19	51	63	.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR , 1983										
19...	.06	.06	.24	.30	.06	.01	.01	<10	31	1.6

UNNAMED TRIBUTARY ABOVE INTERSTATE 5, CREEK INFLOW TO COTTONWOOD CREEK, LEFT BANK (LAT 40 22 40 LONG 122 17 04)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
10...	1500	1.8	125	7.2	20.5	10.2	47	8.9	6.0	6.8	1.7
OCT											
06...	1445	10	97	7.6	12.5	10.6	40	8.9	4.2	4.4	1.1
APR , 1983											
21...	1550	11	75	7.0	14.5	10.6	34	6.8	4.2	3.4	.90

DATE	ALKA- LINITY FIELD (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)	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)
MAY , 1982											
10...	53	5.0	2.6	<.10	16	86	79	.12	.03	.18	.12
OCT											
06...	45	<5.0	1.4	<.10	18	63	--	--	<.02	<.10	<.10
APR , 1983											
21...	34	7.1	1.3	<.10	16	56	61	--	<.02	<.10	<.10

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

UNNAMED TRIBUTARY ABOVE INTERSTATE 5, CREEK INFLOW TO COTTONWOOD CREEK, LEFT BANK (LAT 40 22 40 LONG 122 17 04)--Continued

DATE	NITRO- GEN, AMMONIA TOTAL (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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
10...	.14	.16	1.3	1.5	.08	.05	.03	40	46	3.6
OCT										
06...	.06	<.06	--	.60	.02	<.01	<.01	30	44	1.6
APR , 1983										
21...	<.06	<.06	--	.40	.08	.03	.05	<10	360	1.8

COTTONWOOD CREEK ABOVE POWERLINES (LAT 40 22 41 LONG 122 15 51)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
11...	1015	863	288	8.0	16.0	9.6	99	23	10	7.4	1.1
OCT											
08...	1000	138	170	7.3	--	8.6	76	16	8.8	7.1	1.3
APR , 1983											
21...	0915	1930	225	7.3	13.5	10.2	110	25	11	8.3	1.0

DATE	ALKA- LINITY FIELD (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 CONSTITUENTS, DIS- SOLVED (MG/L)	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)
MAY , 1982										
11...	130	12	4.2	<.10	17	141	150	<.02	<.10	<.10
OCT										
08...	92	7.0	6.3	<.10	18	112	120	<.02	<.10	<.10
APR , 1983										
21...	80	20	15	<.10	17	144	150	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
11...	.10	.19	.43	.62	.01	.02	.02	40	<9	1.1
OCT										
08...	.08	.07	.33	.40	.02	<.01	<.01	30	25	1.7
APR , 1983										
21...	.08	.08	1.5	1.6	.09	.02	.05	30	22	1.1

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

DITCH NUMBER 2 AT CLARKS RANCH, CA (LAT 40 22 42 LONG 122 17 49)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
20...	0845	.03	120	7.3	15.0	9.5	55	11	6.7	7.0	2.0
OCT											
05...	1430	3.3	94	7.4	--	8.5	41	8.3	4.9	5.0	4.4
APR , 1983											
22...	1040	.98	158	7.8	13.5	10.6	54	11	6.5	7.4	1.6

DATE	ALKA- LINITY FIELD (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)	NITRO- GEN, NITRATE DIS- SOLVED (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)
MAY , 1982											
20...	62	6.0	3.4	.10	10	96	84	--	<.02	<.10	<.10
OCT											
05...	41	8.0	2.6	<.10	19	83	77	.12	.02	.10	.12
APR , 1983											
22...	53	11	4.2	<.10	18	87	92	.85	<.02	.90	.85

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
20...	.09	.06	.67	.73	.08	.05	.03	20	180	4.9
OCT										
05...	.16	.11	.69	.80	.19	.15	.01	30	12	7.8
APR , 1983										
22...	.10	<.06	--	.90	.10	.04	.05	20	150	2.2

COTTONWOOD CREEK ABOVE MOUTH, COTTONWOOD CREEK (LAT 40 22 49 LONG 122 12 15)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
11...	1530	864	236	--	20.5	9.3	110	24	11	8.1	1.0
OCT											
06...	1330	190	273	7.8	17.0	10.2	130	27	15	11	1.3
APR , 1983											
21...	1220	1850	212	8.0	16.0	10.2	110	25	11	8.2	1.1

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SACRAMENTO RIVER BASIN--Continued

COTTONWOOD CREEK ABOVE MOUTH, COTTONWOOD CREEK (40 22 49 LONG 122 12 15)--Continued

DATE	ALKA- LINITY FIELD (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)	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)
MAY , 1982										
11...	102	11	4.3	<.10	18	148	140	<.02	<.10	<.10
OCT										
06...	147	10	11	.10	19	169	180	<.02	<.10	<.10
APR , 1983										
21...	100	20	3.9	<.10	17	138	150	<.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
11...	.12	.10	.32	.42	.01	.02	.02	30	<9	1.1
OCT										
06...	.08	.08	.22	.30	.01	<.01	<.01	40	10	1.3
APR , 1983										
21...	<.06	<.06	--	.50	.08	.03	.04	30	37	1.4

DITCH NUMBER 1 AT CLARKS RANCH, CA (LAT 40 22 49 LONG 122 17 43)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
20...	0830	3.3	127	7.2	14.5	8.3	52	11	5.9	5.8	2.2
OCT											
05...	1500	.39	81	7.5	14.5	9.7	40	8.5	4.5	4.8	1.7
APR , 1983											
22...	1030	.11	125	7.9	12.0	11.8	51	10	6.3	5.8	.80

DATE	ALKA- LINITY FIELD (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)	NITRO- GEN, NITRATE DIS- SOLVED (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)
MAY , 1982											
20...	56	7.0	2.5	.10	18	48	86	.47	<.02	.48	.47
OCT											
05...	44	6.0	1.6	<.10	18	73	72	--	<.02	<.10	<.10
APR , 1983											
22...	50	7.7	2.0	<.10	17	74	80	.88	<.02	.90	.88

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SACRAMENTO RIVER BASIN--Continued

DITCH NUMBER 1 AT CLARKS RANCH, CA (LAT 40 22 49 LONG 122 17 43)--Continued

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
20...	<.06	.09	.46	.55	.12	.05	.04	30	82	5.3
OCT										
05...	.07	<.06	--	.40	.05	.03	.02	30	27	--
APR , 1983										
22...	.09	<.06	--	.60	.08	.02	.04	20	30	1.1

DRY CREEK NEAR OLINDA, CA (LAT 40 22 49 LONG 122 25 16)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
12...	1310	2.8	70	7.3	21.5	8.9	26	5.8	2.8	4.8	.80
APR , 1983											
19...	1330	12	74	7.3	17.0	9.8	27	5.9	2.9	4.1	.80

DATE	ALKA- LINITY FIELD (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 CONSTITUENTS, DIS- SOLVED (MG/L)	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)
MAY , 1982										
12...	35	<5.0	1.1	<.10	18	58	--	<.02	<.10	<.10
APR , 1983										
19...	40	2.8	1.1	<.10	16	43	58	--	--	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
12...	<.06	.07	.44	.51	<.01	.02	.02	20	16	1.0
APR , 1983										
19...	--	.07	.13	.20	--	--	.02	10	56	1.1

PATTERSON CREEK ON PRICE RANCH, CA (LAT 40 22 59 LONG 122 13 02)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
10...	1300	.07	110	7.1	22.5	7.4	41	8.1	5.0	5.9	4.9
OCT											
08...	1145	1.9	97	7.3	17.0	9.5	35	7.1	4.3	5.4	2.7
APR , 1983											
25...	1150	6.5	103	6.8	11.5	10.5	39	7.7	4.9	4.1	1.4

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SACRAMENTO RIVER BASIN--Continued

PATTERSON CREEK ON PRICE RANCH, CA (40 22 59 LONG 122 13 02)--Continued

DATE	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	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)	NITRO- GEN, NITRATE DIS- SOLVED (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)
MAY , 1982											
10...	50	8.0	2.4	<.10	20	103	85	.15	<.02	<.10	.15
OCT											
08...	41	9.0	2.0	<.10	20	77	75	--	<.02	<.10	<.10
APR , 1983											
25...	36	9.9	1.4	<.10	16	62	68	.22	.02	.20	.22

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
10...	.23	.21	1.4	1.6	.27	.18	.17	30	92	12
OCT										
08...	.09	<.06	--	.70	.06	.04	.04	30	85	5.7
APR , 1983										
25...	.58	.35	.55	.90	.08	.05	.04	20	140	--

DUTCH GULCH NEAR OLINDA, CA (LAT 40 23 06 LONG 122 29 22)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1982											
12...	0900	.52	127	7.3	17.0	8.1	51	9.1	6.9	8.0	.80
APR , 1983											
19...	0900	2.8	10	7.2	14.5	9.0	40	7.5	5.2	6.1	.80

DATE	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	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)	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)
MAY , 1982										
12...	64	<5.0	1.9	<.10	26	98	--	<.02	<.10	<.10
APR , 1983										
19...	60	3.1	1.9	<.10	24	66	85	.02	<.10	<.10

DATE	NITRO- GEN, AMMONIA TOTAL (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, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY , 1982										
12...	<.06	<.06	.45	.55	<.01	.02	.02	20	20	.90
APR , 1983										
19...	.08	.11	.09	.20	.04	.01	.04	20	69	1.5

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

BUTTE COUNTY

Sacramento Valley (5-21)

WELL 018N002E16F01M

SITE NUMBER 392451121451101

2 MI WEST OF BIGGS. STOCK WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 60 FT, PERFORATED 20-60 FT. ALTITUDE OF LSD 80 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. 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	DATE	WATER LEVEL
OCT 07, 1982	6.4	MAR 23, 1983	4.6

WELL 020N002E06Q01M

SITE NUMBER 393646121471601

2 MI SOUTH OF DURHAM. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 383 FT, PERFORATED 10-44 FT. ALTITUDE OF LSD 135 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 3.3 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

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 06, 1982	14.8	MAR 22, 1983	3.3

WELL 023N001W14R01M

SITE NUMBER 395026122562001

4 MI NORTH OF NORD. STOCK WATER-TABLE WELL IN ALLUVIUM. DIAM 12 IN, DEPTH 157 FT. ALTITUDE OF LSD 189 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1948 TO CURRENT YEAR.

HIGHEST WATER LEVEL 18.74 FEET BELOW LAND SURFACE DATUM APR 08, 1952.

LOWEST WATER LEVEL 42.8 FEET BELOW LAND SURFACE DATUM OCT 29, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
MAR 16, 1983	24.8

GROUND WATER

GLENN COUNTY

Sacramento Valley (5-21)

WELL 019N001W32G01M

SITE NUMBER 392730121593001

0.5 MI SOUTH OF BUTTE CITY. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM
3 IN, DEPTH 1333 FT, SCREENED 1328-1333 FT. ALTITUDE OF LSD 87.40 FT. RECORDS AVAILABLE 1979 TO
CURRENT YEAR. RECORDER INSTALLED 1979.

HIGHEST WATER LEVEL 0.76 FEET ABOVE LAND SURFACE DATUM MAR 14, 1983.

LOWEST WATER LEVEL 5.31 FEET BELOW LAND SURFACE DATUM NOV 26, 1979.

WATER LEVELS IN FEET ABOVE OR BELOW(-) LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	-2.87	NOV 10, 1982	-2.52	DEC 20, 1982	-1.80	FEB 22, 1983	-0.40
02	-2.85	11	-2.62	21	-1.56	23	-0.38
03	-2.82	12	-2.62	22	-0.92	24	-0.57
04	-2.84	13	-2.58	23	-0.46	25	-0.59
05	-2.85	14	-2.60	24	-0.64	26	-0.20
06	-2.84	15	-2.58	25	-1.08	27	0.14
07	-2.91	16	-2.52	26	-1.30	28	0.42
08	-2.93	17	-2.45	27	-1.42	MAR 08	0.53
09	-2.93	18	-2.23	28	-1.64	09	0.52
10	-2.92	19	-2.08	29	-1.74	10	0.38
11	-2.91	20	-2.26	30	-1.78	11	0.28
12	-2.89	21	-2.32	31	-1.86	12	0.42
13	-2.91	22	-2.27	JAN 01, 1983	-1.90	13	0.56
14	-2.90	23	-2.20	02	-1.90	14	0.76
15	-2.91	24	-2.20	03	-1.89	15	0.52
16	-2.90	25	-2.25	04	-1.87	16	0.51
17	-2.90	26	-2.24	05	-1.85	17	0.46
18	-2.88	27	-2.19	06	-1.84	18	0.45
19	-2.88	28	-2.04	31	0.06	19	0.37
20	-2.90	29	-1.85	FEB 01	-0.01	20	0.08
21	-2.89	30	-1.58	02	-0.10	21	0.12
22	-2.86	DEC 01	-1.84	03	-0.23	22	0.30
23	-2.85	02	-2.07	04	-0.49	23	0.38
24	-2.81	03	-2.13	05	-0.78	24	0.44
25	-2.72	04	-2.11	06	-0.87	25	0.30
26	-2.70	05	-2.09	07	-0.56	26	0.10
27	-2.76	06	-2.10	08	-0.25	27	0.02
28	-2.76	07	-2.11	09	-0.34	28	0.22
29	-2.67	08	-2.11	10	-0.55	29	0.16
30	-2.52	09	-2.07	11	-0.28	30	0.20
31	-2.58	10	-2.14	12	-0.22	31	0.30
NOV 01	-2.62	11	-2.21	13	-0.31	APR 01	0.41
02	-2.63	12	-2.17	14	-0.27	02	0.30
03	-2.64	13	-2.18	15	-0.24	03	0.21
04	-2.61	14	-2.20	16	-0.32	04	0.20
05	-2.58	15	-2.18	17	-0.32	05	0.14
06	-2.57	16	-1.98	18	-0.30	06	-0.08
07	-2.53	17	-1.95	19	-0.37	07	-0.25
08	-2.50	18	-1.80	20	-0.31	08	-0.31
09	-2.50	19	-1.83	21	-0.38	09	-0.31

GLENN COUNTY--Continued

Sacramento Valley (5-21)

WELL 019N001W32G01M SITE NUMBER 392730121593001--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 10, 1983	-0.30	MAY 24, 1983	0.54	JUL 07, 1983	0.42	AUG 20, 1983	0.01
11	-0.28	25	0.59	08	0.36	21	0.02
12	-0.30	26	0.64	09	0.33	22	0.02
13	-0.34	27	0.65	10	0.37	23	0.02
14	-0.35	28	0.66	11	0.42	24	0.03
15	-0.31	29	0.62	12	0.42	25	-0.02
16	-0.26	30	0.68	13	0.43	26	-0.05
17	-0.17	31	0.73	14	0.43	27	-0.03
18	-0.12	JUN 01	0.75	15	0.39	28	-0.02
19	-0.12	02	0.70	16	0.40	29	-0.00
20	-0.04	03	0.67	17	0.37	30	-0.01
21	-0.09	04	0.67	18	0.38	31	-0.03
22	-0.13	05	0.67	19	0.33	SEP 01	-0.08
23	-0.04	06	0.70	20	0.30	02	-0.08
24	0.04	07	0.74	21	0.33	03	-0.05
25	0.13	08	0.70	22	0.33	04	-0.03
26	0.11	09	0.65	23	0.33	05	-0.02
27	0.13	10	0.62	24	0.32	06	-0.05
28	0.29	11	0.64	25	0.30	07	-0.11
29	0.44	12	0.60	26	0.30	08	-0.16
30	0.40	13	0.60	27	0.29	09	-0.22
MAY 01	0.38	14	0.64	28	0.28	10	-0.23
02	0.35	15	0.60	29	0.25	11	-0.24
03	0.40	16	0.62	30	0.24	12	-0.21
04	0.48	17	0.61	31	0.25	13	-0.21
05	0.49	18	0.53	AUG 01	0.28	14	-0.23
06	0.45	19	0.56	02	0.22	15	-0.24
07	0.36	20	0.59	03	0.20	16	-0.25
08	0.52	21	0.56	04	0.18	17	-0.25
09	0.52	22	0.54	05	0.14	18	-0.25
10	0.52	23	0.53	06	0.20	19	-0.25
11	0.50	24	0.54	07	0.18	20	-0.29
12	0.54	25	0.55	08	0.20	21	-0.31
13	0.57	26	0.52	09	0.22	22	-0.33
14	0.52	27	0.46	10	0.17	23	-0.36
15	0.45	28	0.46	11	0.14	24	-0.36
16	0.38	29	0.51	12	0.14	25	-0.35
17	0.31	30	0.51	13	0.17	26	-0.34
18	0.34	JUL 01	0.49	14	0.13	27	-0.35
19	0.42	02	0.43	15	0.12	28	-0.31
20	0.45	03	0.44	16	0.10	29	-0.27
21	0.48	04	0.46	17	0.10	30	-0.26
22	0.52	05	0.48	18	0.10		
23	0.53	06	0.48	19	0.04		

GROUND WATER

GLENN COUNTY--Continued

Sacramento Valley (5-21)

WELL 019N001W32G02H

SITE NUMBER 392730121593002

0.5 MI SOUTH OF BUTTE CITY. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 3 IN, DEPTH 968 FT, SCREENED 963-968 FT. ALTITUDE OF LSD 87.40 FT. RECORDS AVAILABLE 1979 TO CURRENT YEAR. RECORDER INSTALLED 1979.

HIGHEST WATER LEVEL 2.30 FEET BELOW LAND SURFACE DATUM MAR 02, 1983; MAR 04, 1983.

LOWEST WATER LEVEL 12.02 FEET BELOW LAND SURFACE DATUM SEP 08, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	10.09	NOV 10, 1982	8.87	JAN 02, 1983	7.68	FEB 11, 1983	5.28
02	10.05	11	8.95	03	7.66	12	5.13
03	9.98	12	8.95	04	7.63	13	5.22
04	9.95	13	8.91	05	7.60	14	5.14
05	9.93	14	8.92	06	7.60	15	5.08
06	9.89	15	8.88	07	7.60	16	5.16
07	9.92	16	8.83	08	7.58	17	5.18
08	9.89	17	8.74	09	7.54	18	5.18
09	9.86	18	8.42	10	7.53	19	5.20
10	9.81	19	8.02	11	7.49	20	5.12
11	9.76	20	8.40	12	7.45	21	5.20
12	9.72	21	8.51	13	7.43	22	5.24
13	9.70	22	8.48	14	7.42	23	5.27
14	9.66	23	8.40	15	7.36	24	5.48
15	9.65	24	8.36	16	7.29	25	5.58
16	9.61	25	8.44	17	7.28	26	5.10
17	9.58	26	8.43	18	7.16	27	4.65
18	9.53	27	8.39	19	6.84	28	4.32
19	9.51	28	8.24	20	6.86	MAR 01	3.50
20	9.50	29	7.84	21	7.04	02	2.30
21	9.47	30	7.54	22	6.82	03	2.60
22	9.42	DEC 01	7.86	23	6.42	04	2.30
23	9.37	02	8.10	24	5.86	08	3.89
24	9.30	16	7.70	25	5.00	09	3.96
25	9.18	17	7.42	26	5.40	10	4.14
26	9.10	18	7.40	27	4.24	11	4.29
27	9.14	19	7.52	28	3.42	12	4.14
28	9.17	20	7.38	29	4.32	13	3.98
29	9.11	21	6.56	30	4.55	14	3.68
30	8.88	22	5.82	31	4.60	15	4.02
31	8.87	23	5.56	FEB 01	4.72	16	4.05
NOV 01	8.99	24	6.04	02	4.88	17	4.11
02	9.03	25	6.48	03	5.08	18	4.13
03	9.03	26	6.65	04	5.43	19	4.24
04	8.97	27	6.96	05	5.88	20	4.52
05	8.94	28	7.34	06	6.10	21	4.54
06	8.92	29	7.45	07	5.80	22	4.32
07	8.87	30	7.56	08	5.30	23	4.24
08	8.85	31	7.66	09	5.29	24	4.18
09	8.84	JAN 01, 1983	7.70	10	5.60	25	4.30

GLENN COUNTY--Continued

Sacramento Valley (5-21)

WELL 019N001W32G02M SITE NUMBER 392730121593002--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
HAR 26, 1983	4.54	MAY 13, 1983	4.44	JUN 30, 1983	5.60	AUG 17, 1983	6.83
27	4.64	14	4.50	JUL 01	5.70	18	6.84
28	4.38	15	4.64	02	5.76	19	6.90
29	4.44	16	4.80	03	5.77	20	6.91
30	4.39	17	4.92	04	5.78	21	6.90
31	4.27	18	4.94	05	5.76	22	6.91
APR 01	4.12	19	4.82	06	5.79	23	6.90
02	4.23	20	4.75	07	5.86	24	6.90
03	4.34	21	4.73	08	5.94	25	6.95
04	4.39	22	4.70	09	5.99	26	7.02
05	4.52	23	4.71	10	5.98	27	7.02
06	4.81	24	4.70	11	5.93	28	7.00
07	5.08	25	4.65	12	5.98	29	6.96
08	5.23	26	4.59	13	5.96	30	6.99
09	5.27	27	4.61	14	6.02	31	7.00
10	5.26	28	4.60	15	6.08	SEP 01	7.04
11	5.25	29	4.66	16	6.09	02	7.06
12	5.31	30	4.62	17	6.14	03	7.04
13	5.36	31	4.62	18	6.10	04	7.03
14	5.37	JUN 01	4.63	19	6.16	05	6.98
15	5.33	02	4.71	20	6.22	06	7.01
16	5.28	03	4.77	21	6.20	07	7.10
17	5.18	04	4.85	22	6.21	08	7.16
18	5.12	05	4.89	23	6.24	09	7.25
19	5.11	06	4.88	24	6.30	10	7.26
20	5.03	07	4.89	25	6.30	11	7.25
21	5.04	08	4.99	26	6.30	12	7.20
22	5.08	09	5.06	27	6.34	13	7.23
23	5.00	10	5.12	28	6.38	14	7.21
24	4.86	11	5.18	29	6.41	15	7.25
25	4.69	12	5.31	30	6.44	16	7.25
26	4.77	13	5.27	31	6.46	17	7.23
27	4.80	14	5.30	AUG 01	6.46	18	7.24
28	4.56	15	5.32	02	6.49	19	7.28
29	4.29	16	5.34	03	6.55	20	7.28
30	4.40	17	5.44	04	6.60	21	7.27
MAY 01	4.42	18	5.45	05	6.62	22	7.30
02	4.44	19	5.45	06	6.58	23	7.25
03	4.42	20	5.50	07	6.63	24	7.21
04	4.39	21	5.54	08	6.62	25	7.20
05	4.40	22	5.56	09	6.58	26	7.21
06	4.42	23	5.55	10	6.64	27	7.14
07	4.60	24	5.56	11	6.69	28	7.09
08	4.38	25	5.62	12	6.70	29	7.08
09	4.39	26	5.67	13	6.69	30	7.11
10	4.42	27	5.69	14	6.74		
11	4.46	28	5.62	15	6.76		
12	4.45	29	5.60	16	6.80		

GROUND WATER

GLENN COUNTY--Continued

Sacramento Valley (5-21)

WELL 019N001W32G03H

SITE NUMBER 392730121593003

0.5 MI SOUTH OF BUTTE CITY. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 3 IN, DEPTH 595 FT, SCREENED 590-595 FT. ALTITUDE OF LSD 87.40 FT. RECORDS AVAILABLE 1979 TO CURRENT YEAR. RECORDER INSTALLED 1979.

HIGHEST WATER LEVEL 5.52 FEET BELOW LAND SURFACE DATUM MAR 03, 1983.

LOWEST WATER LEVEL 22.49 FEET BELOW LAND SURFACE DATUM AUG 01, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	17.03	NOV 10, 1982	15.69	DEC 20, 1982	13.31	JAN 29, 1983	10.22
02	16.94	11	15.74	21	13.02	30	10.20
03	16.92	12	15.73	22	12.32	31	9.96
04	16.74	13	15.70	23	11.90	FEB 01	9.83
05	16.68	14	15.70	24	12.12	02	9.76
06	16.61	15	15.69	25	12.54	03	9.68
07	16.61	16	15.66	26	12.61	04	9.76
08	16.57	17	15.60	27	12.53	05	9.88
09	16.53	18	15.42	28	12.60	06	9.80
10	16.48	19	15.28	29	12.58	07	9.36
11	16.44	20	15.44	30	12.49	08	8.96
12	16.40	21	15.48	31	12.44	09	8.99
13	16.38	22	15.42	JAN 01, 1983	12.40	10	9.14
14	16.34	23	15.28	02	12.35	11	8.77
15	16.33	24	15.23	03	12.29	12	8.67
16	16.30	25	15.21	04	12.24	13	8.67
17	16.26	26	15.13	05	12.20	14	8.57
18	16.23	27	15.02	06	12.19	15	8.51
19	16.21	28	14.82	07	12.18	16	8.51
20	16.21	29	14.54	08	12.17	17	8.47
21	16.20	30	14.26	09	12.17	18	8.41
22	16.17	DEC 01	14.34	10	12.19	19	8.38
23	16.14	02	14.43	11	12.19	20	8.28
24	16.12	03	14.40	12	12.19	21	8.34
25	16.03	04	14.28	13	12.22	22	8.35
26	15.97	05	14.18	14	12.24	23	8.33
27	16.02	06	14.09	15	12.23	24	8.46
28	16.02	07	14.02	16	12.21	25	8.47
29	15.98	08	13.97	17	12.22	26	8.06
30	15.82	09	13.86	18	12.19	27	7.72
31	15.84	10	13.85	19	12.08	28	7.48
NOV 01	15.94	11	13.85	20	12.12	MAR 01	6.83
02	15.96	12	13.79	21	12.23	02	5.90
03	15.96	13	13.77	22	12.15	03	5.52
04	15.92	14	13.76	23	11.93	08	6.94
05	15.87	15	13.73	24	11.56	09	6.90
06	15.84	16	13.50	25	10.72	10	7.00
07	15.78	17	13.44	26	11.30	11	7.06
08	15.74	18	13.29	27	10.16	12	6.90
09	15.71	19	13.33	28	8.98	13	6.72

GLENN COUNTY--Continued

Sacramento Valley (5-21)

WELL 019N001W32G03M SITE NUMBER 392730121593003--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 14, 1983	6.42	MAY 02, 1983	9.51	JUN 20, 1983	13.07	AUG 08, 1983	16.31
15	6.76	03	9.56	21	13.09	09	16.30
16	6.83	04	9.51	22	13.12	10	16.32
17	6.84	05	9.51	23	13.19	11	16.29
18	6.83	06	9.53	24	13.25	12	16.26
19	6.88	07	9.62	25	13.33	13	16.25
20	7.16	08	9.54	26	13.43	14	16.25
21	7.12	09	9.54	27	13.62	15	16.22
22	6.90	10	9.56	28	13.81	16	16.19
23	6.87	11	9.60	29	13.98	17	16.19
24	6.83	12	9.61	30	14.17	18	16.26
25	6.96	13	9.61	JUL 01	14.32	19	16.40
26	7.19	14	9.67	02	14.43	20	16.49
27	7.26	15	9.75	03	14.52	21	16.51
28	7.02	16	9.85	04	14.53	22	16.50
29	7.11	17	9.94	05	14.50	23	16.45
30	7.12	18	10.00	06	14.55	24	16.36
31	7.03	19	10.03	07	14.66	25	16.27
APR 01	6.98	20	10.14	08	14.72	26	16.24
02	7.12	21	10.26	09	14.69	27	16.20
03	7.22	22	10.41	10	14.63	28	16.17
04	7.28	23	10.60	11	14.58	29	16.10
05	7.42	24	10.85	12	14.59	30	16.03
06	7.64	25	11.10	13	14.58	31	15.99
07	7.81	26	11.35	14	14.64	SEP 01	15.96
08	7.90	27	11.60	15	14.79	02	15.92
09	7.95	28	11.83	16	15.03	03	15.86
10	8.00	29	12.02	17	15.26	04	15.78
11	8.07	30	12.15	18	15.38	05	15.70
12	8.16	31	12.18	19	15.44	06	15.69
13	8.28	JUN 01	12.22	20	15.55	07	15.77
14	8.38	02	12.30	21	15.66	08	15.90
15	8.46	03	12.33	22	15.79	09	16.00
16	8.53	04	12.30	23	15.87	10	16.02
17	8.56	05	12.29	24	15.87	11	16.04
18	8.64	06	12.25	25	15.81	12	16.00
19	8.76	07	12.21	26	15.74	13	15.94
20	8.90	08	12.27	27	15.67	14	15.88
21	9.09	09	12.36	28	15.64	15	15.81
22	9.24	10	12.45	29	15.66	16	15.76
23	9.33	11	12.58	30	15.67	17	15.72
24	9.37	12	12.75	31	15.69	18	15.66
25	9.41	13	12.86	AUG 01	15.71	19	15.63
26	9.49	14	12.86	02	15.78	20	15.63
27	9.54	15	12.92	03	15.88	21	15.61
28	9.45	16	12.97	04	15.98	22	15.57
29	9.37	17	13.01	05	16.08	23	15.57
30	9.43	18	13.06	06	16.20	24	15.51
MAY 01	9.47	19	13.07	07	16.30	25	15.46

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
SEP 26, 1983	15.41	SEP 28, 1983	15.28	29	15.20	SEP 30, 1983	15.13
27	15.37						

GROUND WATER
GLENN COUNTY--Continued
Sacramento Valley (5-21)

WELL 019N004W12E01M

SITE NUMBER 393111122155901

3.6 MI WEST OF WILLOWS. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 162 FT, PERFORATED 150-162 FT. ALTITUDE OF LSD 174 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1964 TO CURRENT YEAR.

HIGHEST WATER LEVEL 13.1 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

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
OCT 13, 1982	25.2	MAR 23, 1983	13.1

LAKE COUNTY

Kelseyville Valley (5-15)

WELL 013N009W05R05M

SITE NUMBER 385952122523301

NEAR FINLEY. DRILLED IRRIGATION WATER-TABLE WELL. DIAM 8 IN, DEPTH 185 FT, PERFORATED 72-165 FT. ALTITUDE OF LSD 1355 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 4.1 FEET BELOW LAND SURFACE DATUM MAR 28, 1983.

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
OCT 19, 1982	27.4	MAR 28, 1983	4.1

WELL 013N009W09F02M

SITE NUMBER 385935122520401

NEAR KELSEYVILLE. DRILLED IRRIGATION WATER-TABLE WELL. DIAM 12 IN, DEPTH 48 FT, PERFORATED 40-48 FT. ALTITUDE OF LSD 1358 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 1.5 FEET BELOW LAND SURFACE DATUM MAR 28, 1983.

LOWEST WATER LEVEL 41.9 FEET BELOW LAND SURFACE DATUM OCT 08, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19, 1982	23.2	MAR 28, 1983	1.5

LASSEN COUNTY

Honey Lake Valley (6-4)

WELL 029N014E22Q01M

SITE NUMBER 402106120231201

0.7 MI EAST OF STANDISH. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DEPTH 91 FT. ALTITUDE OF LSD 4023 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 3.5 FEET BELOW LAND SURFACE DATUM APR 12, 1958.

LOWEST WATER LEVEL 51.1 FEET BELOW LAND SURFACE DATUM APR 01, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1982	15.1	APR 21, 1983	9.2

LASSEN COUNTY--Continued

Big Valley (5-4)

WELL 038N008E17K01M

SITE NUMBER 410754120043001

3.2 MI EAST OF BIEBER. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 180 FT, PERFORATED 150-180 FT. ALTITUDE OF LSD 4150 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 3.3 FEET BELOW LAND SURFACE DATUM MAR 17, 1970.

LOWEST WATER LEVEL 21.7 FEET BELOW LAND SURFACE DATUM OCT 24, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
APR 13, 1983	6.9

MODOC COUNTY

Surprise Valley (6-1)

WELL 040N016E36G02M

SITE NUMBER 411722120061501

2 MI SOUTH OF EAGLEVILLE. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL. DIAM 14 IN, DEPTH 400 FT, PERFORATED 63-400 FT. ALTITUDE OF LSD 4625 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1972 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 06, 1982	91.0	APR 20, 1983	68.0

Alturas Basin (5-2)

WELL 041N011E05L03M

SITE NUMBER 412516120434601

9.2 MI SOUTHWEST OF ALTURAS. CABLE TOOL DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 47 FT. ALTITUDE OF LSD 4320 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1965 TO CURRENT YEAR.

HIGHEST WATER LEVEL 5.8 FEET BELOW LAND SURFACE DATUM APR 27, 1982.

LOWEST WATER LEVEL 10.0 FEET BELOW LAND SURFACE DATUM OCT 12, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
APR 19, 1983	6.5

WELL 041N012E15Q01M

SITE NUMBER 412318120342001

6.8 MI SOUTH OF ALTURAS. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL. DIAM 16 IN, DEPTH 300 FT. ALTITUDE OF LSD 4400 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1978 TO CURRENT YEAR.

HIGHEST WATER LEVEL 37.20 FEET BELOW LAND SURFACE DATUM APR 01, 1980.

LOWEST WATER LEVEL 46.0 FEET BELOW LAND SURFACE DATUM OCT 12, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
APR 19, 1983	39.0

GROUND WATER

MODOC COUNTY--Continued

Surprise Valley (6-1)

WELL 043N016E06R02H

SITE NUMBER 413714120110601

2 MI SOUTHEAST OF LAKE CITY. CABLE TOOL IRRIGATION WATER-TABLE WELL. DIAM 12 IN, DEPTH 300 FT, PERFORATED 50-300 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 5.8 FEET BELOW LAND SURFACE DATUM OCT 28, 1982.

LOWEST WATER LEVEL 73.7 FEET BELOW LAND SURFACE DATUM OCT 17, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1982	66.0	OCT 28, 1982	5.8

Goose Lake Valley (5-1)

WELL 045N014E17P01H

SITE NUMBER 414402120224501

6.4 MI WEST OF DAVIS CREEK. CABLE TOOL UNUSED WATER-TABLE WELL IN ALLUVIUM-VOLCANIC. DIAM 18 IN, DEPTH 222 FT. ALTITUDE OF LSD 4798 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 45.1 FEET BELOW LAND SURFACE DATUM MAR 15, 1972.

LOWEST WATER LEVEL 68.8 FEET BELOW LAND SURFACE DATUM OCT 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1982	68.4	APR 19, 1983	58.0

Surprise Valley (6-1)

WELL 046N016E04Q01H

SITE NUMBER 415254120082201

2 MI NORTH OF FORT BIDEWELL. UNUSED WATER-TABLE WELL. DIAM 14 IN, DEPTH 200 FT. ALTITUDE OF LSD 4600 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 67.0 FEET BELOW LAND SURFACE DATUM APR 24, 1973.

LOWEST WATER LEVEL 91.0 FEET BELOW LAND SURFACE DATUM OCT 06, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1982	91.0	APR 20, 1983	82.5

NEVADA COUNTY

Martis Valley (6-67)

WELL 017N016E16L01H

SITE NUMBER 391914120122501

0.2 MI SOUTHWEST OF TRUCKEE. CABLE TOOL PUBLIC SUPPLY WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 85 FT, CASED TO 85 FT, PERFORATED 30-85 FT. ALTITUDE OF LSD 5880 FT. RECORDS AVAILABLE 1961 TO CURRENT YEAR.

HIGHEST WATER LEVEL 10.2 FEET BELOW LAND SURFACE DATUM MAY 21, 1979.

LOWEST WATER LEVEL 39.9 FEET BELOW LAND SURFACE DATUM JUL 06, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02, 1982	24.5 P	APR 13, 1983	12.5 X

P Pumping.

X Affected by surface water.

PLACER COUNTY

Sacramento Valley (5-21)

WELL 012N005E35E02M

SITE NUMBER 385054121232301

5.6 MI NORTHEAST OF PLEASANT GROVE. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 12 IN, DEPTH 352 FT. ALTITUDE OF LSD 90 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1949 TO CURRENT YEAR.

HIGHEST WATER LEVEL 28.7 FEET BELOW LAND SURFACE DATUM APR 06, 1950.

LOWEST WATER LEVEL 108.3 FEET BELOW LAND SURFACE DATUM OCT 06, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	99.7	APR 15, 1983	87.8

SACRAMENTO COUNTY

Sacramento Valley (5-21)

WELL 006N007E28E01M

SITE NUMBER 382039121131901

3.2 MI WEST OF CLAY. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 225 FT. ALTITUDE OF LSD 75 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 34.4 FEET BELOW LAND SURFACE DATUM FEB 11, 1953.

LOWEST WATER LEVEL 124.8 FEET BELOW LAND SURFACE DATUM AUG 31, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	118.7	JAN 25, 1983	109.8	APR 25, 1983	105.4	SEP 01, 1983	116.7
27	117.0	FEB 24	107.6	MAY 26	106.6	29	114.2
DEC 06	113.1	MAR 28	106.4	JUN 29	111.2		
27	111.6	31	105.2	JUL 25	115.0		

WELL 007N006E23P01M

SITE NUMBER 382627121172801

4.8 MI NORTHEAST OF ELK GROVE. CABLE TOOL DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 12 TO 8 IN, DEPTH 144 FT, 12 IN CSG 0-42 FT, 8 IN CSG 42-144 FT. ALTITUDE OF LSD 77 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1968 TO CURRENT YEAR.

HIGHEST WATER LEVEL 77.3 FEET BELOW LAND SURFACE DATUM MAR 25, 1969.

LOWEST WATER LEVEL 105.9 FEET BELOW LAND SURFACE DATUM AUG 31, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	96.4	JAN 25, 1983	92.3	APR 25, 1983	88.3	JUL 25, 1983	93.6
DEC 06	94.4	FEB 24	90.4	MAY 26	89.6	SEP 01	93.6
27	93.5	MAR 28	89.3	JUN 29	93.4	29	91.6

WELL 008N006E21N02M

SITE NUMBER 383143121200001

4 MI NORTHEAST OF FLORIN. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 175 FT. ALTITUDE OF LSD 65 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1962 TO CURRENT YEAR.

HIGHEST WATER LEVEL 61.6 FEET BELOW LAND SURFACE DATUM MAR 15, 1963.

LOWEST WATER LEVEL 82.9 FEET BELOW LAND SURFACE DATUM OCT 20, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	81.9	NOV 05, 1982	80.5	MAR 01, 1983	76.6	APR 25, 1983	76.6

GROUND WATER

SHASTA COUNTY

Redding Basin (5-6)

WELL 028N005N13A01H

SITE NUMBER 401716122221201

9.3 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 680 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 204.33 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 233.60 FEET BELOW LAND SURFACE DATUM DEC 29, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	217.39	NOV 18, 1982	209.73	FEB 28, 1983	207.08	APR 13, 1983	210.66
27	219.46	DEC 29	233.60	MAR 23	204.33	MAY 18	225.29

WELL 029N003W04N01H

SITE NUMBER 402335122125401

3.4 MI EAST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 407 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 34.59 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 38.82 FEET BELOW LAND SURFACE DATUM SEP 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	38.39	JAN 25, 1983	38.63	APR 11, 1983	35.07	JUL 21, 1983	37.45
NOV 15	38.77	FEB 23	36.15	MAY 16	35.78	AUG 23	37.87
DEC 20	37.39	MAR 21	34.59	JUN 21	36.56	SEP 20	38.13

WELL 029N003W06L01H

SITE NUMBER 402348122144301

1.7 MI NORTHEAST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 430 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 44.94 FEET BELOW LAND SURFACE DATUM DEC 20, 1983.

LOWEST WATER LEVEL 50.85 FEET BELOW LAND SURFACE DATUM NOV 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	49.23	JAN 25, 1983	47.49	APR 11, 1983	48.38	JUL 21, 1983	50.58
NOV 15	50.85	FEB 23	46.79	MAY 17	45.42	AUG 23	48.48
DEC 27	47.88	MAR 21	48.12	JUN 21	46.31	SEP 20	48.39

WELL 029N003W07D01H

SITE NUMBER 402321122150301

1.4 MI EAST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 410 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 23.87 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 36.59 FEET BELOW LAND SURFACE DATUM JUN 21, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	27.93	JAN 25, 1983	25.08	APR 11, 1983	27.14	JUL 21, 1983	28.5
NOV 15	28.07	FEB 23	26.63	MAY 17	25.37	AUG 23	27.98
DEC 20	27.94	MAR 21	23.87	JUN 21	36.59	SEP 24	27.62

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W01J01M

SITE NUMBER 402347122151901

1.3 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 423 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 34.27 FEET BELOW LAND SURFACE DATUM APR 11, 1983.

LOWEST WATER LEVEL 41.95 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	41.95	JAN 25, 1983	37.88	APR 11, 1983	34.27	JUL 21, 1983	38.08
NOV 15	40.14	FEB 23	37.24	MAY 16	34.8	AUG 23	37.57
DEC 20	36.25	MAR 21	37.35	JUN 21	36.12	SEP 20	39.21

WELL 029N004W02K01M

SITE NUMBER 402335122164801

0.8 MI NORTH OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 445 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 52.03 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 62.92 FEET BELOW LAND SURFACE DATUM NOV 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	59.70	JAN 25, 1983	58.90	APR 11, 1983	52.57	JUL 21, 1983	55.
NOV 15	62.92	FEB 23	53.24	MAY 17	52.85	AUG 23	55.73
DEC 20	58.46	MAR 21	52.03	JUN 21	54.18	SEP 20	55.64

WELL 029N004W02P01M

SITE NUMBER 402328122171101

0.5 MI WEST OF COTTONWOOD. UNUSED WELL. ALTITUDE OF LSD 446 FT. RECORDS AVAILABLE 1968 TO CURRENT YEAR.

HIGHEST WATER LEVEL 46.5 FEET BELOW LAND SURFACE DATUM JUL 17, 1969.

LOWEST WATER LEVEL 73.3 FEET BELOW LAND SURFACE DATUM AUG 15, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	59.47	JAN 25, 1983	57.20	APR 11, 1983	55.52	JUL 21, 1983	58.13
NOV 15	59.63	FEB 23	56.12	MAY 17	55.88	AUG 23	58.97
DEC 20	57.86	MAR 21	55.33	JUN 21	57.46	SEP 20	58.79

WELL 029N004W03R01M

SITE NUMBER 402324122174501

0.9 N MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 452 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 14.11 FEET BELOW LAND SURFACE DATUM AUG 23, 1983.

LOWEST WATER LEVEL 23.38 FEET BELOW LAND SURFACE DATUM APR 16, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	15.23	JAN 25, 1983	16.32	APR 11, 1983	17.55	JUL 21, 1983	15.43
NOV 16	18.52	FEB 23	15.44	MAY 10	15.9	AUG 23	14.11
DEC 20	16.26	MAR 21	14.46	JUN 21	14.29	SEP 20	14.37

GROUND WATER

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W04Q01M

SITE NUMBER 402331122191201

2.1 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 503 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 41.4 FEET BELOW LAND SURFACE DATUM JUN 15, 1982.

LOWEST WATER LEVEL 122.52 FEET BELOW LAND SURFACE DATUM NOV 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	119.63	JAN 25, 1983	121.43	APR 11, 1983	111.53	JUL 21, 1983	115.96
NOV 15	122.52	FEB 23	121.97	MAY 17	108.09	AUG 23	115.94
DEC 27	118.54	MAR 21	121.42	JUN 21	109.73	SEP 20	121.53

WELL 029N004W06R01M

SITE NUMBER 402336122210001

3.8 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 545 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 141.90 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 158.51 FEET BELOW LAND SURFACE DATUM OCT 20, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	146.77	JAN 25, 1983	147.38	APR 11, 1983	153.78 P	JUL 21, 1983	144.40
NOV 16	153.02	FEB 23	147.45	MAY 19	144.1	AUG 23	149.31
DEC 27	145.09	MAR 21	147.34	JUN 21	143.46	SEP 20	157.45

WELL 029N004W07G02M

SITE NUMBER 402303122212201

4.3 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 482.66 FT. RECORDS AVAILABLE 1979 SEPTEMBER 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 47.46 FEET BELOW LAND SURFACE DATUM APR 11, 1983.

LOWEST WATER LEVEL 56.96 FEET BELOW LAND SURFACE DATUM JUL 21, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	54.24	MAY 19, 1983	49.73	JUL 21, 1983	56.96	SEP 20, 1983	56.42
APR 11, 1983	47.46	JUN 21	52.46	AUG 23	50.90		

WELL 029N004W09F01M

SITE NUMBER 402300122192001

2.3 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 468 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 56.84 FEET BELOW LAND SURFACE DATUM JAN 25, 1984.

LOWEST WATER LEVEL 69.80 FEET BELOW LAND SURFACE DATUM JUL 21, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	68.82	FEB 23, 1983	63.18	MAY 18, 1983	58.12	AUG 23, 1983	63.04
NOV 16	63.50	MAR 21	61.57	JUN 21	65.27	SEP 20	63.46
JAN 25, 1983	60.02	APR 11	60.39	JUL 21	69.80		

P Pumping.

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W10E01M

SITE NUMBER 402308122183201

1.6 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 460 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 11.83 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 16.84 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	15.24	JAN 25, 1983	15.48	APR 11, 1983	13.84	JUL 21, 1983	15.46
NOV 15	16.74	FEB 23	13.2	MAY 17	14.59	AUG 23	14.59
DEC 20	16.2	MAR 21	11.83	JUN 21	14.30	SEP 20	15.29

WELL 029N004W10H01M

SITE NUMBER 402305122173201

0.8 MI WEST OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 448 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 55.53 FEET BELOW LAND SURFACE DATUM APR 11, 1983.

LOWEST WATER LEVEL 83.39 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	83.39	JAN 25, 1983	56.89	APR 11, 1983	55.53	JUL 21, 1983	79.08 P
NOV 15	63.08	FEB 23	57.57	MAY 18	57.45	AUG 23	59.26
DEC 20	66.83	MAR 21	57.33	JUN 21	79.62	SEP 20	58.63

WELL 029N004W11K01M

SITE NUMBER 402245122165201

0.5 MI SOUTH OF COTTONWOOD. INDUSTRIAL WELL. ALTITUDE OF LSD 407 FT. RECORDS AVAILABLE SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 11.96 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 26.43 FEET BELOW LAND SURFACE DATUM SEP 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	11.96	JAN 25, 1983	21.18	APR 11, 1983	22.73	JUL 21, 1983	20.87
NOV 15	21.64	FEB 23	19.73	MAY 16	21.97	AUG 23	22.80
DEC 20	19.46	MAR 21	17.69	JUN 21	19.24 P	SEP 20	22.91

WELL 029N004W13M01M

SITE NUMBER 402158122161801

1.4 MI SOUTH OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 409 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 19.04 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 27.31 FEET BELOW LAND SURFACE DATUM DEC 28, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	23.52	JAN 25, 1983	22.14	APR 12, 1983	22.50	AUG 24, 1983	23.97
NOV 17	23.18	FEB 23	20.19	MAY 20	20.72	SEP 21	26.38
DEC 28	27.31	MAR 22	19.04	JUL 26	21.82		

P Pumping.

GROUND WATER

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W19A01M

SITE NUMBER 402131122210501

4.3 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 460 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 27.00 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 37.49 FEET BELOW LAND SURFACE DATUM SEP 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	35.23	FEB 24, 1983	31.96	MAY 18, 1983	32.09	AUG 25, 1983	33.61
NOV 18	35.42	MAR 23	27.00	JUN 24	36.54	SEP 26	35.45
DEC 29	34.15	APR 12	31.70	JUL 27	34.85		

WELL 029N005W01D02M

SITE NUMBER 402401122225501

5.6 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 550 FT. RECORDS AVAILABLE JUNE 1982

HIGHEST WATER LEVEL 109.38 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

LOWEST WATER LEVEL 114.80 FEET BELOW LAND SURFACE DATUM SEP 14, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	110.93	NOV 16, 1982	109.38	JUN 25, 1983	112.06

WELL 029N005W01L01M

SITE NUMBER 402344122224501

5.3 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 544 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 91.16 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 120.29 FEET BELOW LAND SURFACE DATUM AUG 09, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	97.73	FEB 23, 1983	96.67	MAY 18, 1983	95.33	AUG 23, 1983	103.27
NOV 16	96.11	MAR 21	92.81	JUN 21	97.70	SEP 20	108.08
DEC 27	95.23	APR 11	92.63	JUL 21	98.40		

WELL 029N005W01N01M

SITE NUMBER 402320122225601

5.6 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 538 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 79.84 FEET BELOW LAND SURFACE DATUM JAN 25, 1984.

LOWEST WATER LEVEL 98.72 FEET BELOW LAND SURFACE DATUM OCT 20, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	87.08	FEB 23, 1983	81.98	MAY 18, 1983	82.46	AUG 23, 1983	89.17
NOV 16	86.57	MAR 21	80.95	JUN 21	85.71	SEP 20	97.53
DEC 27	83.70	APR 11	80.71	JUL 21	92.33		

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005N07B02H

SITE NUMBER 402306122281601

10.2 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 551 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 40.02 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 51.37 FEET BELOW LAND SURFACE DATUM OCT 14, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	51.37	FEB 24, 1983	42.25	MAY 18, 1983	47.82	AUG 24, 1983	47.04
NOV 16	47.66	MAR 22	40.02	JUN 23	44.66	SEP 21	47.19
DEC 28	48.78	APR 12	42.21	JUL 26	50.09 P		

WELL 029N005N08A01H

SITE NUMBER 402310122264301

8.8 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 543 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 49.19 FEET BELOW LAND SURFACE DATUM APR 17, 1984.

LOWEST WATER LEVEL 62.27 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	56.56	FEB 24, 1983	58.15	MAY 18, 1983	50.71	AUG 24, 1983	52.18
NOV 16	62.27	MAR 22	52.55	JUN 23	50.76	SEP 21	52.83
DEC 27	56.94	APR 12	51.21	JUL 26	51.84		

WELL 029N005N08B01H

SITE NUMBER 402317122270301

9.1 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 555 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 53.51 FEET BELOW LAND SURFACE DATUM MAY 18, 1984.

LOWEST WATER LEVEL 75.18 FEET BELOW LAND SURFACE DATUM AUG 30, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	62.74	FEB 24, 1983	59.97	MAY 18, 1983	56.14	AUG 24, 1983	60.12
NOV 16	67.05	MAR 22	59.81	JUN 23	56.52	SEP 21	63.17
DEC 27	67.84	APR 12	63.07	JUL 26	57.60		

WELL 029N005N08L02H

SITE NUMBER 402249122271901

9.4 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 534 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 32.56 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 44.12 FEET BELOW LAND SURFACE DATUM AUG 30, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	41.66	DEC 27, 1982	38.82	APR 12, 1983	34.25	JUL 26, 1983	39.95
27	40.21	FEB 24, 1983	38.15	MAY 18	35.29	AUG 23	40.86
NOV 16	42.13	MAR 23	32.56	JUN 23	39.16	SEP 21	43.44

P Pumping.

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005W09L01M

SITE NUMBER 402240122260901

8.3 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 510 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 18.70 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 31.87 FEET BELOW LAND SURFACE DATUM AUG 30, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	27.70	FEB 24, 1983	21.38	MAY 18, 1983	21.68	AUG 24, 1983	26.15
NOV 16	27.44	MAR 22	18.70	JUN 23	22.36	SEP 21	26.00
DEC 27	25.38	APR 12	19.51	JUL 26	24.03		

WELL 029N005W11A02M

SITE NUMBER 402318122233001

4 MI SOUTH OF OLINDA. CABLE TOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 360 FT, PERFORATED 110-150 FT. ALTITUDE OF LSD 518 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 27.4 FEET BELOW LAND SURFACE DATUM MAR 09, 1981.

LOWEST WATER LEVEL 120.5 FEET BELOW LAND SURFACE DATUM AUG 04, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
MAR 25, 1983	51.2

WELL 029N005W12M01M

SITE NUMBER 402246122231001

5.6 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 488 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 16.75 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

LOWEST WATER LEVEL 31.53 FEET BELOW LAND SURFACE DATUM DEC 27, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	30.01	FEB 23, 1983	21.77	MAY 18, 1983	22.22	AUG 23, 1983	27.80
NOV 16	16.75	MAR 21	22.50	JUN 21	25.18	SEP 20	28.62
DEC 27	31.53	APR 11	20.88	JUL 21	28.98		

WELL 029N005W25L01M

SITE NUMBER 402010122225101

6.4 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 487 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 20.70 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 31.72 FEET BELOW LAND SURFACE DATUM SEP 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	27.06	FEB 25, 1983	22.21	MAY 17, 1983	21.86	AUG 24, 1983	26.22
NOV 17	27.32	MAR 23	20.70	JUN 23	23.34	SEP 21	27.35
DEC 28	24.38	APR 13	22.15	JUL 26	24.43		

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005H34B01H

SITE NUMBER 401951122244901

8.1 MI SOUTHWEST OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 502.50 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 12.12 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 26.8 FEET BELOW LAND SURFACE DATUM JUL 21, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	22.49	FEB 25, 1983	14.50	APR 13, 1983	12.97	JUN 24, 1983	21.20
NOV 17	19.80	MAR 23	12.12	MAY 20	15.46	JUL 27	23.34
DEC 28	17.96						

WELL 029N006H12B01H

SITE NUMBER 402316122291601

11.0 MI WEST OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 569 FT. RECORDS AVAILABLE
DECEMBER 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 37.89 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 42.09 FEET BELOW LAND SURFACE DATUM DEC 28, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 28, 1982	42.09	APR 12, 1983	38.26	JUN 23, 1983	38.35	AUG 24, 1983	39.55
FEB 24, 1983	40.14	MAY 18	38.13	JUL 26	39.05	SEP 21	39.13
MAR 22	37.89						

WELL 029N006H12B02H

SITE NUMBER 402316122291501

11.0 MI WEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 569 FT. RECORDS AVAILABLE
DECEMBER 1982 TO CURRENT YEAR. RECORDER INSTALLED JULY 1983.

HIGHEST WATER LEVEL 37.31 FEET BELOW LAND SURFACE DATUM MAR 22, 1983..

LOWEST WATER LEVEL 41.90 FEET BELOW LAND SURFACE DATUM APR 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 28, 1982	39.12	JUL 24, 1983	38.18	AUG 16, 1983	38.40	SEP 08, 1983	38.49
FEB 24, 1983	38.06	25	38.19	17	38.40	09	38.49
MAR 22	37.31	26	38.21	18	38.41	10	38.50
APR 12	37.75	27	38.22	19	38.43	11	38.50
MAY 19	37.69	28	38.23	20	38.46	12	38.50
JUN 23	38.34	29	38.24	21	38.47	13	38.50
JUL 07	38.04	30	38.26	22	38.48	14	38.51
08	38.06	31	38.26	23	38.48	15	38.52
09	38.09	AUG 01	38.26	24	38.48	16	38.53
10	38.09	02	38.28	25	38.48	17	38.53
11	38.09	03	38.30	26	38.48	18	38.54
12	38.08	04	38.31	27	38.48	19	38.56
13	38.08	05	38.33	28	38.48	20	38.57
14	38.08	06	38.33	29	38.48	21	38.71
15	38.08	07	38.32	30	38.47	22	38.71
16	38.08	08	38.33	31	38.47	23	38.70
17	38.08	09	38.33	SEP 01	38.48	24	38.69
18	38.10	10	38.34	02	38.48	25	38.69
19	38.15	11	38.37	03	38.48	26	38.69
20	38.18	12	38.38	04	38.48	27	38.70
21	38.18	13	38.38	05	38.47	28	38.69
22	38.17	14	38.38	06	38.48	29	38.67
23	38.18	15	38.39	07	38.48	30	38.66

GROUND WATER

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 029N006W12B03M

SITE NUMBER 402316122291401

11.9 MI WEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 568 FT. RECORDS AVAILABLE
DECEMBER 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 37.76 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 42.93 FEET BELOW LAND SURFACE DATUM APR 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 28, 1982	39.34	APR 12, 1983	37.89	JUN 23, 1983	38.10	AUG 24, 1983	38.65
FEB 24, 1983	38.25	MAY 19	37.84	JUL 26	38.38	SEP 21	38.88
MAR 22	37.76						

WELL 029N006W12B04M

SITE NUMBER 402316122291301

11.0 MI WEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 568 FT. RECORDS AVAILABLE
DECEMBER 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 20.46 FEET BELOW LAND SURFACE DATUM APR 12, 1983.

LOWEST WATER LEVEL 27.67 FEET BELOW LAND SURFACE DATUM DEC 28, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 28, 1982	27.67	APR 12, 1983	20.46	JUN 23, 1983	22.51	AUG 24, 1983	25.54
FEB 24, 1983	21.83	MAY 19	20.94	JUL 26	24.18	SEP 21	26.58
MAR 22	21.73						

WELL 029N006W12B05M

SITE NUMBER 402316122291201

11.0 MI WEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 568 FT. RECORDS AVAILABLE
DECEMBER 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 8.54 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 24.21 FEET BELOW LAND SURFACE DATUM NOV 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 28, 1982	22.04	APR 12, 1983	9.56	JUN 23, 1983	13.72	AUG 24, 1983	19.72
FEB 24, 1983	9.14	MAY 19	10.11	JUL 26	17.24	SEP 21	21.61
MAR 22	8.54						

Honey Lake Valley (6-4)

WELL 029N012E11B01M

SITE NUMBER 402334120353401

1 MI SOUTHEAST OF SUSANVILLE. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 120 FT,
PERFORATED 105-120 FT. ALTITUDE OF LSD 4125 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT
OF WATER RESOURCES. RECORDS AVAILABLE 1972 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 09, 1982	7.9	APR 21, 1983	5.6

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 030N003W29M01M

SITE NUMBER 402533122140001

3.5 MI NORTHEAST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 429 FT. RECORDS AVAILABLE
JUNE 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 34.28 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 40.84 FEET BELOW LAND SURFACE DATUM JUN 28, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	37.23	JAN 25, 1983	38.02	APR 11, 1983	34.44	JUL 21, 1983	38.06
NOV 15	37.71	FEB 23	37.44	MAY 16	35.49	AUG 23	36.03
DEC 20	36.14	MAR 21	34.28	JUN 21	35.87	SEP 20	36.25

WELL 030N003W31P02M

SITE NUMBER 402425122145101

2.1 MI NORTHEAST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 525 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 116.05 FEET BELOW LAND SURFACE DATUM FEB 21, 1984.

LOWEST WATER LEVEL 124.31 FEET BELOW LAND SURFACE DATUM SEP 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	118.54	JAN 25, 1983	117.46	APR 11, 1983	117.86	JUL 21, 1983	118.27
NOV 15	118.37	FEB 23	117.80	MAY 16	116.86	AUG 23	117.33
DEC 27	117.56	MAR 21	117.46	JUN 21	116.53	SEP 20	117.72

WELL 030N003W32P01M

SITE NUMBER 402418122134301

3.0 MI NORTHEAST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 430 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 40.26 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 43.85 FEET BELOW LAND SURFACE DATUM JUL 07, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	42.58	JAN 25, 1983	42.80	APR 11, 1983	40.96	JUL 21, 1983	42.61
NOV 15	42.58	FEB 23	42.67	MAY 16	42.06	AUG 23	43.27
DEC 20	40.65	MAR 21	40.26	JUN 21	42.24	SEP 20	43.17

WELL 030N004W20F01M

SITE NUMBER 402635122202701

5.1 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 620 FT. RECORDS AVAILABLE
SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 220.79 FEET BELOW LAND SURFACE DATUM SEP 14, 1982.

LOWEST WATER LEVEL 237.25 FEET BELOW LAND SURFACE DATUM JAN 25, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	228.03	JAN 25, 1983	237.25	APR 11, 1983	223.63	JUL 21, 1983	232.82
NOV 15	233.57	FEB 23	227.16	MAY 17	235.70	AUG 23	233.68
DEC 27	228.06	MAR 21	222.79	JUN 21	227.25	SEP 20	228.76

GROUND WATER

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 030N004W26F01N

SITE NUMBER 402534122165701

2.9 MI NORTH OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 620 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 225.12 FEET BELOW LAND SURFACE DATUM APR 11, 1983.

LOWEST WATER LEVEL 241.36 FEET BELOW LAND SURFACE DATUM SEP 14, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	230.90	JAN 25, 1983	233.68	APR 11, 1983	225.12	JUL 21, 1983	229.71
NOV 15	240.09	FEB 23	233.32	MAY 17	232.32	AUG 23	232.25
DEC 27	226.10	MAR 21	230.61	JUN 21	228.17	SEP 20	230.30

WELL 030N004W33D01M

SITE NUMBER 402457122194501

3.4 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 682 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 289.05 FEET BELOW LAND SURFACE DATUM MAY 15, 1984.

LOWEST WATER LEVEL 315.22 FEET BELOW LAND SURFACE DATUM AUG 23, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	294.19	JAN 25, 1983	295.98	APR 11, 1983	308.09 P	SEP 20, 1983	309.71
NOV 15	297.87	FEB 23	297.33	MAY 17	312.60		
DEC 27	295.68	MAR 21	297.50	AUG 23	315.22		

WELL 030N004W35C01M

SITE NUMBER 402505122170401

2.0 MI NORTH OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 652 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 264.28 FEET BELOW LAND SURFACE DATUM JAN 25, 1984.

LOWEST WATER LEVEL 285.33 FEET BELOW LAND SURFACE DATUM MAY 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	271.59	JAN 25, 1983	272.32	APR 11, 1983	266.85	JUL 21, 1983	269.73
NOV 15	271.18	FEB 23	270.12	MAY 17	285.33	AUG 23	272.21
DEC 27	269.46	MAR 21	267.40	JUN 21	269.46	SEP 20	274.03

WELL 030N005W21K01M

SITE NUMBER 402610122260001

9.0 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL ALTITUDE OF LSD 791 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 263.30 FEET BELOW LAND SURFACE DATUM MAY 17, 1984.

LOWEST WATER LEVEL 284.60 FEET BELOW LAND SURFACE DATUM MAY 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	273.24	MAR 21, 1983	270.64	JUN 21, 1983	283.28	SEP 20, 1983	270.32
NOV 15	272.63	APR 11	271.93	JUL 21	278.78		
FEB 23, 1983	272.33	MAY 16	284.60	AUG 23	281.72		

P Pumping.

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 030N005W28B01M

SITE NUMBER 402553122255101

8.6 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 765 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 205.12 FEET BELOW LAND SURFACE DATUM DEC 21, 1983.

LOWEST WATER LEVEL 225.37 FEET BELOW LAND SURFACE DATUM SEP 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	213.09	JAN 25, 1983	206.17	APR 11, 1983	208.28	JUL 21, 1983	214.21
NOV 15	218.48	FEB 23	207.59	MAY 19	205.19	AUG 23	205.17
DEC 27	208.02	MAR 21	206.72	JUN 21	209.27	SEP 20	208.28

WELL 030N005W34R01M

SITE NUMBER 402414122242501

7.0 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 660 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 188.92 FEET BELOW LAND SURFACE DATUM MAR 23, 1984.

LOWEST WATER LEVEL 219.6 FEET BELOW LAND SURFACE DATUM AUG 10, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	196.36	JAN 25, 1983	198.24	APR 11, 1983	191.64	JUL 21, 1983	201.12
NOV 15	203.01	FEB 23	197.10	MAY 17	196.66	AUG 23	196.58
DEC 27	193.79	MAR 21	196.46	JUN 21	192.21	SEP 20	203.77

WELL 030N005W35C01M

SITE NUMBER 402457122235101

6.7 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 725 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 124.85 FEET BELOW LAND SURFACE DATUM MAY 17, 1983.

LOWEST WATER LEVEL 150.40 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	150.40	JAN 25, 1983	135.94	APR 11, 1983	137.70	AUG 23, 1983	144.29
NOV 15	144.32	FEB 23	135.78	MAY 17	124.85	SEP 20	144.04
DEC 27	135.48	MAR 21	136.42	JUN 21	141.86		

WELL 030N006W05G01M

SITE NUMBER 402910122335101

16.7 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 1010 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 2.91 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 61.16 FEET BELOW LAND SURFACE DATUM JAN 25, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	17.08	FEB 24, 1983	7.54	MAY 19, 1983	9.22	AUG 24, 1983	15.07
NOV 16	18.24	MAR 22	2.91	JUN 23	16.98	SEP 21	16.86
DEC 28	31.38	APR 12	37.47	JUL 26	14.44		

GROUND WATER

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 030N006W09J01M

SITE NUMBER 402758122322201

14.9 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 1025 FT. RECORDS AVAILABLE
JULY 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 93.00 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 124.42 FEET BELOW LAND SURFACE DATUM JUL 25, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	111.18	FEB 24, 1983	105.55	MAY 18, 1983	96.97	AUG 24, 1983	102.38
NOV 16	106.97	MAR 22	105.48	JUN 23	97.14	SEP 21	105.18
DEC 28	105.75	APR 12	102.89	JUL 26	101.61		

WELL 030N006W10K01M

SITE NUMBER 402753122313801

14.2 MI NORTHWEST OF COTTONWOOD. UNUSED WELL. ALTITUDE OF LSD 925 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 0.32 FEET ABOVE LAND SURFACE DATUM FEB 28, 1984.

LOWEST WATER LEVEL 6.24 FEET BELOW LAND SURFACE DATUM SEP 14, 1982.

WATER LEVELS IN FEET ABOVE OR BELOW(-) LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	-5.70	FEB 24, 1983	-2.85	MAY 18, 1983	0.10	AUG 24, 1983	-5.64
NOV 16	-4.59	MAR 22	-2.49	JUN 23	-3.82	SEP 21	-5.56
DEC 28	-3.16	APR 12	-3.51	JUL 26	-0.90		

WELL 030N006W10K02M

SITE NUMBER 402753122313802

14.2 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 925 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 0.32 FEET ABOVE LAND SURFACE DATUM FEB 28, 1984.

LOWEST WATER LEVEL 6.87 FEET BELOW LAND SURFACE DATUM SEP 14, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	0.74	DEC 28, 1982	0.00	MAY 18, 1983	0.1	AUG 24, 1983	1.84
NOV 16	0.63	FEB 24, 1983	0.98	JUL 26	0.9	SEP 21	2.14

WELL 030N006W15P01M

SITE NUMBER 402654122314601

13.9 MI NORTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 925 FT. RECORDS AVAILABLE
JULY 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 72.76 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 99.11 FEET BELOW LAND SURFACE DATUM JUL 25, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	93.02	FEB 24, 1983	74.68	MAY 18, 1983	95.33	AUG 24, 1983	83.86
NOV 16	87.14	MAR 22	72.76	JUN 23	97.20	SEP 21	93.17
DEC 28	79.69	APR 12	76.02	JUL 26	95.80		

SHASTA COUNTY--Continued

Redding Basin (5-6)

WELL 030N007W12Q01M

SITE NUMBER 402739122355701

17.8 MI NORTHWEST OF COTTONWOOD. UNUSED WELL. ALTITUDE OF LSD 920 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 25.64 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 50.23 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	48.69	FEB 24, 1983	33.60	MAY 19, 1983	25.86	AUG 24, 1983	38.35
NOV 16	50.23	MAR 22	25.64	JUN 23	30.92	SEP 21	43.69
DEC 28	47.77	APR 12	26.25	JUL 26	35.89		

WELL 031N004W16H01M

SITE NUMBER 403242122185001

4 MI SOUTHEAST OF REDDING. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 5 IN, DEPTH 140 FT, PERFORATED 70-140 FT. ALTITUDE OF LSD 512 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1969 TO CURRENT YEAR.

HIGHEST WATER LEVEL 94.5 FEET BELOW LAND SURFACE DATUM MAR 28, 1983.

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
OCT 12, 1982	113.0	MAR 28, 1983	94.5

Fall River Valley (5-5)

WELL 037N004E11A01M

SITE NUMBER 410342121281001

4 MI WEST OF MCARTHUR. DOMESTIC WATER-TABLE WELL. DIAM 6 IN, DEPTH 185 FT, PERFORATED 74-94 FT. ALTITUDE OF LSD 3310 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1959 TO CURRENT YEAR.

HIGHEST WATER LEVEL 26.2 FEET BELOW LAND SURFACE DATUM APR 14, 1983.

LOWEST WATER LEVEL 56.3 FEET BELOW LAND SURFACE DATUM OCT 06, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
APR 14, 1983	26.2

SIERRA COUNTY

Sierra Valley (5-12)

WELL 020N014E13Q02M

SITE NUMBER 393448120221001

0.4 MI NORTHWEST OF SIERRAVILLE. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 31 FT. ALTITUDE OF LSD 4986 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. 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	DATE	WATER LEVEL
OCT 05, 1982	2.4	APR 12, 1983	2.6

GROUND WATER
SISKIYOU COUNTY
 Shasta Valley (1-4)

WELL 042N005W20J01M

SITE NUMBER 412818122261801

1.6 MI NORTHWEST OF EDGEWOOD. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 40 FT.
 ALTITUDE OF LSD 2892 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
 RECORDS AVAILABLE 1953 TO CURRENT YEAR.

HIGHEST WATER LEVEL 2.0 FEET BELOW LAND SURFACE DATUM OCT 03, 1972.

LOWEST WATER LEVEL 9.10 FEET BELOW LAND SURFACE DATUM MAR 27, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	6.7	APR 11, 1983	7.6

Scott River Valley (1-5)

WELL 043N009W24F01M

SITE NUMBER 413348122495001

4 MI EAST OF GREENVIEW. CABLE TOOL IRRIGATION WATER-TABLE WELL. DIAM 16 IN, DEPTH 204 FT,
 PERFORATED 18-200 FT. ALTITUDE OF LSD 2735 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT
 OF WATER RESOURCES. RECORDS AVAILABLE 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 1.8 FEET BELOW LAND SURFACE DATUM APR 10, 1974.

LOWEST WATER LEVEL 20.0 FEET BELOW LAND SURFACE DATUM OCT 07, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	8.5	APR 11, 1983	2.9

Shasta Valley (1-4)

WELL 044N006W27B01M

SITE NUMBER 413823122311401

0.8 MI SOUTH OF GRENADE. HYDRAULIC ROTARY DOMESTIC WATER-TABLE WELL. DIAM 6 IN, DEPTH 110 FT,
 PERFORATED 50-110 FT. ALTITUDE OF LSD 2560 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT
 OF WATER RESOURCES. RECORDS AVAILABLE 1975 TO CURRENT YEAR.

HIGHEST WATER LEVEL 10.9 FEET BELOW LAND SURFACE DATUM APR 20, 1982.

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 13, 1982	11.4	APR 11, 1983	12.7

Butte Valley (1-3)

WELL 045N001W06A01M

SITE NUMBER 414641122001201

1.2 MI SOUTH OF MT. HEBRON. CABLE TOOL IRRIGATION WATER-TABLE WELL. DIAM 16 IN, DEPTH 40 FT.
 ALTITUDE OF LSD 4257 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
 RECORDS AVAILABLE 1971 TO CURRENT YEAR.

HIGHEST WATER LEVEL 24.7 FEET BELOW LAND SURFACE DATUM OCT 28, 1971.

LOWEST WATER LEVEL 73.8 FEET BELOW LAND SURFACE DATUM OCT 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	45.3	APR 12, 1983	33.0

SISKIYOU COUNTY--Continued

Butte Valley (1-3)

WELL 047N001E20D01M

SITE NUMBER 415428121534001

4 MI SOUTH OF DORRIS. CABLE TOOL IRRIGATION WATER-TABLE WELL. DIAM 16 IN, DEPTH 240 FT, PERFORATED 60-240 FT. ALTITUDE OF LSD 4240 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1971 TO CURRENT YEAR.

HIGHEST WATER LEVEL 21.6 FEET BELOW LAND SURFACE DATUM MAR 30, 1972.

LOWEST WATER LEVEL 38.8 FEET BELOW LAND SURFACE DATUM OCT 08, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 12, 1983	31.1	MAY 11, 1983	30.5

WELL 047N001W27B01M

SITE NUMBER 415339121574901

4.8 MI NORTHEAST OF MACDOEL. CABLE TOOL UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 2 IN, DEPTH 40 FT, PERFORATED 30-40 FT. ALTITUDE OF LSD 4233 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. 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 14, 1982	9.2	APR 12, 1983	6.7

SOLANO COUNTY

Sacramento Valley (5-21)

WELL 006N002E19J01M

SITE NUMBER 382103121470901

6 MI EAST OF ELMIRA. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 5 IN, DEPTH 182 FT. ALTITUDE OF LSD 23 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1974 TO CURRENT YEAR.

HIGHEST WATER LEVEL 2.0 FEET BELOW LAND SURFACE DATUM MAR 21, 1983.

LOWEST WATER LEVEL 30.4 FEET BELOW LAND SURFACE DATUM OCT 05, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1982	11.6	MAR 21, 1983	2.0

WELL 007N001E33R01M

SITE NUMBER 382419121513301

4 MI SOUTHWEST OF DIXON. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 86 FT. ALTITUDE OF LSD 86 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES, U.S. GEOLOGICAL SURVEY, U.S. BUREAU OF RECLAMATION. RECORDS AVAILABLE 1941 TO CURRENT YEAR.

HIGHEST WATER LEVEL 0.7 FEET BELOW LAND SURFACE DATUM MAR 17, 1983.

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 12, 1982	8.9	JAN 25, 1983	3.4	APR 20, 1983	3.9	JUL 28, 1983	4.5
NOV 24	8.7	FEB 23	2.1	MAY 26	4.6	AUG 25	5.0
DEC 14	6.8	MAR 17	0.7	JUN 28	3.8		

GROUND WATER

SUTTER COUNTY

Sacramento Valley (5-21)

WELL 012N003E02G01M

SITE NUMBER 385S01121361901

1.7 MI NORTHWEST OF NICOLAUS. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 3 IN, DEPTH 1081 FT, CASED TO 1081 FT, SCREENED 1066-1071 FT. ALTITUDE OF LSD 32.54 FT. RECORDS AVAILABLE 1980 TO CURRENT YEAR. RECORDER INSTALLED 1980.

HIGHEST WATER LEVEL 12.55 FEET BELOW LAND SURFACE DATUM MAY 14, 1983; MAY 16, 1983.

LOWEST WATER LEVEL 33.88 FEET BELOW LAND SURFACE DATUM SEP 09, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	25.59	DEC 06, 1982	20.25	JAN 15, 1983	18.41	FEB 24, 1983	15.72
02	25.54	07	20.26	16	18.32	25	15.67
03	25.44	08	20.25	17	18.26	26	15.62
04	25.33	09	20.20	18	18.19	27	15.54
05	25.21	10	20.15	19	18.12	28	15.40
06	25.10	11	20.17	20	18.05	MAR 01	15.19
07	25.01	12	20.20	21	17.98	02	14.88
08	24.97	13	20.19	22	17.91	03	14.54
09	24.88	14	20.18	23	17.81	04	14.21
10	24.78	15	20.16	24	17.66	05	14.16
11	24.68	16	20.11	25	17.48	06	14.24
12	24.58	17	20.06	26	17.22	07	14.38
13	24.49	18	20.03	27	16.92	08	14.50
14	24.42	19	19.94	28	16.68	09	14.56
15	24.34	20	19.76	29	16.44	10	14.56
16	24.26	21	19.56	30	16.30	11	14.56
17	24.19	22	19.24	31	16.42	12	14.56
18	24.10	23	18.85	FEB 01	16.41	13	14.52
19	23.99	24	18.57	02	16.42	14	14.36
20	23.88	25	18.42	03	16.46	15	14.17
21	23.77	26	18.37	04	16.49	16	14.03
22	23.67	27	18.40	05	16.53	17	13.94
23	23.58	28	18.46	06	16.55	18	13.89
24	23.49	29	18.52	07	16.53	19	13.94
25	23.38	30	18.54	08	16.45	20	14.10
26	23.28	31	20.19	09	16.32	21	14.23
27	23.22	JAN 01, 1983	18.71	10	16.14	22	14.29
28	23.15	02	18.81	11	16.01	23	14.33
29	23.04	03	18.86	12	15.96	24	14.27
30	22.90	04	18.88	13	15.90	25	14.21
31	22.81	05	18.88	14	15.84	26	14.20
NOV 01	22.80	06	18.86	15	15.77	27	14.19
02	22.72	07	18.79	16	15.74	28	14.18
03	22.66	08	18.70	17	15.76	29	14.17
04	22.58	09	18.62	18	15.77	30	14.16
05	22.50	10	18.62	19	15.84	31	14.16
DEC 02	20.18	11	18.64	20	15.91	APR 01	14.16
03	20.13	12	18.59	21	15.91	02	14.11
04	20.10	13	18.53	22	15.88	03	14.05
05	20.17	14	18.48	23	15.80	04	13.99

SUTTER COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N003E02G01M SITE NUMBER 385501121361901--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 05, 1983	13.94	MAY 20, 1983	12.64	JUL 04, 1983	15.87	AUG 18, 1983	18.65
06	13.93	21	12.67	05	15.90	19	18.70
07	13.94	22	12.68	06	15.96	20	18.76
08	13.94	23	12.68	07	16.04	21	18.85
09	13.95	24	12.68	08	16.14	22	18.91
10	13.97	25	12.68	09	16.25	23	18.96
11	14.00	26	12.72	10	16.33	24	18.99
12	14.00	27	12.80	11	16.35	25	19.01
13	14.02	28	12.88	12	16.38	26	19.04
14	14.05	29	13.00	13	16.43	27	19.06
15	14.05	30	13.11	14	16.47	28	19.07
16	14.05	31	13.20	15	16.53	29	19.09
17	13.99	JUN 01	13.29	16	16.59	30	19.11
18	13.91	02	13.40	17	16.65	31	19.14
19	13.86	03	13.58	18	16.73	SEP 01	19.19
20	13.81	04	13.70	19	16.91	02	19.21
21	13.78	05	13.81	20	17.12	03	19.21
22	13.80	06	13.91	21	17.22	04	19.19
23	13.79	07	14.00	22	17.27	05	19.17
24	13.75	08	14.10	23	17.30	06	19.17
25	13.69	09	14.22	24	17.32	07	19.18
26	13.62	10	14.34	25	17.32	08	19.21
27	13.55	11	14.45	26	17.36	09	19.27
28	13.50	12	14.54	27	17.40	10	19.33
29	13.41	13	14.62	28	17.45	11	19.36
30	13.31	14	14.69	29	17.52	12	19.36
MAY 01	13.21	15	14.76	30	17.58	13	19.38
02	13.13	16	14.81	31	17.64	14	19.40
03	13.11	17	14.86	AUG 01	17.70	15	19.41
04	13.07	18	14.92	02	17.76	16	19.41
05	13.03	19	14.97	03	17.79	17	19.40
06	13.01	20	14.99	04	17.82	18	19.38
07	12.98	21	15.04	05	17.86	19	19.36
08	12.85	22	15.13	06	17.93	20	19.36
09	12.74	23	15.22	07	18.00	21	19.36
10	12.66	24	15.30	08	18.05	22	19.34
11	12.63	25	15.34	09	18.10	23	19.33
12	12.60	26	15.35	10	18.17	24	19.31
13	12.57	27	15.40	11	18.24	25	19.28
14	12.55	28	15.48	12	18.31	26	19.23
15	12.56	29	15.53	13	18.34	27	19.19
16	12.55	30	15.57	14	18.40	28	19.13
17	12.56	JUL 01	15.66	15	18.46	29	19.05
18	12.59	02	15.75	16	18.52	30	18.97
19	12.62	03	15.82	17	18.57		

GROUND WATER

SUTTER COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N003E02G02M

SITE NUMBER 385501121361902

1.7 MI NORTHWEST OF NICOLAUS. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM.
 DIAM 3 IN, DEPTH 721 FT, CASED TO 711 FT, SCREENED 706-711 FT. ALTITUDE OF LSD 32.54 FT. RECORDS
 AVAILABLE 1980 TO CURRENT YEAR. RECORDER INSTALLED 1980.

HIGHEST WATER LEVEL 10.84 FEET BELOW LAND SURFACE DATUM MAY 13, 1983; MAY 14, 1983;
 MAY 15, 1983.

LOWEST WATER LEVEL 26.94 FEET BELOW LAND SURFACE DATUM SEP 08, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	21.32	NOV 25, 1982	18.10	JAN 03, 1983	16.16	FEB 11, 1983	13.41
02	21.24	26	18.07	04	16.18	12	13.33
03	21.14	27	18.01	05	16.17	13	13.29
04	21.07	28	17.90	06	16.16	14	13.23
05	21.00	29	17.79	07	16.14	15	13.12
06	20.92	30	17.59	08	16.11	16	13.08
07	20.89	DEC 01	17.62	09	16.06	17	13.07
08	20.82	02	17.50	10	16.04	18	13.02
09	20.75	03	17.46	11	16.00	19	13.11
10	20.67	04	17.37	12	15.95	20	13.13
11	20.59	05	17.30	13	15.91	21	13.13
12	20.52	06	17.29	14	15.85	22	13.10
13	20.46	07	17.29	15	15.77	23	13.02
14	20.40	08	17.26	16	15.67	24	12.99
15	20.36	09	17.21	17	15.64	25	12.92
NOV 01	19.34	10	17.20	18	15.53	26	12.90
02	19.32	11	17.24	19	15.50	27	12.81
03	19.28	12	17.20	20	15.48	28	12.66
04	19.22	13	17.16	21	15.45	MAR 01	12.43
05	19.15	14	17.16	22	15.28	02	12.16
06	19.10	15	17.14	23	15.18	03	11.89
07	19.03	16	17.07	24	15.12	04	11.64
08	18.97	17	17.05	25	15.02	05	11.58
09	18.91	18	17.02	26	14.64	06	11.57
10	18.88	19	16.93	27	14.43	07	11.60
11	18.91	20	16.78	28	14.20	08	11.68
12	18.88	21	16.58	29	13.98	09	11.75
13	18.81	22	16.30	30	13.80	10	11.78
14	18.78	23	16.14	31	13.66	11	11.82
15	18.74	24	15.94	FEB 01	13.66	12	11.85
16	18.65	25	15.70	02	13.65	13	11.78
17	18.53	26	15.54	03	13.69	14	11.72
18	18.37	27	15.54	04	13.76	15	11.60
19	18.35	28	15.57	05	13.80	16	11.42
20	18.34	29	15.73	06	13.83	17	11.29
21	18.30	30	15.78	07	13.80	18	11.24
22	18.17	31	15.92	08	13.75	19	11.31
23	18.12	JAN 01, 1983	16.03	09	13.69	20	11.39
24	18.10	02	16.12	10	13.56	21	11.45

SUTTER COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N003E02G02M SITE NUMBER 385501121361902--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 22, 1983	11.53	MAY 10, 1983	10.93	JUN 28, 1983	13.26	AUG 16, 1983	15.81
23	11.61	11	10.92	29	13.29	17	15.85
24	11.58	12	10.88	30	13.37	18	15.90
25	11.59	13	10.84	JUL 01	13.42	19	15.99
26	11.57	14	10.84	02	13.50	20	16.06
27	11.55	15	10.84	03	13.56	21	16.11
28	11.58	16	10.95	04	13.60	22	16.19
29	11.58	17	10.88	05	13.65	23	16.23
30	11.59	18	10.92	06	13.73	24	16.27
31	11.59	19	10.94	07	13.82	25	16.32
APR 01	11.60	20	10.98	08	13.94	26	16.37
02	11.57	21	11.01	09	14.02	27	16.39
03	11.54	22	11.02	10	14.08	28	16.41
04	11.47	23	11.03	11	14.10	29	16.43
05	11.43	24	11.03	12	14.15	30	16.44
06	11.42	25	11.03	13	14.19	31	16.44
07	11.42	26	11.03	14	14.25	SEP 01	16.59
08	11.42	27	11.06	15	14.31	02	16.59
09	11.44	28	11.10	16	14.34	03	16.58
10	11.49	29	11.18	17	14.41	04	16.54
11	11.50	30	11.21	18	14.49	05	16.52
12	11.50	31	11.25	19	14.58	06	16.53
13	11.56	JUN 01	11.32	20	14.66	07	16.54
14	11.61	02	11.42	21	14.69	08	16.58
15	11.62	03	11.55	22	14.75	09	16.63
16	11.62	04	11.61	23	14.83	10	16.67
17	11.58	05	11.68	24	14.87	11	16.69
18	11.54	06	11.75	25	14.92	12	16.68
19	11.54	07	11.82	26	14.98	13	16.70
20	11.48	08	11.92	27	15.03	14	16.73
21	11.50	09	12.04	28	15.10	15	16.75
22	11.53	10	12.12	29	15.17	16	16.75
23	11.48	11	12.18	30	15.22	17	16.75
24	11.44	12	12.26	31	15.27	18	16.74
25	11.43	13	12.35	AUG 01	15.32	19	16.74
26	11.39	14	12.39	02	15.32	20	16.76
27	11.36	15	12.46	03	15.35	21	16.77
28	11.27	16	12.50	04	15.39	22	16.77
29	11.23	17	12.57	05	15.44	23	16.79
30	11.19	18	12.65	06	15.46	24	16.80
MAY 01	11.15	19	12.68	07	15.48	25	16.80
02	11.10	20	12.70	08	15.51	26	16.78
03	11.06	21	12.80	09	15.53	27	16.77
04	10.99	22	12.89	10	15.56	28	16.73
05	10.97	23	12.98	11	15.59	29	16.67
06	10.98	24	13.04	12	15.61	30	16.62
07	10.98	25	13.08	13	15.64		
08	10.96	26	13.10	14	15.71		
09	10.94	27	13.20	15	15.76		

SUTTER COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N003E02G03H

SITE NUMBER 385501121361903

1.7 MI NORTHWEST OF NICOLAUS. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM.
 DIAM 3 IN, DEPTH 321 FT, CASED TO 311 FT, SCREENED 306-311 FT. ALTITUDE OF LSD 32.54 FT.
 RECORDS AVAILABLE 1980 TO CURRENT YEAR. RECORDER INSTALLED 1980.

HIGHEST WATER LEVEL 0.62 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 11.31 FEET BELOW LAND SURFACE DATUM DEC 24, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	8.79	NOV 10, 1982	9.22	DEC 20, 1982	6.82	JAN 29, 1983	3.68
02	8.75	11	9.41	21	6.73	30	3.44
03	8.70	12	9.36	22	6.16	31	3.19
04	8.74	13	9.29	23	6.42	FEB 01	3.04
05	8.79	14	9.36	24	6.01	02	2.91
06	8.80	15	9.29	25	5.52	03	2.95
07	8.91	16	9.22	26	5.18	04	3.05
08	8.95	17	9.10	27	5.02	05	3.13
09	8.96	18	9.00	28	4.96	06	3.13
10	8.97	19	9.16	29	4.89	07	3.02
11	8.98	20	9.08	30	4.83	08	3.07
12	8.99	21	8.90	31	4.96	09	2.97
13	9.04	22	8.68	JAN 01, 1983	5.08	10	2.83
14	9.06	23	8.54	02	5.16	11	2.64
15	9.15	24	8.43	03	5.24	12	2.59
16	9.18	25	8.34	04	5.29	13	2.65
17	9.20	26	8.20	05	5.34	14	2.56
18	9.22	27	8.07	06	5.44	15	2.35
19	9.25	28	7.86	07	5.50	16	2.36
20	9.34	29	7.62	08	5.56	17	2.34
21	9.35	30	7.44	09	5.60	18	2.28
22	9.36	DEC 01	7.54	10	5.72	19	2.51
23	9.38	02	7.48	11	5.74	20	2.52
24	9.36	03	7.34	12	5.78	21	2.54
25	9.34	04	7.09	13	5.85	22	2.50
26	9.40	05	6.94	14	5.87	23	2.45
27	9.52	06	6.86	15	5.84	24	2.55
28	9.43	07	6.83	16	5.84	25	2.56
29	9.29	08	6.72	17	5.92	26	2.58
30	9.23	09	6.64	18	5.86	27	2.51
31	9.36	10	6.78	19	5.96	28	2.37
NOV 01	9.32	11	6.90	20	5.86	MAR 01	2.14
02	9.31	12	6.83	21	5.82	02	1.92
03	9.30	13	6.92	22	5.70	03	1.67
04	9.24	14	6.96	23	5.54	04	1.61
05	9.21	15	6.97	24	5.34	05	1.54
06	9.16	16	6.96	25	5.06	06	1.49
07	9.08	17	7.04	26	4.56	07	1.50
08	9.07	18	7.05	27	4.34	08	1.50
09	9.08	19	6.96	28	3.96	09	1.45

SUTTER COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N003E02G03M SITE NUMBER 385501121361903--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 10, 1983	1.44	MAY 10, 1983	3.56	JUN 27, 1983	5.80	AUG 14, 1983	7.64
11	1.52	11	0.62	28	5.83	15	7.67
12	1.52	12	3.61	29	5.82	16	7.70
13	1.42	13	3.64	30	5.86	17	7.70
14	1.43	14	3.76	JUL 01	6.01	18	7.76
15	1.29	15	3.81	02	6.12	19	7.84
16	1.04	16	3.84	03	6.19	20	7.85
17	0.96	17	3.90	04	6.21	21	7.85
18	0.97	18	3.94	05	6.18	22	7.87
APR 01	2.05	19	3.99	06	6.32	23	7.85
02	2.10	20	4.12	07	6.48	24	7.87
03	2.13	21	4.21	08	6.64	25	7.90
04	2.15	22	4.30	09	6.76	26	7.87
05	2.27	23	4.42	10	6.70	27	7.84
06	2.42	24	4.54	11	6.65	28	7.78
07	2.52	25	4.60	12	6.69	29	7.80
08	2.64	26	4.66	13	6.66	30	7.84
09	2.78	27	4.76	14	6.58	31	7.89
10	2.90	28	4.91	15	6.52	SEP 01	7.98
11	2.98	29	5.08	16	6.48	02	7.95
12	3.07	30	5.04	17	6.54	03	7.95
13	3.25	31	5.02	18	6.57	04	8.00
14	3.37	JUN 01	5.07	19	6.68	05	8.10
15	3.44	02	5.15	20	6.78	06	8.24
16	3.49	03	5.08	21	6.78	07	8.27
17	3.49	04	5.06	22	6.82	08	8.27
18	3.58	05	5.03	23	6.87	09	8.28
19	3.70	06	4.98	24	6.86	10	8.17
20	3.76	07	4.93	25	6.96	11	8.09
21	3.96	08	4.99	26	7.06	12	8.05
22	4.10	09	5.03	27	7.12	13	8.08
23	4.06	10	5.05	28	7.22	14	8.12
24	4.11	11	5.04	29	7.26	15	8.12
25	4.14	12	5.07	30	7.21	16	8.15
26	4.06	13	5.08	31	7.18	17	8.19
27	4.03	14	5.16	AUG 01	7.14	18	8.21
28	3.98	15	5.31	02	7.16	19	8.30
29	3.91	16	5.31	03	7.11	20	8.39
30	3.83	17	5.42	04	7.11	21	8.41
MAY 01	3.76	18	5.55	05	7.11	22	8.44
02	3.72	19	5.50	06	7.07	23	8.51
03	3.57	20	5.39	07	7.12	24	8.48
04	3.43	21	6.78	08	7.20	25	8.47
05	3.45	22	5.50	09	7.33	26	8.44
06	3.57	23	5.56	10	7.47	27	8.46
07	3.55	24	5.60	11	7.58	28	8.41
08	3.54	25	5.59	12	7.58	29	8.42
09	3.52	26	5.64	13	7.56	30	8.52

TEHAMA COUNTY

Sacramento Valley (5-21)

WELL 024N003W14K01M

SITE NUMBER 395556122100201

0.4 MI NORTH OF CORNING. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 7 IN, DEPTH 124 FT, PERFORATED 118-124 FT. ALTITUDE OF LSD 297 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1955 TO CURRENT YEAR.

HIGHEST WATER LEVEL 43.4 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

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 06, 1982	57.2	MAR 22, 1983	43.4

WELL 025N003W08E01M

SITE NUMBER 400225122134901

4.5 MI WEST OF TEHAMA. CABLE TOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 14-12 IN, DEPTH 420 FT, 14-IN CSG 0-144 FT, 12-IN CSG 144-420 FT, PERFORATED 55-134, 149-420 FT. ALTITUDE OF LSD 420 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 18.7 FEET BELOW LAND SURFACE DATUM MAR 17, 1980.

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
OCT 04, 1982	48.7	MAR 24, 1983	33.5

WELL 026N003W04K01M

SITE NUMBER 400757122122201

3.2 MI SOUTHEAST OF RED BLUFF. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 12 IN, DEPTH 149 FT. ALTITUDE OF LSD 300 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1929 TO CURRENT YEAR.

HIGHEST WATER LEVEL 46.0 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 102.8 FEET BELOW LAND SURFACE DATUM OCT 18, 1963.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
MAR 22, 1983	46.0

Redding Basin (5-6)

WELL 028N004W08K01M

SITE NUMBER 401734122202201

7.2 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 565 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 126.77 FEET BELOW LAND SURFACE DATUM APR 24, 1984.

LOWEST WATER LEVEL 138.58 FEET BELOW LAND SURFACE DATUM MAY 20, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	129.96	FEB 28, 1983	128.19	MAY 20, 1983	138.58	AUG 25, 1983	134.33
NOV 18	133.48	MAR 23	128.09	JUN 24	127.74		
DEC 29	138.13	APR 13	132.98	JUL 26	131.13		

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 028N004W09C01M

SITE NUMBER 401805122191901

6.2 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 595 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 169.18 FEET BELOW LAND SURFACE DATUM APR 24, 1984.

LOWEST WATER LEVEL 182.19 FEET BELOW LAND SURFACE DATUM NOV 18, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	177.44	FEB 28, 1983	177.83	JUN 24, 1983	169.35	SEP 22, 1983	169.57
NOV 18	182.19	MAR 23	176.08	JUL 27	169.51		
DEC 29	176.50	APR 13	178.36	AUG 25	173.76		

WELL 028N005W01P01M

SITE NUMBER 401817122224201

7.7 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 645 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 133.14 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 166.28 FEET BELOW LAND SURFACE DATUM JUL 27, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	141.87	FEB 28, 1983	141.64	MAY 17, 1983	167.42 P	AUG 25, 1983	154.71
NOV 18	140.22	MAR 23	133.14	JUN 24	151.83	SEP 22	151.64
DEC 29	144.68	APR 13	151.83 P	JUL 27	166.28		

WELL 028N005W05G01M

SITE NUMBER 401846122270501

10.5 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 570 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 81.16 FEET BELOW LAND SURFACE DATUM MAY 17, 1983.

LOWEST WATER LEVEL 94.94 FEET BELOW LAND SURFACE DATUM JUL 21, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	86.07	FEB 25, 1983	85.34	MAY 17, 1983	81.16	AUG 25, 1983	89.30
NOV 17	90.98	MAR 23	81.32	JUN 24	84.79	SEP 26	93.35 P
DEC 28	86.86	APR 13	81.39	JUL 27	86.27		

WELL 028N005W09F01M

SITE NUMBER 401754122261401

10.3 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 730 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 192.93 FEET BELOW LAND SURFACE DATUM MAR 19, 1984.

LOWEST WATER LEVEL 210.99 FEET BELOW LAND SURFACE DATUM APR 24, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	204.12	FEB 28, 1983	203.06	MAY 17, 1983	202.74	AUG 25, 1983	197.96
NOV 18	206.47	MAR 23	195.50	JUN 24	201.25	SEP 22	194.36
DEC 29	209.77	APR 13	201.58	JUL 27	196.34		

P Pumping.

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 028N005W10B01M

SITE NUMBER 401803122244601

9.2 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 720 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 267.03 FEET BELOW LAND SURFACE DATUM MAR 19, 1984.

LOWEST WATER LEVEL 287.90 FEET BELOW LAND SURFACE DATUM DEC 29, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	286.24	FEB 28, 1983	276.80	MAY 18, 1983	273.73	AUG 25, 1983	280.65
NOV 18	272.07	MAR 23	274.79	JUN 24	273.29	SEP 22	279.83
DEC 29	287.90	APR 13	277.28	JUL 26	276.36		

WELL 028N005W11D01M

SITE NUMBER 401803122240401

8.8 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 725 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 240.81 FEET BELOW LAND SURFACE DATUM MAR 19, 1984.

LOWEST WATER LEVEL 253.47 FEET BELOW LAND SURFACE DATUM AUG 29, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	246.00	MAR 23, 1983	243.08	JUN 24, 1983	246.22	SEP 22, 1983	249.61
NOV 18	250.35	APR 13	248.62	JUL 26	249.28		
FEB 28, 1983	242.18	MAY 17	246.97	AUG 25	251.71		

WELL 028N005W14F01M

SITE NUMBER 401659122235501

9.5 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 710 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 201.11 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 226.78 FEET BELOW LAND SURFACE DATUM NOV 23, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	223.19	MAR 23, 1983	201.11	JUN 24, 1983	211.67	SEP 21, 1983	219.13
NOV 18	225.61	APR 13	212.98	JUL 27	216.53		
FEB 25, 1983	201.90	MAY 18	226.68	AUG 25	219.91		

WELL 028N005W27D01M

SITE NUMBER 401525122252301

11.6 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 813 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 262.72 FEET BELOW LAND SURFACE DATUM NOV 18, 1982.

LOWEST WATER LEVEL 287.5 FEET BELOW LAND SURFACE DATUM JUL 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	276.10	FEB 28, 1983	278.58	MAY 20, 1983	275.58	AUG 25, 1983	279.98
NOV 18	262.72	MAR 23	272.09	JUN 24	275.51	SEP 22	275.39
DEC 29	276.20	APR 13	275.67	JUL 27	277.48		

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W14J01H

SITE NUMBER 402201122163301

1.4 MI SOUTH OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 412 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 21.26 FEET BELOW LAND SURFACE DATUM MAY 14, 1984.

LOWEST WATER LEVEL 25.38 FEET BELOW LAND SURFACE DATUM AUG 21, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 26, 1982	22.82

WELL 029N004W15K01H

SITE NUMBER 402203122175401

1.7 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 420 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 8.50 FEET BELOW LAND SURFACE DATUM JAN 25, 1983.

LOWEST WATER LEVEL 28.30 FEET BELOW LAND SURFACE DATUM JUN 09, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	10.68	JAN 25, 1983	8.50	APR 12, 1983	10.93	JUL 26, 1983	9.54
NOV 17	12.97	FEB 24	9.29	MAY 20	11.55	AUG 24	9.45
DEC 28	9.34	MAR 22	8.95	JUN 23	9.94	SEP 21	14.95

WELL 029N004W16P02H

SITE NUMBER 402140122192801

2.9 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 441 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 26.83 FEET BELOW LAND SURFACE DATUM DEC 22, 1983.

LOWEST WATER LEVEL 38.62 FEET BELOW LAND SURFACE DATUM SEP 21, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	33.93	JAN 27, 1983	30.28	APR 12, 1983	29.87	JUL 26, 1983	35.78
NOV 17	37.47	FEB 24	29.29	MAY 20	32.12	AUG 24	35.23
DEC 28	34.48	MAR 22	28.37	JUN 23	32.82	SEP 21	38.62

WELL 029N004W18J01H

SITE NUMBER 402201122210201

4.1 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 456 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 27.64 FEET BELOW LAND SURFACE DATUM FEB 22, 1984.

LOWEST WATER LEVEL 42.32 FEET BELOW LAND SURFACE DATUM OCT 19, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	35.24	FEB 24, 1983	30.67	MAY 18, 1983	28.27	AUG 25, 1983	32.13
NOV 18	38.33	MAR 23	27.83	JUN 24	30.60	SEP 26	38.54
DEC 29	30.95	APR 12	28.56	JUL 27	31.89		

GROUND WATER
TEHAMA COUNTY--Continued
 Redding Basin (5-6)

WELL 029N004W19J01M

SITE NUMBER 402104122210001

4.5 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 463 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 23.91 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 31.69 FEET BELOW LAND SURFACE DATUM SEP 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	31.12	JAN 27, 1983	26.22	APR 13, 1983	23.93	JUL 26, 1983	30.67
NOV 17	29.77	FEB 24	23.93	MAY 20	24.97	AUG 24	29.19
DEC 28	26.86	MAR 22	23.91	JUN 23	28.22	SEP 21	28.85

WELL 029N004W19N01M

SITE NUMBER 402051122215801

5.3 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 468 FT. RECORDS AVAILABLE SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 25.54 FEET BELOW LAND SURFACE DATUM MAY 20, 1983.

LOWEST WATER LEVEL 37.48 FEET BELOW LAND SURFACE DATUM SEP 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	31.44	FEB 24, 1983	26.83	MAY 20, 1983	25.54	AUG 25, 1983	31.39
NOV 18	30.20	MAR 23	25.72	JUN 24	29.30	SEP 26	32.65
DEC 29	29.31	APR 12	27.05	JUL 27	29.56		

WELL 029N004W19N02M

SITE NUMBER 402051122215802

5.3 MI SOUTHWEST OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 468 FT. RECORDS AVAILABLE SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 25.01 FEET BELOW LAND SURFACE DATUM MAY 20, 1983.

LOWEST WATER LEVEL 43.27 FEET BELOW LAND SURFACE DATUM SEP 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	31.67	FEB 25, 1983	27.32	MAY 20, 1983	25.01	AUG 25, 1983	32.17
NOV 18	30.57	MAR 23	26.19	JUN 24	30.39	SEP 26	32.37
DEC 29	29.68	APR 12	26.73	JUL 27	30.55		

WELL 029N004W19R02M

SITE NUMBER 402057122210801

4.7 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 492 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 57.07 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 69.83 FEET BELOW LAND SURFACE DATUM MAY 14, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	63.08	FEB 24, 1983	62.50	MAY 16, 1983	60.45	AUG 24, 1983	61.03
NOV 17	62.45	MAR 22	57.50	JUN 23	66.11	SEP 21	62.12
DEC 28	60.95	APR 13	57.72	JUL 26	69.32		

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W20B01M

SITE NUMBER 402135122201701

3.6 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 448 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 40.29 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 47.76 FEET BELOW LAND SURFACE DATUM AUG 22, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	44.96	JAN 27, 1983	42.29	APR 12, 1983	41.45	JUL 26, 1983	43.49
NOV 17	43.96	FEB 24	41.47	MAY 18	40.68	AUG 24	43.27
DEC 28	43.34	MAR 22	40.78	JUN 23	42.31	SEP 21	44.69

WELL 029N004W21N03M

SITE NUMBER 402050122194201

3.8 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 518 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 93.82 FEET BELOW LAND SURFACE DATUM FEB 22, 1984.

LOWEST WATER LEVEL 114.28 FEET BELOW LAND SURFACE DATUM MAY 20, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	98.79	JAN 27, 1983	102.70	APR 12, 1983	115.26 P	JUL 26, 1983	104.79
NOV 17	98.59	FEB 24	103.57	MAY 20	114.28	AUG 24	106.21
DEC 28	103.11	MAR 22	106.30	JUN 23	97.10	SEP 21	106.85

WELL 029N004W22C02M

SITE NUMBER 402131122181501

2.5 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 490 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 91.04 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 100.41 FEET BELOW LAND SURFACE DATUM OCT 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	96.77	JAN 25, 1983	97.56	APR 12, 1983	96.02	JUL 26, 1983	95.24
NOV 17	98.13	FEB 24	97.39	MAY 20	94.47	AUG 24	94.96
DEC 28	95.68	MAR 22	91.04	JUN 23	93.81	SEP 21	96.18

WELL 029N004W23M01M

SITE NUMBER 402102122171601

2.6 MI SOUTH OF COTTONWOOD. STOCK WELL. ALTITUDE OF LSD 455 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 61.72 FEET BELOW LAND SURFACE DATUM MAR 22, 1983.

LOWEST WATER LEVEL 66.88 FEET BELOW LAND SURFACE DATUM NOV 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	65.96	JAN 25, 1983	62.38	APR 12, 1983	63.21	JUL 26, 1983	63.42
NOV 17	66.88	FEB 24	62.32	MAY 20	66.33	AUG 24	65.82
DEC 28	63.90	MAR 22	61.72	JUN 23	62.61	SEP 21	64.98

P Pumping.

GROUND WATER

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W28F01M

SITE NUMBER 402025122192601

3.9 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 468 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 32.24 FEET BELOW LAND SURFACE DATUM SEP 17, 1982.

LOWEST WATER LEVEL 47.65 FEET BELOW LAND SURFACE DATUM NOV 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	42.80	JAN 27, 1983	43.04	APR 12, 1983	34.71	JUL 26, 1983	36.96
NOV 17	47.65	FEB 24	38.03	MAY 20	37.38	AUG 24	37.17
DEC 28	43.54	MAR 22	35.42	JUN 23	35.17	SEP 21	37.82

WELL 029N004W29M01M

SITE NUMBER 402011122205101

5.0 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 560 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 110.15 FEET BELOW LAND SURFACE DATUM JAN 26, 1984.

LOWEST WATER LEVEL 141.73 FEET BELOW LAND SURFACE DATUM OCT 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	132.58	FEB 24, 1983	128.28	MAY 20, 1983	128.02	AUG 24, 1983	137.63
NOV 17	131.49	MAR 22	128.44	JUN 23	138.23 P	SEP 21	130.97
DEC 28	130.54	APR 13	127.74	JUL 26	139.38 P		

WELL 029N004W30M01M

SITE NUMBER 402016122215801

5.7 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 487 FT. RECORDS AVAILABLE SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 27.65 FEET BELOW LAND SURFACE DATUM SEP 16, 1982.

LOWEST WATER LEVEL 36.45 FEET BELOW LAND SURFACE DATUM MAY 15, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	36.4	FEB 25, 1983	29.91	MAY 16, 1983	29.86	AUG 24, 1983	33.96
NOV 17	35.7	MAR 22	28.14	JUN 23	31.81	SEP 21	34.27
DEC 28	33.77	APR 13	29.32	JUL 26	35.40		

WELL 029N004W30P01M

SITE NUMBER 401959122213201

5.5 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 550 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 115.88 FEET BELOW LAND SURFACE DATUM NOV 17, 1982.

LOWEST WATER LEVEL 136.15 FEET BELOW LAND SURFACE DATUM NOV 22, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	118.79	DEC 28, 1982	125.29	MAR 22, 1983	127.99	SEP 21, 1983	132.49
NOV 17	115.88	FEB 25, 1983	124.84				

P Pumping.

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N004W32M01M

SITE NUMBER 401920122204301

5.6 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 548 FT. RECORDS AVAILABLE SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 116.15 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 130.74 FEET BELOW LAND SURFACE DATUM MAY 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	122.66	FEB 25, 1983	126.56	MAY 16, 1983	130.74	AUG 24, 1983	119.29
NOV 17	123.94	MAR 22	123.91	JUN 23	117.31	SEP 21	127.74
DEC 28	127.91	APR 13	128.09	JUL 26	121.38		

WELL 029N005W09B01M

SITE NUMBER 402317122254701

8.1 MI WEST OF COTTONWOOD. UNUSED WELL. ALTITUDE OF LSD 533 FT. RECORDS AVAILABLE NOVEMBER 1982 TO CURRENT YEAR. RECORDER INSTALLED JULY 1983.

HIGHEST WATER LEVEL 61.35 FEET BELOW LAND SURFACE DATUM FEB 24, 1984.

LOWEST WATER LEVEL 68.31 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1982	68.31	JUL 21, 1983	67.32	AUG 11, 1983	67.44	SEP 01, 1983	64.75
DEC 27	67.45	22	67.47	12	67.44	02	64.85
FEB 24, 1983	67.68	23	67.41	13	65.28	03	64.94
MAR 22	66.72	24	67.39	14	64.87	08	64.78
APR 12	66.46	25	67.39	15	64.86	11	65.04
MAY 19	65.66	26	67.36	16	64.71	12	64.94
JUN 23	66.69	27	67.36	17	64.60	18	64.75
JUL 07	67.01	28	67.52	18	64.59	19	64.74
08	66.99	29	67.60	19	64.58	20	64.74
09	67.03	30	67.58	20	64.60	21	64.47
10	67.00	31	67.53	21	64.82	22	64.35
11	66.97	AUG 01	67.49	22	64.82	23	64.30
12	67.09	02	67.49	23	64.64	24	64.28
13	67.09	03	67.48	24	64.87	25	64.24
14	67.07	04	67.47	25	64.77	26	64.21
15	67.04	05	67.46	26	64.76	27	64.22
16	67.00	06	67.40	27	64.98	28	64.14
17	67.05	07	67.39	28	64.95	29	64.05
18	67.10	08	67.41	29	64.83	30	64.04
19	67.19	09	67.37	30	64.75		
20	67.21	10	67.39	31	64.72		

WELL 029N005W14D01M

SITE NUMBER 402222122240501

6.6 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 488 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 12.28 FEET BELOW LAND SURFACE DATUM APR 12, 1983.

LOWEST WATER LEVEL 26.82 FEET BELOW LAND SURFACE DATUM OCT 24, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	24.15	FEB 24, 1983	15.56	MAY 20, 1983	15.07	AUG 25, 1983	21.55
NOV 18	23.57	MAR 23	13.47	JUN 24	22.54	SEP 26	23.23
DEC 29	22.59	APR 12	12.28	JUL 27	21.58		

GROUND WATER

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005W14F01M

SITE NUMBER 402204122235501

6.5 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 495 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 17.37 FEET BELOW LAND SURFACE DATUM APR 12, 1983.

LOWEST WATER LEVEL 30.44 FEET BELOW LAND SURFACE DATUM SEP 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	29.87	FEB 24, 1983	21.32	MAY 18, 1983	19.41	AUG 25, 1983	27.60
NOV 18	28.07	MAR 23	19.60	JUN 24	25.29	SEP 26	26.72
DEC 29	26.37	APR 12	17.37	JUL 27	28.33		

WELL 029N005W14N01M

SITE NUMBER 402145122240901

6.8 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 530 FT. RECORDS AVAILABLE JUNE 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 40.03 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 52.44 FEET BELOW LAND SURFACE DATUM DEC 29, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	48.99	FEB 24, 1983	46.19	MAY 20, 1983	40.52	AUG 25, 1983	44.22
NOV 18	49.43	MAR 23	43.61	JUN 24	44.14	SEP 26	44.97
DEC 29	52.44	APR 12	43.69	JUL 27	45.61		

WELL 029N005W14R01M

SITE NUMBER 402147122232201

6.1 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 570 FT. RECORDS AVAILABLE JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 96.83 FEET BELOW LAND SURFACE DATUM OCT 15, 1982.

LOWEST WATER LEVEL 123.62 FEET BELOW LAND SURFACE DATUM DEC 29, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	96.83	FEB 24, 1983	120.94	APR 12, 1983	115.74	JUL 27, 1983	112.91
NOV 18	122.04	MAR 23	118.05	MAY 19	112.64	AUG 25	114.73
DEC 29	123.62						

WELL 029N005W15A02M

SITE NUMBER 402217122242601

6.9 MI WEST OF COTTONWOOD. IRRIGATION WELL. ALTITUDE OF LSD 493 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

WATER LEVELS WERE NOT MEASURED IN THIS WELL BETWEEN 10/01/1982 AND 09/30/1983

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005W16P01M

SITE NUMBER 402137122261501

8.6 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 531 FT. RECORDS AVAILABLE
SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 28.50 FEET BELOW LAND SURFACE DATUM FEB 22, 1984.

LOWEST WATER LEVEL 47.8 FEET BELOW LAND SURFACE DATUM SEP 11, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	37.43	FEB 24, 1983	30.90	MAY 19, 1983	29.51	AUG 25, 1983	28.41 P
NOV 18	36.23	MAR 23	29.07	JUN 24	38.56 P	SEP 26	35.49
DEC 29	34.22	APR 12	31.23	JUL 27	34.53		

WELL 029N005W21D01M

SITE NUMBER 402124122262301

8.8 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 547 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 49.48 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 58.13 FEET BELOW LAND SURFACE DATUM SEP 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	56.06	FEB 24, 1983	55.71	MAY 19, 1983	50.99	AUG 25, 1983	53.68
NOV 18	54.80	MAR 23	51.99	JUN 24	53.05	SEP 26	53.15
DEC 29	57.54	APR 12	56.51	JUL 27	54.68		

WELL 029N005W22N01M

SITE NUMBER 402050122251701

8.0 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 660 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 98.71 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 188.15 FEET BELOW LAND SURFACE DATUM OCT 19, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	104.27	FEB 24, 1983	102.22	MAY 19, 1983	123.83	AUG 25, 1983	133.59
NOV 18	103.14	MAR 23	98.71	JUN 24	127.63	SEP 26	137.34
DEC 29	109.28	APR 12	104.18	JUL 27	131.78		

WELL 029N005W25R01M

SITE NUMBER 401959122221701

6.2 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 495 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 36.55 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 44.97 FEET BELOW LAND SURFACE DATUM DEC 29, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	43.16	FEB 28, 1983	41.13	MAY 17, 1983	36.75	AUG 25, 1983	41.29
NOV 18	42.61	MAR 23	36.55	JUN 24	38.06	SEP 22	42.92
DEC 29	44.97	APR 13	37.76	JUL 27	43.44		

P Pumping.

GROUND WATER

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005H27N01M

SITE NUMBER 401957122251501

8.4 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 514 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 22.39 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 30.68 FEET BELOW LAND SURFACE DATUM JUL 23, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	28.97	FEB 24, 1983	23.83	MAY 19, 1983	23.55	AUG 25, 1983	29.47 P
NOV 18	26.89	MAR 23	22.39	JUN 24	28.17	SEP 26	30.58
DEC 29	27.53	APR 12	23.60	JUL 23	30.68		

WELL 029N005H28C01M

SITE NUMBER 402039122261101

8.8 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 670 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 190.04 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 208.52 FEET BELOW LAND SURFACE DATUM SEP 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	197.07	FEB 24, 1983	198.18	MAY 20, 1983	191.59	AUG 25, 1983	208.40 P
NOV 18	194.48	MAR 23	197.33	JUN 24	204.63 P	SEP 26	194.88
DEC 29	198.60	APR 12	202.75	JUL 27	195.76		

WELL 029N005H33A01M

SITE NUMBER 401942122252903

8.7 MI SOUTHWEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 532 FT. RECORDS AVAILABLE
JULY 1983 TO CURRENT YEAR.

HIGHEST WATER LEVEL 38.46 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 51.11 FEET BELOW LAND SURFACE DATUM AUG 25, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 27, 1983	47.46	AUG 25, 1983	51.11	SEP 26, 1983	44.66

WELL 029N005H33A02M

SITE NUMBER 401942122252902

8.7 MI SOUTHWEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 532 FT. RECORDS AVAILABLE
JULY 1983 TO CURRENT YEAR.

HIGHEST WATER LEVEL 41.48 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 50.70 FEET BELOW LAND SURFACE DATUM AUG 25, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 27, 1983	49.42	AUG 25, 1983	50.70	SEP 26, 1983	47.00

P Pumping.

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005W33A03M

SITE NUMBER 401942122252901

8.7 MI SOUTHWEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 532 FT. RECORDS AVAILABLE
JULY 1983 TO CURRENT YEAR. RECORDER INSTALLED JULY 1983.

HIGHEST WATER LEVEL 39.78 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 60.08 FEET BELOW LAND SURFACE DATUM JUL 13, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 13, 1983	60.08	AUG 12, 1983	50.63	AUG 29, 1983	47.20	SEP 15, 1983	48.06
27	48.25	13	50.61	30	46.88	16	47.50
28	47.84	14	49.62	31	46.65	17	47.06
29	47.61	15	49.19	SEP 01	46.36	18	46.74
30	47.37	16	48.71	02	46.11	19	46.52
31	47.16	17	48.30	03	45.98	20	46.28
AUG 01	47.02	18	47.98	04	45.78	21	46.10
02	46.87	19	47.98	05	45.68	22	46.44
03	46.94	20	48.16	06	45.60	23	46.20
04	47.64	21	48.02	07	45.50	24	45.94
05	48.64	22	48.01	08	45.60	25	45.70
06	49.16	23	48.94	09	46.36	26	45.63
07	48.80	24	49.60	10	47.10	27	45.40
08	48.74	25	49.87	11	47.34	28	45.21
09	49.48	26	48.80	12	47.65	29	45.03
10	50.06	27	48.10	13	47.82	30	44.90
11	50.32	28	47.60	14	48.30		

WELL 029N005W33A04M

SITE NUMBER 401942122253001

8.7 MI SOUTHWEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 532 FT. RECORDS AVAILABLE
JULY 1983 TO CURRENT YEAR.

HIGHEST WATER LEVEL 35.44 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 40.68 FEET BELOW LAND SURFACE DATUM AUG 25, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 27, 1983	39.35	AUG 25, 1983	40.68	SEP 26, 1983	38.75

WELL 029N005W33A05M

SITE NUMBER 401942122253002

8.7 MI SOUTHWEST OF COTTONWOOD. OBSERVATION WELL. ALTITUDE OF LSD 532 FT. RECORDS AVAILABLE
JULY 1983 TO CURRENT YEAR.

HIGHEST WATER LEVEL 33.75 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

LOWEST WATER LEVEL 36.78 FEET BELOW LAND SURFACE DATUM SEP 26, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 27, 1983	35.45	AUG 25, 1983	35.94	SEP 26, 1983	36.78

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005W33C01M

SITE NUMBER 401939122261101

9.1 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 549 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 50.06 FEET BELOW LAND SURFACE DATUM FEB 29, 1984.

LOWEST WATER LEVEL 63.27 FEET BELOW LAND SURFACE DATUM AUG 25, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	56.48	FEB 25, 1983	53.60	MAY 17, 1983	52.69	AUG 25, 1983	63.27
NOV 17	56.78	MAR 23	52.92	JUN 24	57.61	SEP 26	62.01
DEC 28	55.23	APR 13	50.22	JUL 27	56.39		

WELL 029N005W33F02M

SITE NUMBER 401927122260101

9.4 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 557 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 57.06 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 69.44 FEET BELOW LAND SURFACE DATUM AUG 25, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	64.15	FEB 25, 1983	59.63	MAY 20, 1983	60.78	AUG 25, 1983	69.44
NOV 17	67.35	MAR 23	57.06	JUN 24	64.18	SEP 26	68.61
DEC 28	60.91	APR 13	57.46	JUL 27	64.81		

WELL 029N005W34D02M

SITE NUMBER 401945122252201

8.5 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 526 FT. RECORDS AVAILABLE
JULY 1982 TO CURRENT YEAR.

HIGHEST WATER LEVEL 28.54 FEET BELOW LAND SURFACE DATUM MAR 23, 1983.

LOWEST WATER LEVEL 38.00 FEET BELOW LAND SURFACE DATUM JUL 27, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	34.36	FEB 25, 1983	32.62	MAY 20, 1983	30.78	AUG 25, 1983	32.74
NOV 17	36.51	MAR 23	28.54	JUN 24	36.15 P	SEP 26	32.91
DEC 28	32.57	APR 13	30.20	JUL 27	38.00		

WELL 029N005W34N01M

SITE NUMBER 401919122251601

8.7 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 623 FT. RECORDS AVAILABLE
AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 118.50 FEET BELOW LAND SURFACE DATUM JAN 26, 1984.

LOWEST WATER LEVEL 133.90 FEET BELOW LAND SURFACE DATUM DEC 28, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1982	128.19	FEB 25, 1983	120.56	MAY 17, 1983	122.65	AUG 25, 1983	127.58
NOV 17	132.98	MAR 23	119.59	JUN 24	125.52	SEP 26	127.12
DEC 28	133.90	APR 13	118.60	JUL 27	129.52		

P Pumping.

TEHAMA COUNTY--Continued

Redding Basin (5-6)

WELL 029N005W35E01M

SITE NUMBER 401926122241801

7.9 MI SOUTHWEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 612 FT. RECORDS AVAILABLE AUGUST 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 129.20 FEET BELOW LAND SURFACE DATUM FEB 28, 1984.

LOWEST WATER LEVEL 147.80 FEET BELOW LAND SURFACE DATUM NOV 22, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	137.24	FEB 25, 1983	137.54	MAY 17, 1983	138.17	AUG 25, 1983	142.72
NOV 17	138.85	MAR 23	138.75	JUN 24	143.01	SEP 26	132.14
DEC 28	137.45	APR 13	143.64 P	JUL 27	144.03		

WELL 029N006W02K01M

SITE NUMBER 402320122282001

10.4 MI WEST OF COTTONWOOD. DOMESTIC WELL. ALTITUDE OF LSD 559 FT. RECORDS AVAILABLE SEPTEMBER 1979 TO CURRENT YEAR.

HIGHEST WATER LEVEL 28.80 FEET BELOW LAND SURFACE DATUM JAN 26, 1984.

LOWEST WATER LEVEL 57.14 FEET BELOW LAND SURFACE DATUM SEP 13, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	52.49	FEB 24, 1983	29.76	MAY 18, 1983	46.30	AUG 24, 1983	39.81
NOV 16	41.58	MAR 22	38.45 P	JUN 23	31.14	SEP 21	43.97 P
DEC 27	42.67	APR 12	42.53	JUL 26	33.96		

YOLO COUNTY

Sacramento Valley (5-21)

WELL 008N001E15B01M

SITE NUMBER 383248121505501

6.4 MI WEST OF DAVIS. STOCK WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 117 FT. ALTITUDE OF LSD 83 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1931 TO CURRENT YEAR.

HIGHEST WATER LEVEL 9.8 FEET BELOW LAND SURFACE DATUM MAR 30, 1983.

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 18, 1982	18.9	JAN 26, 1983	18.1	APR 26, 1983	11.1	SEP 02, 1983	16.3
28	18.7	MAR 01	12.8	MAY 27	12.2	28	17.2
DEC 07	19.4	29	9.9	JUL 01	13.7		
28	19.2	30	9.8	29	15.0		

WELL 010N002E29A01M

SITE NUMBER 384129121455101

1.2 MI NORTHWEST OF WOODLAND. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 120 FT. ALTITUDE OF LSD 55 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 12.4 FEET BELOW LAND SURFACE DATUM APR 11, 1983.

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
OCT 21, 1982	26.5	APR 11, 1983	12.4

P Pumping.

GROUND WATER

YOLO COUNTY--Continued

Sacramento Valley (5-21)

WELL 010N002E33R01M

SITE NUMBER 383949121450201

0.8 MI SOUTHEAST OF WOODLAND. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 12 IN, DEPTH 216 FT. ALTITUDE OF LSD 52 FT. MEASUREMENTS FURNISHED BY COUNTY OF YOLO. RECORDS AVAILABLE 1951 TO CURRENT YEAR.

HIGHEST WATER LEVEL 9.6 FEET BELOW LAND SURFACE DATUM APR 04, 1983.

LOWEST WATER LEVEL 67.1 FEET BELOW LAND SURFACE DATUM MAR 09, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1982	27.6	APR 04, 1983	9.6

WELL 012N001E34Q01M

SITE NUMBER 385020121503601

4 MI NORTHEAST OF ZAMORA. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 3 IN. DEPTH 2125 FT, CASED TO 2125 FT, SCREENED 2120-2125 FT. ALTITUDE OF LSD 24.27 FT. RECORDS AVAILABLE 1979 TO CURRENT YEAR. RECORDER INSTALLED 1979.

HIGHEST WATER LEVEL 2.45 FEET ABOVE LAND SURFACE DATUM FEB 27, 1980.

LOWEST WATER LEVEL 0.57 FEET BELOW LAND SURFACE DATUM APR 05, 1982.

WATER LEVELS IN FEET ABOVE OR BELOW(-) LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	-0.17	NOV 16, 1982	-0.48	DEC 26, 1982	-0.34	MAR 11, 1983	1.56
02	-0.19	17	-0.48	27	-0.33	12	1.57
03	-0.20	18	-0.47	28	-0.33	13	1.57
04	-0.21	19	-0.46	29	-0.30	14	1.56
05	-0.22	20	-0.45	30	-0.30	15	1.53
06	-0.23	21	-0.45	31	-0.30	16	1.50
07	-0.24	22	-0.45	JAN 01, 1983	-0.30	17	1.47
08	-0.26	23	-0.44	02	-0.31	18	1.43
09	-0.27	24	-0.43	03	-0.32	19	1.36
10	-0.28	25	-0.43	04	-0.33	20	1.31
11	-0.29	26	-0.42	05	-0.34	21	1.25
12	-0.30	27	-0.41	06	-0.35	22	1.18
19	-0.35	28	-0.40	07	-0.35	23	1.11
20	-0.36	29	-0.39	08	-0.36	24	1.06
21	-0.36	30	-0.36	09	-0.37	25	1.01
22	-0.37	DEC 01	-0.34	10	-0.38	26	0.96
23	-0.38	02	-0.32	11	-0.39	27	0.91
24	-0.39	03	-0.32	12	-0.39	28	0.87
25	-0.39	04	-0.31	13	-0.39	29	0.83
26	-0.40	05	-0.31	14	-0.40	30	0.79
27	-0.40	06	-0.30	15	-0.40	31	0.76
28	-0.41	07	-0.30	16	-0.40	APR 01	0.68
29	-0.41	08	-0.30	17	-0.40	02	0.65
30	-0.41	09	-0.30	18	-0.39	03	0.61
31	-0.41	10	-0.30	19	-0.39	04	0.57
NOV 01	-0.42	11	-0.31	20	-0.39	05	0.53
02	-0.43	12	-0.32	21	-0.38	06	0.49
03	-0.43	13	-0.32	22	-0.37	07	0.43
04	-0.44	14	-0.33	23	-0.36	08	0.39
05	-0.44	15	-0.32	24	-0.33	09	0.34
06	-0.44	16	-0.35	25	-0.31	10	0.28
07	-0.44	17	-0.36	26	-0.28	11	0.22
08	-0.44	18	-0.37	27	-0.24	12	0.17
09	-0.44	19	-0.37	28	-0.19	13	0.12
10	-0.44	20	-0.37	29	-0.15	14	0.06
11	-0.45	21	-0.37	30	-0.09	15	0.02
12	-0.46	22	-0.36	31	0.01	16	-0.03
13	-0.47	23	-0.35	MAR 08	1.35	17	-0.06
14	-0.47	24	-0.35	09	1.46	18	-0.09
15	-0.48	25	-0.35	10	1.53	19	-0.11

YOLO COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N001E34Q01M SITE NUMBER 385020121503601--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 20, 1983	-0.13	MAY 31, 1983	-0.09	JUL 11, 1983	0.85	AUG 21, 1983	1.36
21	-0.15	JUN 01	-0.07	12	0.88	22	1.36
22	-0.17	02	-0.05	13	0.90	23	1.36
23	-0.19	03	-0.01	14	0.93	24	1.37
24	-0.20	04	0.01	15	0.95	25	1.38
25	-0.21	05	0.03	16	0.97	26	1.38
26	-0.21	06	0.05	17	0.99	27	1.38
27	-0.22	07	0.07	18	1.00	28	1.38
28	-0.22	08	0.09	19	1.01	29	1.38
29	-0.21	09	0.10	20	1.01	30	1.39
30	-0.21	10	0.11	21	1.03	31	1.39
MAY 01	-0.20	11	0.12	22	1.04	SEP 01	1.38
02	-0.20	12	0.13	23	1.05	02	1.16
03	-0.22	13	0.14	24	1.07	03	1.09
04	-0.21	14	0.15	25	1.08	04	1.06
05	-0.20	15	0.16	26	1.09	05	1.04
06	-0.20	16	0.16	27	1.10	06	1.02
07	-0.20	17	0.17	28	1.12	07	1.01
08	-0.20	18	0.17	29	1.13	08	0.99
09	-0.20	19	0.18	30	1.14	09	0.98
10	-0.20	20	0.18	31	1.15	10	0.97
11	-0.20	21	0.18	AUG 01	1.18	11	0.96
12	-0.20	22	0.19	02	1.19	12	0.95
13	-0.19	23	0.20	03	1.20	13	0.94
14	-0.19	24	0.20	04	1.21	14	0.93
15	-0.19	25	0.21	05	1.22	15	0.92
16	-0.19	26	0.27	06	1.24	16	0.91
17	-0.19	27	0.25	07	1.25	17	0.91
18	-0.19	28	0.25	08	1.27	18	0.90
19	-0.19	29	0.25	09	1.27	19	0.89
20	-0.19	30	0.38	10	1.28	20	0.88
21	-0.19	JUL 01	0.50	11	1.29	21	0.87
22	-0.18	02	0.57	12	1.29	22	0.86
23	-0.18	03	0.63	13	1.31	23	0.85
24	-0.18	04	0.68	14	1.31	24	0.83
25	-0.17	05	0.73	15	1.32	25	0.82
26	-0.15	06	0.76	16	1.33	26	0.81
27	-0.14	07	0.78	17	1.34	27	0.80
28	-0.13	08	0.79	18	1.35	28	0.79
29	-0.12	09	0.80	19	1.36	29	0.78
30	-0.10	10	0.82	20	1.36	30	0.78

GROUND WATER

YOLO COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N001E34Q02M

SITE NUMBER 385020121503602

4 MI NORTHEAST OF ZAMORA. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM.
DIAM 3 IN, DEPTH 1401 FT, CASED TO 1401 FT, SCREENED 1396-1401 FT. ALTITUDE OF LSD
24.27 FT. RECORDS AVAILABLE 1979 TO CURRENT YEAR. RECORDER INSTALLED 1979.

HIGHEST WATER LEVEL 2.29 FEET ABOVE LAND SURFACE DATUM JUN 24, 1983.

LOWEST WATER LEVEL 6.31 FEET BELOW LAND SURFACE DATUM APR 18, 1979.

WATER LEVELS IN FEET ABOVE OR BELOW(-) LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	-1.05	NOV 10, 1982	-1.16	DEC 20, 1982	-0.97	JAN 29, 1983	-0.03
02	-1.02	11	-1.28	21	-0.90	30	0.10
03	-1.00	12	-1.28	22	-0.76	31	0.51
04	-1.01	13	-1.22	23	-0.89	FEB 01	0.53
05	-1.03	14	-1.25	24	-1.01	02	0.55
06	-1.03	15	-1.24	25	-0.96	03	0.48
07	-1.12	16	-1.18	26	-0.90	04	0.36
08	-1.14	17	-1.12	27	-0.89	05	0.27
09	-1.14	18	-0.93	28	-0.90	06	0.21
10	-1.12	19	-1.08	29	-0.90	07	0.24
11	-1.11	20	-1.11	30	-0.92	08	0.18
12	-1.10	21	-1.12	31	-1.00	09	0.09
13	-1.12	22	-1.06	JAN 01, 1983	-1.04	10	0.08
14	-1.12	23	-1.02	02	-1.06	11	0.11
15	-1.15	24	-1.03	03	-1.05	12	0.11
16	-1.15	25	-1.07	04	-1.04	13	0.03
17	-1.16	26	-1.05	05	-1.02	14	-0.00
18	-1.16	27	-1.02	06	-1.04	15	0.02
19	-1.17	28	-0.92	07	-1.03	16	-0.02
20	-1.20	29	-0.83	08	-1.03	17	-0.05
21	-1.20	30	-0.66	09	-1.01	18	0.01
22	-1.20	DEC 01	-0.86	10	-1.03	19	-0.15
23	-1.21	02	-0.97	11	-1.01	20	-0.15
24	-1.21	03	-1.04	12	-0.99	21	-0.15
25	-1.14	04	-1.02	13	-0.99	22	-0.12
26	-1.19	05	-0.98	14	-0.96	23	-0.05
27	-1.25	06	-0.99	15	-0.92	24	-0.06
28	-1.21	07	-1.01	16	-0.85	25	-0.02
29	-1.13	08	-1.00	17	-0.85	26	-0.01
30	-1.08	09	-0.96	18	-0.76	27	0.10
31	-1.16	10	-1.02	19	-0.79	28	0.24
NOV 01	-1.18	11	-1.10	20	-0.76	MAR 01	0.60
02	-1.16	12	-1.06	21	-0.75	02	0.96
03	-1.19	13	-1.09	22	-0.66	03	1.26
04	-1.17	14	-1.11	23	-0.56	04	1.44
05	-1.17	15	-1.12	24	-0.47	08	1.49
06	-1.16	16	-1.10	25	-0.48	09	1.36
07	-1.12	17	-1.12	26	-0.26	10	1.22
08	-1.10	18	-1.12	27	-0.15	11	1.06
09	-1.11	19	-1.05	28	-0.10	12	0.96

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 13, 1983	0.99	APR 09, 1983	0.44	MAY 07, 1983	1.02	JUN 03, 1983	1.83
14	0.88	10	0.42	08	1.04	04	1.88
15	0.82	11	0.45	09	1.07	05	1.90
16	0.86	12	0.45	10	1.09	06	1.92
17	0.88	13	0.42	11	1.10	07	2.00
18	0.84	14	0.41	12	1.16	08	2.00
19	0.74	15	0.44	13	1.19	09	1.98
20	0.72	16	0.49	14	1.17	10	1.99
21	0.73	17	0.59	15	1.18	11	2.03
22	0.70	18	0.63	16	1.19	12	2.03
23	0.66	19	0.66	17	1.21	13	2.05
24	0.76	20	0.70	18	1.27	14	2.08
25	0.68	21	0.65	19	1.30	15	2.08
26	0.64	22	0.62	20	1.29	16	2.12
27	0.70	23	0.72	21	1.32	17	2.11
28	0.71	24	0.76	22	1.37	18	2.07
29	0.69	25	0.77	23	1.39	19	2.13
30	0.68	26	0.83	24	1.43	20	2.22
31	0.65	27	0.86	25	1.52	21	2.25
APR 01	0.59	28	0.95	26	1.60	22	2.26
02	0.58	29	1.00	27	1.65	23	2.28
03	0.58	30	1.02	28	1.65	24	2.29
04	0.59	MAY 01	1.01	29	1.62	27	2.22
05	0.56	02	1.02	30	1.68	28	2.25
06	0.50	04	1.12	31	1.75		
07	0.48	05	1.11	JUN 01	1.78		
08	0.46	06	1.02	02	1.76		

YOLO COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N001E34Q03N

SITE NUMBER 385020121S03603

4 MI NORTHEAST OF ZAMORA. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM.
 DIAM 3 IN, DEPTH 947 FT, CASED TO 947 FT, SCREENED 942-947 FT. ALTITUDE OF LSD 24.27 FT.
 RECORDS AVAILABLE 1979 TO CURRENT YEAR. RECORDER INSTALLED 1979.

HIGHEST WATER LEVEL 0.89 FEET BELOW LAND SURFACE DATUM JUL 05, 1983.

LOWEST WATER LEVEL 19.30 FEET BELOW LAND SURFACE DATUM NOV 09, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1982	13.40	NOV 16, 1982	12.90	DEC 26, 1982	10.41	FEB 04, 1983	6.80
02	13.40	17	12.68	27	10.37	05	6.90
03	13.40	18	12.52	28	10.34	06	6.99
04	13.42	19	12.52	29	10.31	07	6.97
05	13.44	20	12.50	30	10.31	08	7.00
06	13.46	21	12.48	31	10.33	09	7.07
13	13.55	22	12.38	JAN 01, 1983	10.33	10	7.07
14	13.55	23	12.28	02	10.30	11	7.02
15	13.57	24	12.22	03	10.25	12	7.00
16	13.58	25	12.21	04	10.19	13	7.01
17	13.57	26	12.18	05	10.12	14	7.02
18	13.55	27	12.13	06	10.07	15	6.98
19	13.53	28	12.00	07	10.03	16	7.02
20	13.56	29	11.84	08	9.98	17	7.03
21	13.56	30	11.64	09	9.92	18	6.98
22	13.54	DEC 01	11.75	10	9.87	19	7.07
23	13.54	02	11.78	11	9.81	20	7.05
24	13.51	03	11.73	12	9.73	21	7.03
25	13.42	04	11.67	13	9.67	22	6.98
26	13.40	05	11.65	14	9.60	23	6.91
27	13.44	06	11.63	15	9.50	24	6.89
28	13.39	07	11.60	16	9.40	25	6.80
29	13.32	08	11.51	17	9.34	26	6.70
30	13.22	09	11.51	18	9.21	27	6.50
31	13.25	10	11.54	19	9.12	28	6.18
NOV 01	13.27	11	11.48	20	9.05	MAR 01	5.68
02	13.24	12	11.43	21	8.99	02	5.12
03	13.25	13	11.41	22	8.86	03	4.66
04	13.23	14	11.39	23	8.68	04	4.20
05	13.19	15	11.30	24	8.46	08	4.01
06	13.16	16	11.23	25	8.39	09	4.18
07	13.11	17	11.19	26	8.20	10	4.36
08	13.05	18	11.08	27	7.94	11	4.58
09	13.01	19	10.97	28	7.78	12	4.74
10	13.00	20	10.83	29	7.62	13	4.75
11	13.06	21	10.65	30	7.28	14	4.81
12	13.03	22	10.61	31	6.58	15	4.88
13	12.95	23	10.65	FEB 01	6.54	16	4.87
14	12.92	24	10.58	02	6.57	17	4.86
15	12.87	25	10.48	03	6.66	18	4.86

GROUND WATER

YOLO COUNTY--Continued

Sacramento Valley (5-21)

WELL 012N001E34Q03M SITE NUMBER 385020121503603--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
HAR 19, 1983	4.94	MAY 07, 1983	2.74	JUN 25, 1983	1.18	AUG 13, 1983	2.21
20	4.96	08	2.71	26	1.15	14	2.24
21	4.96	09	2.66	27	1.22	15	2.29
22	4.97	10	2.61	28	1.25	16	2.34
23	4.97	11	2.57	29	1.24	17	2.38
24	4.86	12	2.50	30	1.14	18	2.43
25	4.83	13	2.43	JUL 01	1.07	19	2.51
26	4.82	14	2.41	02	1.04	20	2.58
27	4.73	15	2.38	03	1.00	21	2.62
28	4.64	16	2.34	04	0.91	22	2.71
29	4.62	17	2.31	05	0.89	23	2.73
30	4.59	18	2.22	06	0.92	24	2.76
31	4.57	19	2.15	07	0.95	25	2.82
APR 01	4.55	20	2.13	08	1.02	26	2.89
02	4.54	21	2.08	09	1.06	27	2.91
03	4.52	22	2.00	10	1.03	28	2.95
04	4.49	23	1.96	11	1.00	29	2.98
05	4.52	24	1.91	12	1.01	30	3.02
06	4.55	25	1.82	13	1.01	31	3.06
07	4.56	26	1.73	14	1.01	SEP 01	3.21
08	4.56	27	1.67	15	1.05	02	3.34
09	4.55	28	1.64	16	1.06	03	3.43
10	4.52	29	1.65	17	1.10	04	3.46
11	4.47	30	1.58	18	1.15	05	3.52
12	4.42	31	1.49	19	1.22	06	3.61
13	4.38	JUN 01	1.46	20	1.29	07	3.68
14	4.34	02	1.46	21	1.30	08	3.76
15	4.27	03	1.44	22	1.32	09	3.84
16	4.17	04	1.38	23	1.36	10	3.90
17	4.02	05	1.34	24	1.37	11	3.94
18	3.92	06	1.31	25	1.44	12	3.97
19	3.87	07	1.27	26	1.47	13	4.02
20	3.78	08	1.27	27	1.48	14	4.08
21	3.76	09	1.29	28	1.53	15	4.13
22	3.75	10	1.26	29	1.60	16	4.18
23	3.62	11	1.22	30	1.62	17	4.23
24	3.51	12	1.20	31	1.63	18	4.26
25	3.45	13	1.19	AUG 01	1.64	19	4.31
26	3.38	14	1.18	02	1.71	20	4.38
27	3.31	15	1.20	03	1.73	21	4.41
28	3.18	16	1.19	04	1.78	22	4.43
29	3.04	17	1.23	05	1.85	23	4.47
30	2.97	18	1.29	06	1.87	24	4.51
MAY 01	2.93	19	1.28	07	1.89	25	4.52
02	2.92	20	1.24	08	1.93	26	4.53
03	2.79	21	1.23	09	2.00	27	4.56
04	2.70	22	1.21	10	2.07	28	4.56
05	2.70	23	1.21	11	2.14	29	4.55
06	2.75	24	1.22	12	2.19	30	4.54

YUBA COUNTY

Sacramento Valley (5-21)

WELL 014N005E30Q01M

SITE NUMBER 390151121273501

2.8 MI NORTHEAST OF WHEATLAND. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN, DEPTH 220 FT.
ALTITUDE OF LSD 77 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
RECORDS AVAILABLE 1947 TO CURRENT YEAR.

HIGHEST WATER LEVEL 25.2 FEET BELOW LAND SURFACE DATUM MAY 08, 1948.

LOWEST WATER LEVEL 132.9 FEET BELOW LAND SURFACE DATUM AUG 31, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1982	104.8	JAN 29, 1983	97.3	APR 29, 1983	89.7	JUL 30, 1983	105.1
NOV 30	101.4	FEB 28	94.7	MAY 31	97.4	AUG 30	103.3
DEC 31	99.8	MAR 31	92.4	JUN 29	98.7	SEP 29	97.6

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
TEHAMA COUNTY											
401650122322001 - 029N006W16J01M (LAT 40 16 50 LONG 122 32 20)											
JUL , 1983											
09...	2000	660	7.2	--	220	50	24	49	3.4	200	38
12...	1200	353	7.2	--	150	35	16	15	.60	160	6.7
AUG											
05...	0345	496	7.5	--	190	41	22	44	3.1	190	27
09...	2335	442	7.8	--	160	34	19	38	2.0	180	22
401650122322002 - 029N006W16J02M (LAT 40 16 50 LONG 122 32 20)											
JUL , 1983											
31...	0745	535	7.7	--	180	40	20	45	2.6	190	25
401805122191901 - 028N004W09C01M (LAT 40 18 05 LONG 122 19 19)											
OCT , 1982											
27...	1400	218	7.9	16.0	78	16	9.3	18	1.3	110	<5.0
MAY , 1983											
18...	1140	225	7.4	20.5	83	17	9.8	17	1.1	110	3.0
401817122224201 - 028N005W01P01M (LAT 40 18 17 LONG 122 22 42)											
OCT , 1982											
27...	0845	381	7.4	15.5	170	29	24	18	.80	185	<5.0
MAY , 1983											
17...	1235	401	7.1	20.0	170	29	24	18	.70	170	5.0
401846122270501 - 028N005W05G01M (LAT 40 18 46 LONG 122 27 05)											
OCT , 1982											
26...	1250	346	7.6	19.0	140	27	18	18	.80	139	15
MAY , 1983											
17...	0815	407	7.5	17.0	150	29	18	18	.80	140	12
401754122261401 - 028N005W09F01M (LAT 40 17 54 LONG 122 26 14)											
OCT , 1982											
27...	1000	327	7.9	17.5	140	28	16	17	1.0	134	13
MAY , 1983											
18...	0930	340	7.6	18.5	140	30	16	17	.80	140	11
401803122244601 - 028N005W10B01M (LAT 40 18 03 LONG 122 24 46)											
OCT , 1982											
27...	1045	306	8.1	15.5	130	27	16	18	.70	153	<5.0
MAY , 1983											
18...	0840	320	8.0	18.5	140	28	16	17	.70	150	5.0
401803122240401 - 028N005W11D01M (LAT 40 18 03 LONG 122 24 04)											
OCT , 1982											
27...	1030	312	8.1	17.5	130	28	14	19	1.0	146	6.0
MAY , 1983											
17...	1310	329	8.0	20.5	130	29	15	18	1.0	150	6.0

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
<u>TEHAMA COUNTY</u>											
401650122322001 - 029N006W16J01M (LAT 40 16 50 LONG 122 32 20)											
JUL , 1983											
09...	79	.10	62	431	430	.50	.50	.04	130	6	80020
12...	8.3	.20	30	206	210	.79	.79	.04	50	300	80020
AUG											
05...	58	.10	50	324	360	.50	.50	.04	100	<3	80020
09...	36	.10	34	272	290	.48	.48	.04	80	71	80020
401650122322002 - 029N006W16J02M (LAT 40 16 50 LONG 122 32 20)											
JUL , 1983											
31...	51	.10	48	340	350	.68	.68	.03	110	<3	80020
401805122191901 - 028N004W09C01M (LAT 40 18 05 LONG 122 19 19)											
OCT , 1982											
27...	3.2	.20	37	150	--	.65	.65	.03	20	50	80020
MAY , 1983											
18...	3.7	.20	44	149	160	1.6	1.6	.06	--	6	80020
401817122224201 - 028N005W01P01M (LAT 40 18 17 LONG 122 22 42)											
OCT , 1982											
27...	10	.20	20	241	--	1.7	1.7	.02	10	150	80020
MAY , 1983											
17...	17	.20	51	241	250	2.4	2.4	.04	--	8	80020
401846122270501 - 028N005W05G01M (LAT 40 18 46 LONG 122 27 05)											
OCT , 1982											
26...	16	.20	38	221	220	.95	.95	.04	40	10	80020
MAY , 1983											
17...	18	.20	36	216	220	.77	.77	.03	--	7	80020
401754122261401 - 028N005W09F01M (LAT 40 17 54 LONG 122 26 14)											
OCT , 1982											
27...	14	.10	31	209	200	.25	.25	<.01	50	5	80020
MAY , 1983											
18...	16	.10	31	194	210	.20	.20	.02	--	5	80020
401803122244601 - 028N005W10B01M (LAT 40 18 03 LONG 122 24 46)											
OCT , 1982											
27...	8.9	.10	32	194	--	.33	.33	.02	50	6	80020
MAY , 1983											
18...	11	<.10	32	182	200	.30	.30	.03	--	3	80020
401803122240401 - 028N005W11D01M (LAT 40 18 03 LONG 122 24 04)											
OCT , 1982											
27...	10	.10	36	206	200	.35	.35	.02	50	170	80020
MAY , 1983											
17...	13	.10	35	196	210	.35	.35	.02	--	5	80020

See footnote at end of table.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
<u>TEHAMA COUNTY</u>											
401716122221201 - 029N005W13A01M (LAT 40 17 16 LONG 122 22 12)											
OCT , 1982											
27...	1320	283	8.1	20.0	130	26	15	15	.70	148	<5.0
MAY , 1983											
18...	1100	289	8.0	20.0	130	27	15	15	.80	150	.7
401659122235501 - 029N005W14F01M (LAT 40 16 59 LONG 122 23 55)											
OCT , 1982											
27...	1235	290	8.1	19.5	140	27	17	12	.70	162	<5.0
MAY , 1983											
18...	1025	298	8.0	19.5	140	27	17	12	.80	160	.7
<u>SHASTA COUNTY</u>											
402335122125401 - 029N003W04M01M (LAT 40 23 35 LONG 122 12 54)											
OCT , 1982											
26...	1030	423	7.0	17.0	180	30	25	20	3.0	150	23
MAY , 1983											
16...	1400	412	7.4	19.0	170	29	24	18	3.0	--	17
402348122144301 - 029N003W06L01M (LAT 40 23 48 LONG 122 14 43)											
OCT , 1982											
26...	1000	160	7.3	16.0	56	9.0	8.1	12	.90	76	<5.0
MAY , 1983											
17...	0900	159	7.3	17.0	58	9.4	8.5	13	1.1	77	3.6
402321122150301 - 029N003W07D01M (LAT 40 23 21 LONG 122 15 03)											
OCT , 1982											
26...	0930	255	7.1	16.5	99	15	15	17	.50	117	7.0
402335122164801 - 029N004W02K01M (LAT 40 23 35 LONG 122 16 48)											
OCT , 1982											
26...	0830	164	7.2	16.0	53	8.9	7.4	14	.50	72	<5.0
MAY , 1983											
17...	0815	165	7.3	17.5	56	9.3	8.0	14	.70	84	2.2
402331122191201 - 029N004W04Q01M (LAT 40 23 31 LONG 122 19 12)											
OCT , 1982											
26...	1230	180	7.4	20.0	60	11	7.9	14	.60	--	<5.0
MAY , 1983											
17...	1315	165	6.8	22.5	54	9.5	7.4	13	.60	69	3.0
402247122212201 - 029N004W07K01M (LAT 40 22 47 LONG 122 21 22)											
OCT , 1982											
27...	1145	265	7.2	15.5	120	21	17	11	.80	121	7.0
MAY , 1983											
18...	1455	268	7.2	21.5	120	21	16	11	.80	130	7.7

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
<u>TEHAMA COUNTY</u>											
401716122221201 - 029N005W13A01M (LAT 40 17 16 LONG 122 22 12)											
OCT , 1982											
27...	4.0	.10	31	181	--	.67	.67	.02	40	9	80020
MAY , 1983											
18...	3.8	.10	32	169	180	.77	.77	.02	--	7	80020
401659122235501 - 029N005W14F01M (LAT 40 16 59 LONG 122 23 55)											
OCT , 1982											
27...	3.7	.20	36	188	--	.75	.75	.02	20	13	80020
MAY , 1983											
18...	3.7	.20	35	176	190	.71	.71	.03	--	7	80020
<u>SHASTA COUNTY</u>											
402335122125401 - 029N003W04N01M (LAT 40 23 35 LONG 122 12 54)											
OCT , 1982											
26...	23	.20	74	304	290	5.4	5.4	.12	10	4	80020
MAY , 1983											
16...	20	.20	74	277	270	4.4	4.4	.12	--	7	80020
402348122144301 - 029N003W06L01M (LAT 40 23 48 LONG 122 14 43)											
OCT , 1982											
26...	1.9	.20	43	117	--	.60	.60	.14	<10	<3	80020
MAY , 1983											
17...	1.9	.20	42	114	130	.54	.54	.13	--	6	80020
402321122150301 - 029N003W07D01M (LAT 40 23 21 LONG 122 15 03)											
OCT , 1982											
26...	4.0	.20	43	161	170	1.6	1.6	.10	<10	<3	80020
402335122164801 - 029N004W02K01M (LAT 40 23 35 LONG 122 16 48)											
OCT , 1982											
26...	3.1	.20	43	117	--	.93	.93	.14	<10	6	80020
MAY , 1983											
17...	2.9	.20	43	119	130	.94	.94	.11	--	35	80020
402331122191201 - 029N004W04Q01M (LAT 40 23 31 LONG 122 19 12)											
OCT , 1982											
26...	6.9	.20	55	145	--	1.2	1.2	.14	<10	12	80020
MAY , 1983											
17...	4.7	.20	55	132	140	1.3	1.3	.10	--	14	80020
402247122212201 - 029N004W07K01M (LAT 40 22 47 LONG 122 21 22)											
OCT , 1982											
27...	3.0	<.10	42	171	170	1.5	1.5	.05	<10	4	80020
MAY , 1983											
18...	3.0	<.10	40	171	180	1.4	1.4	.04	--	6	80020

See footnote at end of table.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
<u>SHASTA COUNTY</u>											
402321122203101 - 029N004W08C01M (LAT 40 23 21 LONG 122 20 31)											
OCT , 1982											
26...	1300	261	7.4	19.5	100	21	12	14	.60	--	6.0
MAY , 1983											
17...	1345	225	6.8	21.0	90	18	11	12	.60	100	6.3
402305122173201 - 029N004W10H01M (LAT 40 23 05 LONG 122 17 32)											
OCT , 1982											
26...	--	230	7.4	17.5	92	17	12	13	.60	--	6.0
MAY , 1983											
17...	1410	227	7.2	18.0	85	16	11	15	.60	120	5.1
402245122165201 - 029N004W11K01M (LAT 40 22 45 LONG 122 16 52)											
OCT , 1982											
26...	0900	191	7.2	17.5	70	13	9.0	11	.60	79	<5.0
MAY , 1983											
16...	1200	185	7.6	19.0	71	13	9.3	11	.70	85	4.0
<u>TEHAMA COUNTY</u>											
402201122163301 - 029N004W14J01M (LAT 40 22 01 LONG 122 16 33)											
OCT , 1982											
26...	0815	151	7.8	16.5	57	12	6.6	9.8	.70	69	<5.0
MAY , 1983											
16...	1130	180	7.4	16.5	62	12	7.8	10	.70	73	3.2
402201122210201 - 029N004W18J01M (LAT 40 22 01 LONG 122 21 02)											
OCT , 1982											
27...	1400	166	7.5	18.5	57	9.2	8.2	13	.50	74	<5.0
MAY , 1983											
18...	1405	213	6.6	18.5	94	13	15	7.1	.40	90	5.4
402131122210501 - 029N004W19A01M (LAT 40 21 31 LONG 122 21 05)											
OCT , 1982											
27...	1430	307	7.0	18.0	120	26	13	13	.90	113	11
MAY , 1983											
18...	1340	313	6.5	17.5	110	19	16	20	1.1	110	13
402057122210801 - 029N004W19R02M (LAT 40 20 57 LONG 122 21 08)											
OCT , 1982											
26...	1045	299	7.2	16.5	130	29	14	13	.90	116	13
MAY , 1983											
16...	1320	365	7.3	--	140	31	14	13	.90	120	12
402135122201701 - 029N004W20B01M (LAT 40 21 35 LONG 122 20 17)											
MAY , 1983											
18...	1310	230	7.4	18.5	96	24	8.8	11	.80	93	9.7

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
<u>SHASTA COUNTY</u>											
402321122203101 - 029N004W08C01M (LAT 40 23 21 LONG 122 20 31)											
OCT , 1982											
26...	5.5	.20	49	172	180	3.4	3.4	.12	<10	14	80020
MAY , 1983											
17...	3.8	.20	49	164	160	2.9	2.9	.12	--	11	80020
402305122173201 - 029N004W10H01M (LAT 40 23 05 LONG 122 17 32)											
OCT , 1982											
26...	3.8	.20	45	160	160	1.5	1.5	.06	--	19	80020
MAY , 1983											
17...	3.8	.20	47	170	170	1.5	1.5	.07	--	<3	80020
402245122165201 - 029N004W11K01M (LAT 40 22 45 LONG 122 16 52)											
OCT , 1982											
26...	5.6	.20	42	129	--	.90	.90	.12	20	<3	80020
MAY , 1983											
16...	5.5	.20	41	126	140	.90	.90	.09	--	8	80020
<u>TEHAMA COUNTY</u>											
402201122163301 - 029N004W14J01M (LAT 40 22 01 LONG 122 16 33)											
OCT , 1982											
26...	3.4	.10	17	112	--	.31	.31	.09	10	160	80020
MAY , 1983											
16...	3.9	.10	38	118	120	.68	.68	.10	--	3	80020
402201122210201 - 029N004W18J01M (LAT 40 22 01 LONG 122 21 02)											
OCT , 1982											
27...	2.6	.10	53	130	--	1.0	1.0	.13	<10	3	80020
MAY , 1983											
18...	3.9	<.10	42	141	140	3.4	3.4	.02	--	5	80020
402131122210501 - 029N004W19A01M (LAT 40 21 31 LONG 122 21 05)											
OCT , 1982											
27...	10	<.10	41	187	180	2.4	2.4	.03	30	4	80020
MAY , 1983											
18...	18	<.10	33	187	190	3.9	3.9	.06	--	9	80020
402057122210801 - 029N004W19R02M (LAT 40 20 57 LONG 122 21 08)											
OCT , 1982											
26...	13	.10	38	201	190	1.1	1.1	.01	40	24	--
MAY , 1983											
16...	16	.10	37	197	200	1.1	1.1	.05	--	27	80020
402135122201701 - 029N004W20B01M (LAT 40 21 35 LONG 122 20 17)											
MAY , 1983											
18...	8.3	<.10	30	141	150	1.6	1.6	.05	--	4	80020

See footnote at end of table.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
<u>TEHAMA COUNTY</u>											
402050122194201 - 029N004W21N03M (LAT 40 20 50 LONG 122 19 42)											
OCT , 1982											
27...	1430	75	6.8	20.0	18	3.3	2.3	7.7	.40	28	<5.0
MAY , 1983											
18...	1235	58	7.2	18.0	16	3.1	2.0	7.2	.40	25	.2
402127122180001 - 029N004W22B03M (LAT 40 21 27 LONG 122 18 00)											
OCT , 1982											
26...	1000	180	7.2	17.5	75	14	9.8	11	.70	89	<5.0
MAY , 1983											
16...	1240	173	7.0	16.0	79	15	10	11	.60	83	4.5
402016122215801 - 029N004W30M01M (LAT 40 20 16 LONG 122 21 58)											
OCT , 1982											
26...	1130	155	6.9	18.0	58	13	6.2	8.2	.60	50	5.0
MAY , 1983											
16...	1355	209	6.8	17.5	72	16	7.9	9.3	.70	62	6.4
401920122204301 - 029N004W32M01M (LAT 40 19 20 LONG 122 20 43)											
OCT , 1982											
26...	1200	172	7.4	19.0	65	14	7.2	12	.60	85	<5.0
MAY , 1983											
16...	1430	207	7.4	20.5	65	14	7.2	11	.60	90	1.7
<u>SHASTA COUNTY</u>											
402401122230201 - 029N005W01D01M (LAT 40 24 01 LONG 122 23 02)											
OCT , 1982											
26...	1345	162	7.3	19.0	51	10	6.4	17	.60	--	<5.0
MAY , 1983											
18...	0920	109	7.0	19.5	51	10	6.3	16	.60	91	1.0
402249122271901 - 029N005W08L02M (LAT 40 22 49 LONG 122 27 19)											
OCT , 1982											
27...	0930	326	7.2	17.5	160	28	21	11	.70	166	7.0
MAY , 1983											
18...	1110	270	6.7	18.5	130	19	20	9.4	.50	140	7.0
402240122260901 - 029N005W09L01M (LAT 40 22 40 LONG 122 26 09)											
OCT , 1982											
25...	1300	--	6.9	18.5	110	19	16	11	.80	120	8.0
MAY , 1983											
18...	1430	251	6.8	20.0	110	19	16	11	.80	110	8.7
<u>TEHAMA COUNTY</u>											
402204122235501 - 029N005W14F01M (LAT 40 22 04 LONG 122 23 55)											
OCT , 1982											
28...	0900	163	6.4	15.5	66	12	8.8	6.5	.50	69	<5.0
MAY , 1983											
18...	--	163	6.7	18.5	70	12	9.7	6.4	.60	73	4.0

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
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TEHAMA COUNTY

402050122194201 - 029N004W21N03H (LAT 40 20 50 LONG 122 19 42)

OCT , 1982											
27...	1.7	.10	37	76	--	1.6	1.6	.22	<10	7	80020
MAY , 1983											
18...	1.3	.20	38	70	68	1.8	1.8	.25	--	25	80020

402127122180001 - 029N004W22B03H (LAT 40 21 27 LONG 122 18 00)

OCT , 1982											
26...	3.1	.10	39	142	--	.62	.62	.07	10	8	80020
MAY , 1983											
16...	3.1	.10	38	131	130	.60	.60	.09	--	8	80020

402016122215801 - 029N004W30H01H (LAT 40 20 16 LONG 122 21 58)

OCT , 1982											
26...	2.4	<.10	54	141	120	4.3	4.3	.06	10	6	80020
MAY , 1983											
16...	4.1	<.10	55	155	140	4.7	4.7	.06	--	5	80020

401920122204301 - 029N004W32H01H (LAT 40 19 20 LONG 122 20 43)

OCT , 1982											
26...	2.2	.20	48	135	--	.70	.70	.10	10	5	80020
MAY , 1983											
16...	2.4	.20	45	128	140	.72	.72	.10	--	6	80020

SHASTA COUNTY

402401122230201 - 029N005W01D01H (LAT 40 24 01 LONG 122 23 02)

OCT , 1982											
26...	3.4	.10	61	145	--	.57	.57	.140	<10	6	80020
MAY , 1983											
18...	3.3	<.10	59	135	150	.56	.56	.130	--	24	80020

402249122271901 - 029N005W08L02H (LAT 40 22 49 LONG 122 27 19)

OCT , 1982											
27...	3.1	<.10	49	209	220	.60	.60	.040	<10	8	80020
MAY , 1983											
18...	3.8	<.10	52	183	200	.77	.77	.030	--	14	80020

402240122260901 - 029N005W09L01H (LAT 40 22 40 LONG 122 26 09)

OCT , 1982											
25...	4.9	.10	47	179	180	2.8	2.8	.010	<0	8	--
MAY , 1983											
18...	4.6	<.10	47	173	170	3.2	3.2	.030	--	7	80020

TEHAMA COUNTY

402204122235501 - 029N005W14F01H (LAT 40 22 04 LONG 122 23 55)

OCT , 1982											
28...	2.8	<.10	41	118	--	1.3	1.3	.040	<10	4	80020
MAY , 1983											
18...	2.9	<.10	42	118	120	1.4	1.4	.040	--	5	80020

See footnote at end of table.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
<u>TEHAMA COUNTY</u>											
402147122232201 - 029N005W14R01M (LAT 40 21 47 LONG 122 23 22)											
OCT , 1982											
28...	0945	225	6.7	17.5	85	16	11	11	.60	84	6.0
MAY , 1983											
19...	0955	215	6.6	19.5	64	13	7.6	16	.60	61	6.3
402217122242601 - 029N005W15A02M (LAT 40 22 17 LONG 122 24 26)											
OCT , 1982											
28...	0830	238	7.3	17.5	89	16	12	11	.60	100	<5.0
MAY , 1983											
19...	0840	237	7.1	19.0	110	19	14	12	.70	120	4.9
402137122261501 - 029N005W16P01M (LAT 40 21 37 LONG 122 26 15)											
OCT , 1982											
28...	0815	290	7.0	14.5	120	20	18	11	.60	116	10
MAY , 1983											
19...	0910	338	6.9	16.5	150	24	21	12	.80	140	11
402124122262301 - 029N005W21D01M (LAT 40 21 24 LONG 122 26 23)											
OCT , 1982											
28...	0840	307	7.2	11.0	130	21	19	13	.70	143	5.0
MAY , 1983											
19...	0930	312	6.9	18.0	140	22	20	13	.70	140	5.5
402050122251701 - 029N005W22N01M (LAT 40 20 50 LONG 122 25 17)											
OCT , 1982											
28...	0940	205	7.8	14.0	77	15	9.7	13	.70	102	<5.0
MAY , 1983											
19...	0915	218	7.8	19.5	79	15	10	13	.70	110	.6
40201012225101 - 029N005W25L01M (LAT 40 20 10 LONG 122 22 51)											
OCT , 1982											
26...	1430	387	6.9	17.0	170	42	17	15	1.0	166	14
MAY , 1983											
17...	1100	365	6.8	17.0	170	39	17	14	.90	160	14
401959122221701 - 029N005W25R01M (LAT 40 19 59 LONG 122 22 17)											
MAY , 1983											
17...	1205	177	7.1	16.5	70	14	8.5	9.9	.50	77	5.8
401957122251501 - 029N005W27N01M (LAT 40 19 57 LONG 122 25 15)											
OCT , 1982											
28...	0915	325	7.5	17.5	130	27	16	15	.80	115	18
MAY , 1983											
19...	0835	361	6.8	18.0	150	26	20	15	.60	110	16

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
<u>TEHAMA COUNTY</u>											
402147122232201 - 029N005W14R01M (LAT 40 21 47 LONG 122 23 22)											
OCT , 1982											
28...	3.3	<.10	50	153	150	3.4	3.4	.08	<10	5	80020
MAY , 1983											
19...	3.8	<.10	57	163	140	6.0	6.0	.10	--	22	80020
402217122242601 - 029N005W15A02M (LAT 40 22 17 LONG 122 24 26)											
OCT , 1982											
28...	3.0	.10	46	147	--	1.2	1.2	.08	<10	52	80020
MAY , 1983											
19...	4.2	.10	49	165	180	2.1	2.1	.07	--	16	80020
402137122261501 - 029N005W16P01M (LAT 40 21 37 LONG 122 26 15)											
OCT , 1982											
28...	7.6	<.10	52	192	190	2.9	2.9	.06	<10	4	80020
MAY , 1983											
19...	9.0	<.10	53	213	210	3.7	3.7	.05	--	6	80020
402124122262301 - 029N005W21D01M (LAT 40 21 24 LONG 122 26 23)											
OCT , 1982											
28...	9.4	<.10	50	193	200	.78	.78	.03	<10	14	80020
MAY , 1983											
19...	9.4	<.10	51	195	210	.84	.84	.03	--	6	80020
402050122251701 - 029N005W22N01M (LAT 40 20 50 LONG 122 25 17)											
OCT , 1982											
28...	2.7	.20	46	143	--	.63	.63	.07	<10	8	80020
MAY , 1983											
19...	2.6	.20	47	140	160	.65	.65	.06	--	34	80020
402010122225101 - 029N005W25L01M (LAT 40 20 10 LONG 122 22 51)											
OCT , 1982											
26...	15	<.10	44	247	250	1.6	1.6	.02	10	10	80020
MAY , 1983											
17...	16	<.10	38	233	230	1.8	1.8	.03	--	4	80020
401959122221701 - 029N005W25R01M (LAT 40 19 59 LONG 122 22 17)											
MAY , 1983											
17...	5.5	.10	40	127	130	.80	.80	.04	--	7	80020
401957122251501 - 029N005W27N01M (LAT 40 19 57 LONG 122 25 15)											
OCT , 1982											
28...	20	.10	31	194	200	1.1	1.1	.04	50	9	--
MAY , 1983											
19...	13	<.10	36	218	190	6.0	6.0	.04	--	12	80020

See footnote at end of table.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
<u>TEHAMA COUNTY</u>											
401942122252901 - 029N005W33A01M (LAT 40 19 42 LONG 122 25 29)											
JUN , 1983											
23...	1030	305	8.2	21.0	75	20	6.1	24	.90	--	1.5
SEP											
02...	0820	516	7.6	--	180	38	21	40	2.6	180	26
401939122261101 - 029N005W33C01M (LAT 40 19 39 LONG 122 26 11)											
OCT , 1982											
26...	1320	310	7.5	17.5	130	28	15	16	.80	133	9.0
MAY , 1983											
17...	0855	370	7.3	17.0	130	29	15	15	.80	130	8.9
401919122251601 - 029N005W34M01M (LAT 40 19 19 LONG 122 25 16)											
OCT , 1982											
26...	1340	205	7.7	18.0	81	18	8.7	14	.60	100	<5.0
MAY , 1983											
17...	0925	--	7.4	19.0	65	14	7.4	16	.60	140	1.3
401928122241801 - 029N005W35E01M (LAT 40 19 28 LONG 122 24 18)											
OCT , 1982											
26...	1400	237	7.7	18.5	94	21	10	15	.70	113	<5.0
MAY , 1983											
17...	1015	246	7.4	18.0	96	22	10	15	.70	120	2.9
401927122221901 - 029N005W36J01M (LAT 40 19 27 LONG 122 22 19)											
OCT , 1982											
27...	0805	258	7.5	13.0	110	22	14	13	.80	120	<5.0
<u>SHASTA COUNTY</u>											
402320122282001 - 029N006W02K01M (LAT 40 23 20 LONG 122 28 20)											
OCT , 1982											
27...	0915	424	6.8	15.0	190	31	27	12	.90	122	24
MAY , 1983											
18...	1140	400	7.1	18.5	180	31	25	11	.90	130	20
402330122303901 - 029N006W02P01M (LAT 40 23 30 LONG 122 30 39)											
OCT , 1982											
25...	1400	388	8.0	18.0	14	3.1	1.6	90	.80	179	<5.0
25...	1930	279	8.1	17.0	23	4.6	2.7	60	1.3	149	<5.0
26...	0100	278	8.0	16.0	56	12	6.2	44	1.3	134	10
402418122134301 - 030N003W32P01M (LAT 40 24 18 LONG 122 13 43)											
OCT , 1982											
26...	1120	126	6.6	17.0	46	9.4	5.4	6.3	.60	54	6.0
MAY , 1983											
16...	1322	136	7.1	15.5	58	12	6.8	6.7	.60	--	4.7

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
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TEHAMA COUNTY

401942122252901 - 029N005W33A01M (LAT 40 19 42 LONG 122 25 29)

JUN , 1983											
23...	4.7	.10	30	152	160	.66	.66	.02	--	7	80020
SEP											
02...	45	.10	42	306	320	.45	.45	.05	90	7	80020

401939122261101 - 029N005W33C01M (LAT 40 19 39 LONG 122 26 11)

OCT , 1982											
26...	10	.10	35	205	190	.94	.94	.03	30	6	80020
MAY , 1983											
17...	12	.10	34	196	190	1.4	1.4	.03	--	6	80020

401919122251601 - 029N005W34H01M (LAT 40 19 19 LONG 122 25 16)

OCT , 1982											
26...	2.9	.20	33	139	--	.90	.90	.04	20	11	80020
MAY , 1983											
17...	2.4	.20	30	123	160	.69	.69	.04	--	10	80020

401928122241801 - 029N005W35E01M (LAT 40 19 28 LONG 122 24 18)

OCT , 1982											
26...	4.1	.20	36	156	--	1.4	1.4	.03	10	6	80020
MAY , 1983											
17...	4.2	.20	35	155	160	1.5	1.5	.04	--	8	80020

401927122221901 - 029N005W36J01M (LAT 40 19 27 LONG 122 22 19)

OCT , 1982											
27...	6.0	.20	24	177	--	1.6	1.6	.06	10	89	80020

SHASTA COUNTY

402320122282001 - 029N006W02K01M (LAT 40 23 20 LONG 122 28 20)

OCT , 1982											
27...	12	<.10	44	266	220	12.	12.	.02	10	9	80020
MAY , 1983											
18...	12	<.10	44	247	220	9.2	9.2	.04	--	7	80020

402330122303901 - 029N006W02P01M (LAT 40 23 30 LONG 122 30 39)

OCT , 1982											
25...	18	.10	29	247	--	--	<.10	.92	220	36	80020
25...	2.6	.20	58	213	--	--	<.10	.71	70	10	80020
26...	6.0	.20	45	193	210	.25	.25	.43	50	37	80020

402418122134301 - 030N003W32P01M (LAT 40 24 18 LONG 122 13 43)

OCT , 1982											
26...	2.0	<.10	22	79	84	.38	.38	.02	30	5	80020
MAY , 1983											
16...	2.2	<.10	20	88	92	.70	.70	.03	--	39	80020

See footnote at end of table.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (HG/L AS CAC03)	CALCIUM DIS- SOLVED (HG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (HG/L AS MG)	SODIUM, DIS- SOLVED (HG/L AS NA)	POTAS- SIUM, DIS- SOLVED (HG/L AS K)	ALKA- LITY FIELD (HG/L AS CAC03)	SULFATE DIS- SOLVED (HG/L AS SO4)
SHASTA COUNTY											
402457122194501 - 030N004W33D01M (LAT 40 24 57 LONG 122 19 45)											
OCT , 1982											
27...	1220	213	7.7	19.5	70	13	9.2	18	.80	105	<5.0
MAY , 1983											
17...	1000	204	7.1	20.0	70	13	9.2	17	.90	89	3.6
402505122170401 - 030N004W35C01M (LAT 40 25 05 LONG 122 17 04)											
OCT , 1982											
27...	1315	197	8.0	19.5	58	11	7.5	18	.80	97	5.0
MAY , 1983											
17...	--	192	7.4	21.5	59	11	7.7	18	.80	100	4.7
402610122260001 - 030N005W21K01M (LAT 40 26 10 LONG 122 26 00)											
OCT , 1982											
27...	1100	132	7.2	19.0	39	7.6	4.8	13	.30	61	<5.0
MAY , 1983											
17...	1110	125	6.8	19.5	40	7.8	4.9	13	.30	62	.8
402414122242501 - 030N005W34R01M (LAT 40 24 14 LONG 122 24 25)											
OCT , 1982											
27...	1015	151	6.9	19.5	47	9.0	5.9	13	.50	66	<5.0
MAY , 1983											
17...	1430	140	6.9	20.5	46	8.9	5.8	12	.50	62	3.0
402753122313802 - 030N006W10K02M (LAT 40 27 53 LONG 122 31 38)											
OCT , 1982											
27...	0830	197	7.9	14.5	51	11	5.8	25	.50	99	<5.0
MAY , 1983											
18...	1315	222	7.0	21.0	90	13	14	16	.40	120	2.8

See footnote at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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)	IRON, DIS- SOLVED (UG/L AS FE)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)
<u>SHASTA COUNTY</u>											
402457122194501 - 030N004W33D01M (LAT 40 24 57 LONG 122 19 45)											
OCT , 1982											
27...	3.5	.10	51	152	--	.45	.45	.11	<10	4	80020
MAY , 1983											
17...	3.4	.10	51	148	150	.44	.44	.13	--	<3	80020
402505122170401 - 030N004W35C01M (LAT 40 25 05 LONG 122 17 04)											
OCT , 1982											
27...	2.6	.20	47	137	150	.48	.48	.09	10	5	80020
MAY , 1983											
17...	2.6	.20	46	139	150	.47	.47	.10	--	10	80020
402610122260001 - 030N005W21K01M (LAT 40 26 10 LONG 122 26 00)											
OCT , 1982											
27...	2.2	.10	54	116	--	.34	.34	.15	<10	5	80020
MAY , 1983											
17...	2.2	.10	52	112	120	.32	.32	.15	--	7	80020
402414122242501 - 030N005W34R01M (LAT 40 24 14 LONG 122 24 25)											
OCT , 1982											
27...	2.9	.10	63	131	--	.63	.63	.10	<10	6	80020
MAY , 1983											
17...	2.8	.10	61	131	130	.60	.60	.12	--	11	80020
402753122313802 - 030N006W10K02M (LAT 40 27 53 LONG 122 31 38)											
OCT , 1982											
27...	2.9	.20	42	142	--	--	<.10	.03	50	130	80020
MAY , 1983											
18...	1.6	.20	46	149	170	.26	.26	.14	--	50	80020

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

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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