

Water Resources Data for California

Volume 1. Colorado River Basin, Southern
Great Basin from Mexican Border
to Mono Lake Basin, and Pacific
Slope Basins from Tijuana River
to Santa Maria River

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-78-1

WATER YEAR 1978

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

CALENDAR FOR WATER YEAR 1978

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LOS ANGELES, CALIFORNIA

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WATER YEAR 1978

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

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

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1979

PREFACE

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

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

Data for California are in four volumes as follows:

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

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SURFACE-WATER AND WATER-QUALITY STATIONS,
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

IX

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

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WATER RESOURCES DATA FOR CALIFORNIA, 1978

Volume 1

INTRODUCTION

Water-resources data for the 1978 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-78-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. Water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

COOPERATION

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

Antelope Valley-East Kern Water Agency, Wallace G. Spinarski, General Manager.
 California Department of Navigation and Ocean Development, Marty Mercado, Director.
 California Department of Water Resources, R. B. Robie, Director.
 Casitas Municipal Water District, Robert N. McKinney, General Manager-Chief Engineer.
 Coachella Valley County Water District, L. O. Weeks, General Manager-Chief Engineer.
 Desert Water Agency, P. G. Payne, General Manager.
 Goleta County Water District, Robert A. Paul, General Manager-Chief Engineer.
 Imperial Irrigation District, Donald A. Twogood, General Manager.
 Los Angeles County Flood Control District, A. E. Bruington, Chief Engineer.
 Los Angeles Department of Water and Power, Duane L. Georgeson, Engineer, Los Angeles Aqueduct Division.
 Montecito County Water District, H. O. Neil Mendenall, General Manager-Chief Engineer.
 Orange County Environmental Management Agency, H. G. Osborne, Director.
 Orange County Water District, Neil M. Cline, Secretary-Manager.
 Riverside County Flood Control and Water Conservation District, J. W. Bryant, Chief Engineer.
 San Bernardino Valley Municipal Water District, J. A. Beaver, General Manager.
 San Diego, City of, Water Utilities, R. W. King, Director.
 San Diego, County of, Department of Sanitation and Flood Control, C. J. Houson, Director.
 Santa Barbara, City of, Department of Public Works, R. W. Puddicombe, Director.
 Santa Barbara County Flood Control and Water Conservation District, James M. Stubchaer, Flood-Control Engineer.
 Santa Barbara County Water Agency, Robert Hedlund, Board of Directors Chairman.
 Santa Maria Valley Water Conservation District, M. F. Twitchell, Secretary.
 Santa Ynez River Water Conservation District, Boyd B. Bettencourt, Secretary.
 United Water Conservation District, R. A. Smith, General Manager-Chief Engineer.
 Ventura County Flood Control District, Arthur Goulet, Director.
 Western Municipal Water District, H. A. Hicks, General Manager.

Assistance in the form of funds or services was given by Environmental Protection Agency; U.S. International Boundary and Water Commission; Corps of Engineers, U.S. Army; U.S. Navy; Bureau of Indian Affairs, Bureau of Reclamation and National Park Service, U.S. Department of the Interior.

The following organizations aided in collecting records: Big Bear Municipal Water District; cities of Long Beach, San Bernardino, and San Diego; Escondido Mutual Water Co.; Fallbrook Public Utility District; Fontana Union Water Co.; Lake Hemet Municipal Water District; Metropolitan Water District of Southern California; Rancho California; Regional Water Quality Control Board, Colorado River Basin Region; Santa Paula Water Works, Ltd; Sweetwater Authority of South Bay Irrigation District; Southern California Edison Co.; Temescal Water Co.; and White Water Mutual Water Co.

HYDROLOGIC CONDITIONS

Runoff during the 1978 water year in the area covered by this volume was below normal from October to late December and above normal the rest of the year. Total runoff at selected sites in California for the 1978 water year is shown in figure 1. Runoff in the Santa Ana River basin and coastal basins to the north and south was 733 percent of the median; in the Los Angeles River

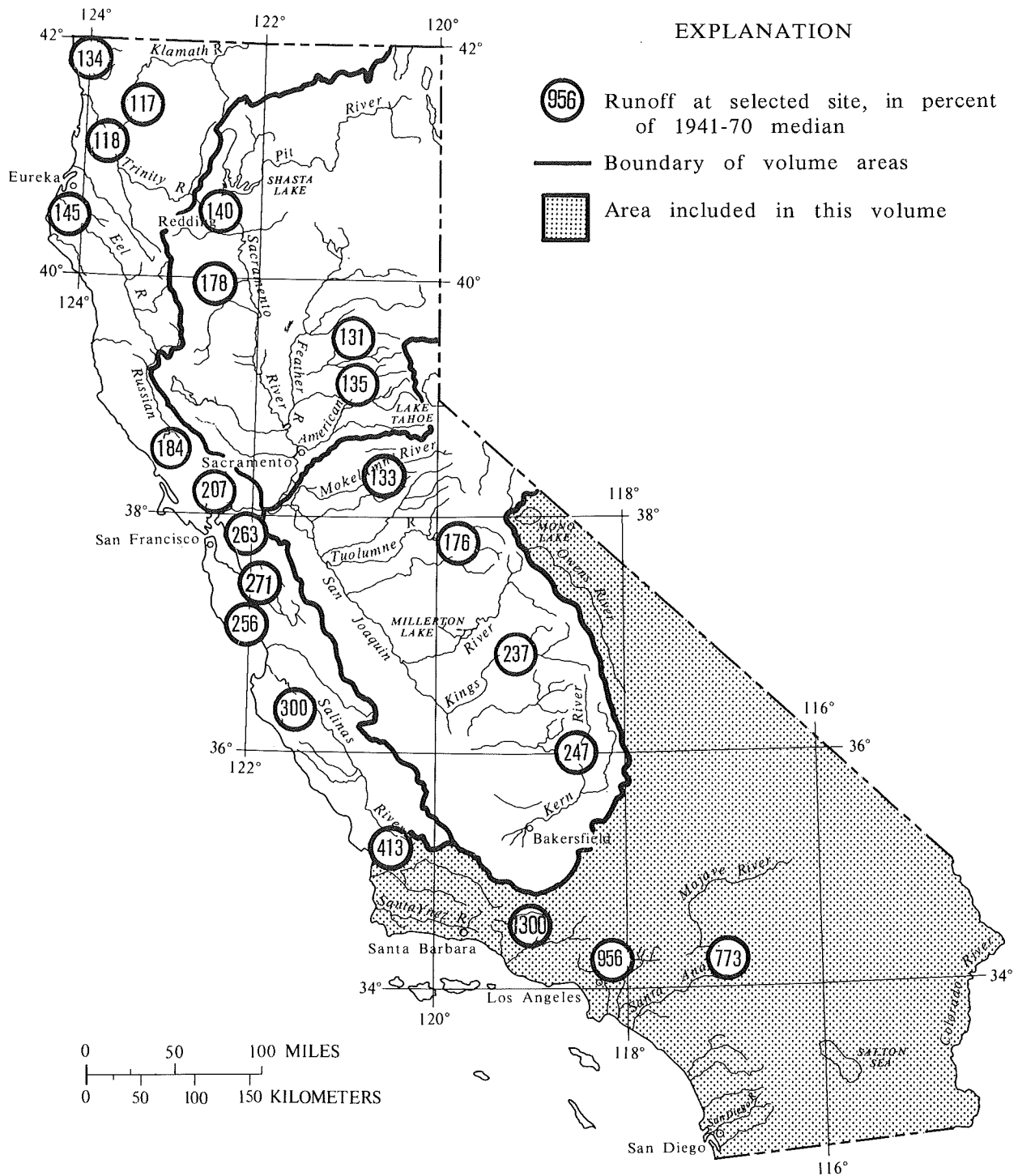


FIGURE 1.--Runoff for the current water year.

basin, 956 percent of the median; in the Santa Clara River basin, 1300 percent of median; and in the desert areas it was above normal for much of the year.

Almost 5 inches (127 mm) of rainfall was recorded at Lake Arrowhead during the first major storm, December 25-28, which brought the season total precipitation to above average in the Los Angeles area. A series of violent storms (January 4-19) swept into southern California from the Pacific Ocean, filling most of the reservoirs and making January the wettest since 1969. A state of emergency was declared in early February when more storms from the Pacific brought hurricane-force winds and precipitation totals reaching 8 inches (204 mm) in parts of Los Angeles and Ventura Counties. February 10 streamflow peaks exceeded those for the 1969 water year in many areas of Santa Barbara and Ventura Counties.

A third series of storm fronts hit southern California the first week of March. Many gaging stations in Ventura County recorded peaks of record. Sespe Creek flooded the town of Fillmore and communities near Ojai, forcing evacuation of at least 500 people. Nine deaths were attributed to this storm. Many reservoirs in southern California filled to capacity and spilled.

The city of Los Angeles had a yearend total rainfall of 30.06 inches (764 mm), 2.5 inches (64 mm) more than in the 1969 water year. Thunderstorms and showers continued through the month of April adding to the already large seasonal rainfall and triggering landslides in many areas of southern California.

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 $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ 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 $35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ 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 , ft^3/s), is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Milligrams of carbon per area or volume per unit time [mg C/(m².time) for periphyton and macrophytes and mg C/(m³.time) for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O₂/(m².time) for periphyton and macrophytes and mg O₂/(m³.time) for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each surface-water station, water-quality station, and partial-record station has been assigned a station number. These are in the same downstream order as used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left between the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 11105850, which appears just to the left of the station

name, includes the 2-digit number "11" plus the 6-digit downstream order number "105850". In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records for California are in Part 9 (Colorado River basin), Part 10 (The Great Basin), and Part 11 (Pacific slope basins in California). All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

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

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

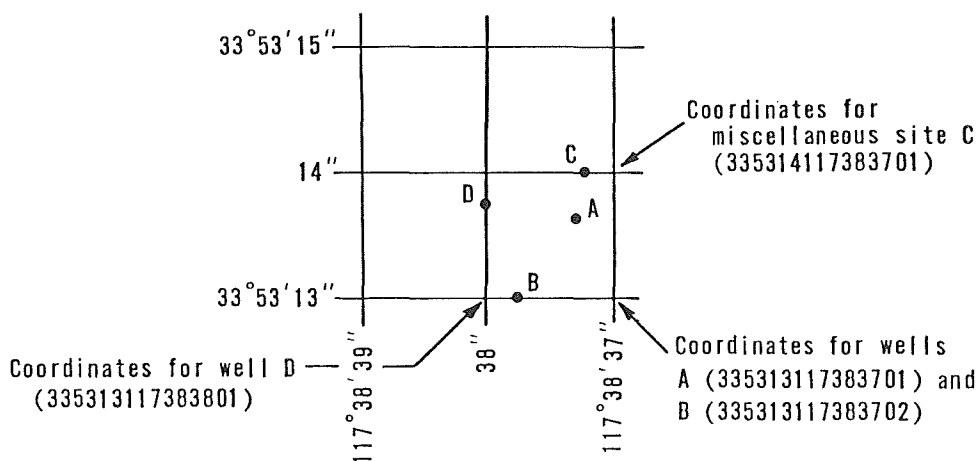


Figure 2.--System for numbering wells and miscellaneous sites (latitude and longitude).

Local well numbers

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

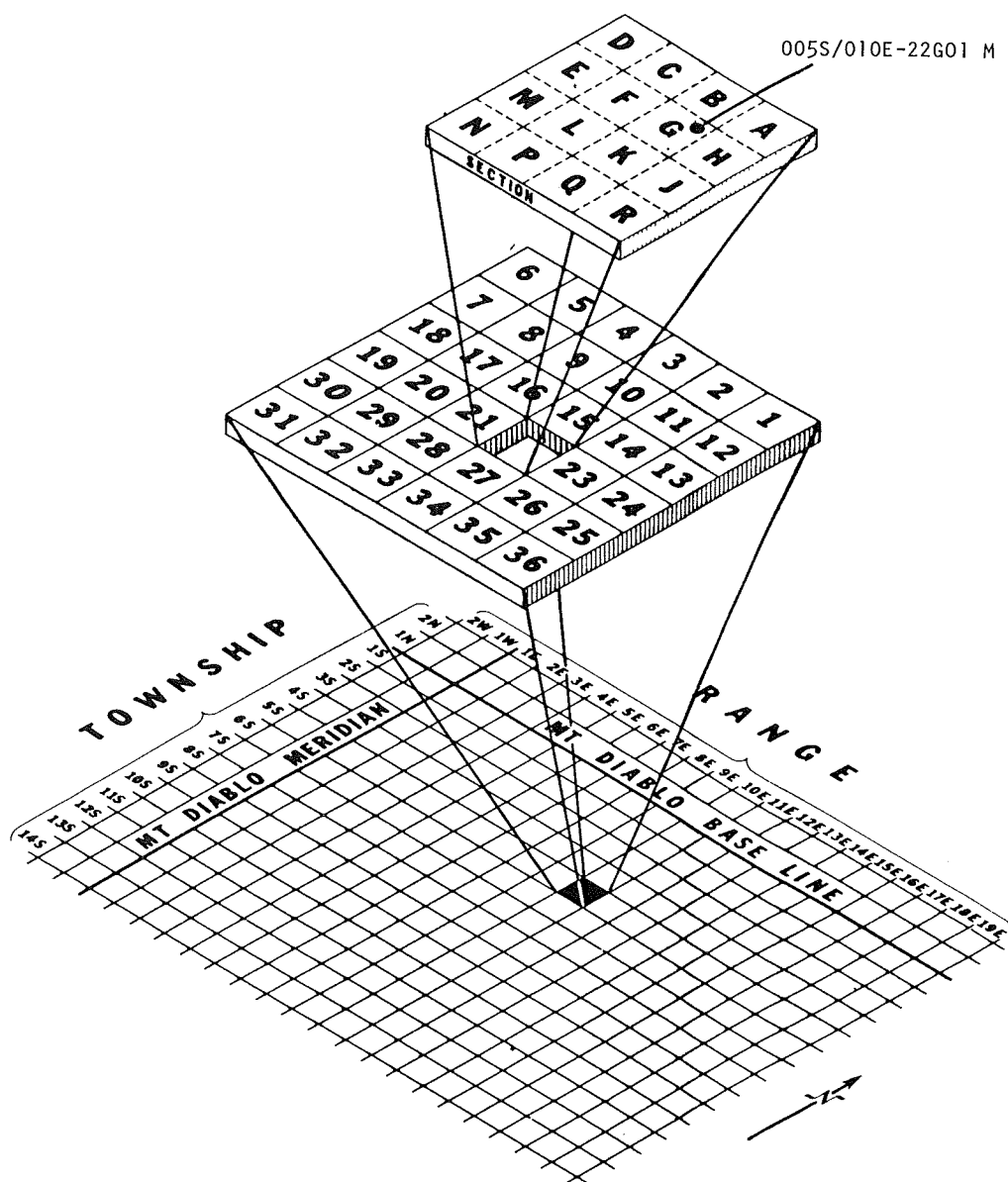


FIGURE 3.--California well-numbering system.

SPECIAL NETWORKS AND PROGRAMS

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

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

Volume 2:

11475500 Elder Creek near Branscomb, CA

Volume 3:

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

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

Volume 1:

09424190 Colorado River Aqueduct near San Jacinto, CA
09429500 Colorado River above Imperial Dam, AZ-CA
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

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
11530500 Klamath River near Klamath, CA
11532500 Smith River near Crescent City, CA

Volume 3:

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

Volume 4:

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

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

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

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Accuracy of field data and computed results

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

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

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

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

Other data available

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

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

Records of discharge collected by agencies other than the Geological Survey

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

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

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

Water analysis

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

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

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

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

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

Water temperature

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

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

Sediment

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

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

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

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

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

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

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

Turbidity

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

Measured values of turbidity are significantly influenced by the type of instrument used. Turbidity values published in California reports prior to July 1966 were determined by means of a Hellige Turbidimeter and are not directly comparable with those published subsequently. Data published in parts per million as silica from July 1966 to September 1968, and in milligrams per liter as silica from October 1968 to September 1970, were measured with a model 1860 Hach Turbidimeter which is optically similar to the model 2100 Hach Turbidimeter used from October 1970 to September 1974, and the model 2100A Hach Turbidimeter used since October 1974. Scales are available for those instruments providing a readout in either milligrams per liter or in Nephelometric turbidity units. Hence, conversion of data for the period July 1966 through September 1970, from parts per million or milligrams per liter of silica to Nephelometric turbidity units can be made by use of table 1.

Table 1.--Conversion of turbidity values, measured by Hach Turbidimeters Model 2100 or 2100A, from parts per million or milligrams per liter of silica to Nephelometric turbidity units.

<u>Turbidity, in ppm or mg/L</u>	<u>Turbidity, in NTU</u>
5	3.0
10	6.0
50	30
100	55
200	110
500	240
1000	450

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum referred to National Geodetic Vertical Datum is given in the well description. The height of the measuring point (MP above

or below land-surface datum), if known, is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (EOM).

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices are effective October 1978 but are subject to change.

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. \$1.60.
- 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. \$0.85.
- 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. \$1.90.
- 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. \$1.75.
- 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. \$1.00.
- 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. \$0.35.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3, 1968. 60 pages. \$0.40.
- 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. \$1.00.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5, 1967. 29 pages. \$0.35.
- 3-A6. General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968. 13 pages. \$1.00.
- 3-A7. Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.

- 3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 3-A11. Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. \$1.20.
- 3-A12. Fluorometric procedures for dye tracing, by J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$0.35. Not currently available.
- 3-B1. Aquifer-test design, observation, and data analyses, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. \$0.70.
- 3-B2. Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages. \$2.50.
- 3-C1. Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$2.50.
- 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. \$2.50.
- 3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. \$2.10.
- 4-A1. Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2. Frequency curves, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$0.35.
- 4-B1. Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. \$1.20.
- 4-B2. Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3. Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. \$0.65.
- 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. \$1.10.
- 5-A1. Methods for determination of inorganic substances in water and fluvial sediments, edited by M. W. Skougstad, M. J. Fishman, L. C. Friedman, D. E. Erdmann, and S. S. Duncan: USGS--TWRI Book 5, Chapter A1. 626 p., \$10.00.
- 5-A2. Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. \$0.80.
- 5-A3. Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. \$0.90.
- 5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greason, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. \$9.25.
- 5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. \$5.75.
- 5-C1. Laboratory theory and methods for sediment analyses, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. \$2.10.
- 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. \$2.30.
- 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. \$0.70.
- 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. \$1.10.

COLORADO RIVER MAIN STEM

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV
(National stream-quality accounting network station)

LOCATION.--Lat 36°00'55", long 114°44'16", in NE¼SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, or SW¼NE¼ sec.29, T.22 S., R.65 E., Mount Diablo meridian, Mohave-Clark Counties, Hydrologic Unit 15030101, in powerhouse at downstream side of Hoover Dam.

DRAINAGE AREA.--171,700 mi² (444,700 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year (prior to April 1934, monthly discharge only, published in WSP 1313).
Published as "near Willow Beach" 1933-39 and as "below Boulder Dam" 1939-45.

GAGE.--Totalizing flowmeters on each turbine in Hoover Dam powerhouse. Prior to Nov. 1, 1939, water-stage recorder at site 9 mi (14 km) downstream at datum 594.8 ft (181.30 m) National Geodetic Vertical Datum of 1929. Nov. 1, 1939, to June 30, 1958, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 600.35 ft (182.987 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Lake Mead since Feb. 1, 1935. Many diversions above station for irrigation, industrial, and municipal use.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--44 years (water years 1935-78), 13,210 ft³/s (374.1 m³/s), 9,571,000 acre-ft/yr (11,800 hm³/yr), unadjusted for storage in Lake Mead.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 36,000 ft³/s (1,020 m³/s) Jan. 28, 1942; no flow at Hoover Dam part of Feb. 10, 1935; minimum daily, 152 ft³/s (4.30 m³/s) Feb. 10, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 22,300 ft³/s (632 m³/s) May 4; minimum daily, 1,560 ft³/s (44.2 m³/s) Jan. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6990	5000	11500	2180	6160	15900	7010	19100	11700	7500	15400	15200
2	5090	6900	11100	2820	3720	14600	6160	16500	10200	5600	13300	10200
3	9160	6480	4310	8530	3780	10700	14300	19500	4850	8600	11500	9660
4	8740	7850	3300	7980	3060	6700	16100	22300	3630	7430	14900	6280
5	7800	4360	10000	6370	3630	5180	16900	18400	14500	12700	12500	8900
6	8750	3930	10400	3670	5010	5200	19600	8120	16700	16400	6260	7240
7	11600	6100	12300	2290	6850	8460	19200	4650	11800	17300	15700	10500
8	5210	6570	14000	1620	5950	9250	12100	19700	13900	12300	18700	10800
9	3950	10400	16000	3780	8820	8920	6240	21100	15000	9570	13600	6430
10	11900	9540	6240	3510	6320	9300	16100	19300	4360	15700	16900	4640
11	9720	6760	5100	4270	4820	7500	19500	15100	5150	13600	13200	10700
12	9560	2600	12200	3910	5210	7650	18100	19500	12900	14200	10100	9050
13	6250	2380	11400	3630	7700	13700	18900	12700	13900	15300	6470	9180
14	10000	7930	14900	3760	5640	13400	18500	4090	13300	16800	12800	10300
15	6420	6060	15300	3260	5380	16400	8990	13800	10900	8870	19400	16400
16	3570	8010	10800	7690	5160	18400	6770	14000	11600	7120	16800	10100
17	9360	10800	6410	4330	6550	15400	17100	13400	7570	13400	19800	6840
18	10300	11100	6600	3870	4260	10800	19700	16500	6280	17600	21500	13700
19	9110	7580	13900	3170	2810	7780	16700	15100	14800	16600	14200	12500
20	8540	5910	12700	1800	2900	14700	19200	6490	13600	17200	9930	14800
21	8640	10800	10700	2170	9650	14200	21400	8620	13200	14000	17500	15200
22	1640	11800	10300	1700	16100	15100	12300	13900	12300	10000	17400	16800
23	2450	12000	6090	2810	17800	15900	7300	14800	14900	11500	16900	11200
24	7480	3600	4330	2450	15400	12700	20600	15100	8280	19000	14600	12900
25	10500	10500	3740	4860	8370	8880	18600	17200	4560	18600	16500	16400
26	3770	5530	3830	4460	9440	5940	18800	15400	10500	20900	6110	16600
27	4010	5110	9360	4930	17400	17900	21500	9480	9560	18600	6340	13900
28	4690	12700	10600	1560	18500	14000	20700	7800	11900	17100	17200	17600
29	2270	11400	7230	1610	---	16300	11300	7960	12900	10300	16800	15600
30	1980	13500	5440	4820	---	14700	4920	11700	15000	8100	17000	7410
31	6550	---	3640	4620	---	17700	---	12200	---	16900	20500	---
TOTAL	216000	233200	283720	118430	216390	373260	454590	433510	329740	418790	449810	347030
MEAN	6968	7773	9152	3820	7728	12040	15150	13980	10990	13510	14510	11570
MAX	11900	13500	16000	8530	18500	18400	21500	22300	16700	20900	21500	17600
MIN	1640	2380	3300	1560	2810	5180	4920	4090	3630	5600	6110	4640
AC-FT	428400	462600	562800	234900	429200	740400	901700	859900	654000	830700	892200	688300
CAL YR 1977	TOTAL	3969260	MEAN	10870	MAX	25000	MIN	1390	AC-FT	7873000		
WTR YR 1978	TOTAL	3874470	MEAN	10610	MAX	22300	MIN	1560	AC-FT	7685000		

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 36°00'38", long 114°44'31", in SW¼SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, Mohave County, Ariz., or in SW¼SE¼ sec.29, T.22 S., R.65 E., Mount Diablo meridian, Clark County, Nev., 0.3 mi (0.5 km) downstream from gaging station in powerhouse at downstream side of Hoover Dam.

DRAINAGE AREA.--171,800 mi² (445,000 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming which is noncontributing (previously considered part of the Missouri River basin).

PERIOD OF RECORD.--October 1939 to September 1962, October 1963 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1941 to September 1957.

REMARKS.--Unpublished chemical analyses for period October 1939 to September 1940, available from district office in Tucson, Ariz.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (CULS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT											
04...	0800	3920	1060	6.9	12.5	1	--	--	--	310	180
05...	0800	4220	--	--	13.5	--	6.6	1	1	--	--
NOV											
08...	0900	3870	1060	8.0	12.0	1	9.1	--	--	310	180
09...	0800	2770	--	--	--	--	--	1	1	--	--
DEC											
06...	0800	7980	1050	8.0	12.0	1	7.1	--	--	340	210
07...	0800	11600	--	--	12.5	--	--	2	1	--	--
JAN											
10...	0800	3370	1040	7.9	13.0	1	8.2	--	--	340	220
11...	0800	2050	--	--	12.5	--	--	3	1	--	--
FEB											
07...	0830	7090	1060	8.1	12.0	1	6.5	--	--	330	200
08...	0830	4850	--	--	12.0	--	--	1	1	--	--
MAR											
07...	0815	9600	1080	8.2	12.5	1	8.5	--	--	340	210
08...	0800	1870	--	--	--	--	--	1	5	--	--
APR											
11...	0800	19900	1080	7.9	12.0	1	6.5	--	--	340	200
12...	0800	18000	--	--	--	--	--	1	1	--	--
MAY											
09...	0800	29400	1060	8.1	13.0	0	7.3	--	--	340	210
10...	0730	21400	--	--	12.5	--	--	1	1	--	--
JUN											
13...	0730	10900	1070	8.0	13.0	--	7.7	--	--	350	--
14...	0715	7760	--	--	13.0	--	--	1	1	--	--
JUL											
11...	0800	9090	1080	8.0	13.0	--	7.8	--	--	340	--
12...	0800	9910	--	--	13.0	--	--	3	1	--	--
AUG											
08...	0800	10800	1070	7.7	13.5	--	7.3	--	--	340	--
09...	0800	8920	--	--	13.0	--	--	1	3	--	--
SEP											
12...	0800	4580	1080	8.4	13.0	--	7.2	--	--	330	--
13...	0800	5480	--	--	13.0	--	--	2	1	--	--

09421500 - COLORADO RIVER BLW HOOVER DAM, ARIZ-NEV

[illegible]

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, TOTAL RECUV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECUV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECUV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECUV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECUV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
UCT											
04...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	<100	15	4	4	.0	.0	5	0	30	10	2.3
09...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	--	--	--	--	--	--	--	--	--	2.1
07...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	2.6
11...	--	--	--	--	--	--	--	--	--	--	--
FEB											
07...	6	30	10	0	.0	.0	5	5	20	20	--
08...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	3.3
08...	--	--	--	--	--	--	--	--	--	--	--
APR											
11...	--	--	--	--	--	--	--	--	--	--	2.6
12...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	--	--	10	10	.1	.0	1	2	40	10	--
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
13...	--	--	--	--	--	--	--	--	--	--	2.8
14...	--	--	--	--	--	--	--	--	--	--	--
JUL											
11...	--	--	--	--	--	--	--	--	--	--	2.5
12...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	--	--	10	0	.0	.0	2	3	20	20	--
09...	--	--	--	--	--	--	--	--	--	--	--
SEP											
12...	--	--	--	--	--	--	--	--	--	--	3.1
13...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. DIAM. % FINER THAN .062 MM
OCT					
04...	0600	3920	1	4.8	68
NOV					
08...	0400	3870	1	23	65
DEC					
06...	0800	7980	2	51	62
JAN					
10...	0800	3370	1	11	65
FEB					
07...	0830	7090	1	19	50
MAR					
07...	0815	9600	6	156	88
APR					
11...	0800	19900	3	161	31
MAY					
09...	0800	29400	2	159	89
JUN					
13...	0730	10900	1	29	76
JUL					
11...	0800	9090	3	74	86
AUG					
08...	0800	10800	1	29	100
SEP					
12...	0800	4580	1	12	100

COLORADO RIVER MAIN STEM

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SG M	PERI- PHYTON BIOMASS ASH WEIGHT G/SG M
NOV 08...	0900	42	.236	.157
FEB 07...	0830	450	--	--
MAY 09...	0800	78	18.0	14.2
JUN 13...	0730	22	--	--
JUL 11...	0800	1900	--	--
AUG 08...	0800	1800	.594	.157
SEP 12...	0800	28	--	--

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 8, 77 0900	FEB 7, 78 0830	MAY 9, 78 0800	JUN 13, 78 0730
TOTAL CELLS/ML	42	450	78	22
DIVERSITY: DIVISION	0.5	0.0	0.0	0.0
..CLASS	0.5	0.0	0.0	0.0
...ORDER	1.4	0.0	0.0	0.0
...FAMILY	2.2	0.0	0.9	0.0
...GENUS	2.2	0.0	0.9	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...DUCCOSTACEAE								
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
...TETRAEDRUM	5	11	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...CUSCINOUSCACEAE								
...CYCLOTELLA	14#	33	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	--	-	--	-	--	-	--	-
...COCCONEIS	5	11	--	-	--	-	--	-
...FRAGILARIACEAE								
...SYNEURA	9#	22	--	-	26#	33	--	-
...NAVICULACEAE								
...NAVICULA	9#	22	--	-	52#	67	22#	100
...NITZSCHACEAE								
...NITZSCHIA	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...HORMOGUNALES								
...NUSTOCACEAE								
...ANABAENOPSIS	--	-	--	-	--	-	--	-
...USCILLATORIACEAE	--	-	450#	100	--	-	--	-
...LYNGBYA	--	-	--	-	--	-	--	-
...USCILLATORIA	--	-	--	-	--	-	--	-

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

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

COLORADO RIVER MAIN STEM

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 11,78 0800	AUG 8,78 0800	SEP 12,78 0800
TOTAL CELLS/ML	1900	1800	28
DIVERSITY: DIVISION	0.1	0.0	0.0
..CLASS	0.1	0.0	0.0
..ORDER	0.1	0.0	0.0
...FAMILY	0.1	0.1	1.0
....GENUS	0.1	0.1	1.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOKOPHYCEAE						
...CHLOROCUCCALES						
....UOYSTACEAE						
....DICTYOSPHAERIUM	--	-	*	0	--	-
....TETRAEDRON	--	-	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCALEAE						
....CYCLOTELLA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	22	1	--	-	--	-
....CUCONEIS	--	-	--	-	--	-
...FRAGILARIACEAE						
....SYNEURA	--	-	--	-	14#	50
...NAVICULACEAE						
....NAVICULA	--	-	*	0	--	-
...NITZSCHACEAE						
....NITZSCHIA	--	-	*	0	14#	50
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENOPSIS	--	-	11	1	--	-
...USCILLATORIACEAE	--	-	--	-	--	-
....LYNGBYA			1800#	99	--	-
....OSCILLATORIA	1900#	99	--	-	--	-

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

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

09423000 COLORADO RIVER BELOW DAVIS DAM, AZ-NV

LOCATION.--Lat 35°11'30", long 114°34'17", in SE¼NE¼ sec.1, T.32 S., R.66 E., Mount Diablo meridian, in Nevada, Clark County, Hydrologic Unit 15030101, on right bank 0.5 mi (0.8 km) downstream from Davis Dam, 29 mi (47 km) west of Kingman, Ariz., and 68 mi (109 km) downstream from Hoover Dam.

DRAINAGE AREA.--173,300 mi² (448,800 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1905 to September 1907 (published as "at Hardyville"), March 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft (152.40 m) National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. 1905-7, nonrecording gage at site 4.8 mi (7.7 km) downstream at datum about 13.4 ft (4.1 m) lower. Mar. 16 to May 3, 1949, water-stage recorder at site 0.5 mi (0.8 km) downstream at present datum. May 4, 1949, to Feb. 24, 1956, water-stage recorder at site 400 ft (120 m) upstream at present datum.

REMARKS.--Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950. Many diversions upstream for irrigation, industrial, and municipal uses.

AVERAGE DISCHARGE.--29 years (water years 1950-78), 12,450 ft³/s (352.6 m³/s), 9,020,000 acre-ft/yr (11,100 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--1905-7: Maximum daily discharge, 116,000 ft³/s (3,290 m³/s) June 20, 1906; minimum daily, 2,850 ft³/s (80.7 m³/s) Jan. 5, 1906.
1949-78: Maximum discharge, 31,200 ft³/s (884 m³/s) Apr. 22, 1952, elevation, 513.91 ft (156.640 m); no flow at Davis Dam parts of several days July to September 1950 and Dec. 27, 1950, when gates in dam were closed; minimum daily discharge, 285 ft³/s (8.07 m³/s) Aug. 3, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,900 ft³/s (733 m³/s) Mar. 23, elevation, 505.52 ft (154.082 m); minimum daily discharge, 2,150 ft³/s (60.9 m³/s) Jan. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8830	8820	7630	4450	2210	4150	17700	13800	14900	18600	16700	14500
2	8030	7870	7750	5540	2220	2280	12400	12400	13900	13100	16000	12400
3	8890	7460	7960	4920	3690	2320	18100	11500	13400	19200	15800	11000
4	9100	7120	6320	4730	4300	5410	16900	12600	12400	16300	13100	11400
5	9080	6540	9120	3550	3360	5500	16700	12400	14600	16300	16400	10300
6	3310	6320	8200	3890	4020	5520	14300	12700	13500	15700	14200	12000
7	4900	7140	7960	3440	4250	8170	16600	12200	11200	16000	16100	12200
8	7260	6710	7300	3460	4560	11200	16700	14200	10900	18000	16200	13000
9	7410	7110	8170	3860	6770	16500	11900	12600	12800	13200	12600	13600
10	6970	6110	8260	2460	7900	14600	17200	9750	16900	19500	14900	11100
11	7950	7980	6360	2270	6980	15500	17500	10700	12800	16100	15400	11900
12	5260	7730	7240	2160	5610	9320	17100	12600	15600	15100	14900	11100
13	4260	6360	8400	3200	8690	13900	16800	13000	14500	13800	12200	11600
14	7020	7500	8140	4190	6760	14800	17100	11600	15000	17900	15400	10700
15	8730	7430	8440	2230	9210	16300	18500	16700	16200	17400	15700	12000
16	8680	5800	9320	2170	8890	11900	12100	12000	17100	13400	14400	11800
17	8750	5340	8610	2170	10500	17400	18400	10800	15100	18300	13200	10800
18	7830	5950	6440	2190	14700	17100	19000	11200	13000	18400	13600	11000
19	8310	6730	7340	2150	9770	11300	19600	13500	18100	17700	14200	10800
20	7390	6180	7390	2150	15800	17300	18400	14500	17200	15800	11400	9390
21	9440	6820	7060	2220	14900	18400	17300	12000	14900	16900	14400	9010
22	9800	7550	6870	2160	12700	19200	17600	14600	13200	18300	15900	9830
23	6460	7770	10000	3600	16200	19800	12400	14300	15900	14300	15600	13000
24	8560	6830	9780	2170	13400	17400	16900	12200	17200	16800	15000	7890
25	7650	5950	5650	2200	14800	16200	14700	12800	12800	16900	14700	13300
26	7740	6270	4960	4520	9640	11200	15100	11700	19300	14700	14600	11700
27	8290	5430	2510	5470	10200	16800	15500	13700	16500	14300	12700	10600
28	7790	6960	2390	5340	7000	16800	15000	11700	16200	15900	13200	9990
29	8380	6980	2360	4870	---	16800	14500	12100	15100	15700	12400	9390
30	6360	6910	2920	5560	---	16800	12100	13800	17000	13200	12100	8780
31	7740	---	4600	2230	---	18000	---	13300	---	16300	12300	---
TOTAL	236170	205670	215450	105520	239030	407870	484100	392950	447200	503180	445300	336080
MEAN	7618	6856	6950	3404	8537	13160	16140	12680	14910	16230	14360	11200
MAX	9800	8820	10000	5560	16200	19800	19600	16700	19300	19500	16700	14500
MIN	3310	5340	2360	2150	2210	2280	11900	9750	10900	13100	11400	7890
AC-FT	468400	407900	427300	209300	474100	809000	960200	779400	887000	997900	883300	666600
WTR YR 1978	TOTAL	4018440	MEAN	11010	MAX	19800	MIN	2150	AC-FT	7971000		

09423000 COLORADO RIVER BELOW DAVIS DAM, AZ-NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM AD-SURPH- TATION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT												
03...	1200	10100	1070	7.9	14.0	330	200	78	32	100	2.4	4.8
NOV												
01...	1425	13400	1080	7.8	16.0	340	210	84	31	110	2.6	5.0
DEC												
01...	1400	5170	1080	7.6	14.0	340	210	83	32	98	2.3	5.2
JAN												
03...	1000	5650	1070	7.8	12.0	330	210	82	30	100	2.4	4.9
FEB												
01...	0920	2160	1080	7.9	12.0	340	210	84	32	96	2.3	4.9
MAR												
01...	0950	9630	1070	8.0	12.0	340	200	83	31	100	2.4	4.8
APR												
03...	1130	24800	1080	7.7	14.5	340	200	88	30	100	2.3	5.4
MAY												
01...	1250	14200	1070	7.8	16.0	320	190	78	31	100	2.4	5.1
JUN												
01...	1340	19500	1070	8.0	14.0	330	190	84	28	100	2.4	5.5
JUL												
03...	0845	23300	1080	7.7	21.0	330	210	82	30	100	2.4	4.9
AUG												
01...	0705	15300	1070	7.7	20.5	340	200	83	31	99	2.4	4.9
SEP												
01...	1100	14300	1070	7.5	14.5	320	190	82	29	100	2.4	4.9

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)
OCT												
03...	150	0	300	42	.3	8.7	695	690	.95	--	140	10
NOV												
01...	150	0	300	43	.4	8.8	697	706	.95	--	140	0
DEC												
01...	160	0	310	87	.4	8.8	707	703	.96	--	160	10
JAN												
03...	150	0	310	89	.3	10	709	700	.96	--	140	0
FEB												
01...	160	0	280	89	.4	8.8	694	674	.94	--	140	0
MAR												
01...	160	0	290	89	.4	8.4	707	686	.96	--	140	10
APR												
03...	170	0	270	43	.3	9.0	690	680	.94	--	140	10
MAY												
01...	160	0	280	87	.3	9.0	700	669	.95	--	140	0
JUN												
01...	160	0	280	42	.3	8.4	703	677	.96	--	140	0
JUL												
03...	150	0	290	92	.3	8.9	706	683	.96	.17	130	30
AUG												
01...	160	0	290	44	.3	9.0	703	691	.96	.23	130	0
SEP												
01...	160	0	290	41	.3	9.3	716	687	.97	.26	150	30

09423500 COLORADO RIVER AT NEEDLES, CA

LOCATION.--Lat 34°51'06", long 114°36'33", in SE¼SE¼ sec.19, T.9 N., R.23 E., San Bernardino meridian, San Bernardino County, Hydrologic Unit 15030101, on right bank at Needles, 15 mi (24 km) upstream from gaging station near Topock, Ariz., 30 mi (48 km) downstream from Davis Dam, and 97 mi (156 km) downstream from Hoover Dam.

DRAINAGE AREA.--174,500 mi² (452,000 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

PERIOD OF RECORD.--April 1931 to current year (elevations only).

REVISED RECORDS.--WSP 1119: 1931-47.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft (121.920 m) National Geodetic Vertical Datum of 1929. Prior to May 15, 1942, at site 550 ft (170 m) downstream and May 15, 1942, to Feb. 16, 1969, at site 200 ft (60 m) upstream; at datum 66.23 ft (20.187 m) higher prior to Jan. 12, 1952, and at present datum thereafter.

REMARKS.--Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 475.77 ft (145.015 m) Nov. 30, 1944; minimum, 457.84 ft (139.550 m) Feb. 26, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 469.70 ft (143.165 m) Mar. 23; minimum, 458.61 ft (139.784 m) Jan. 20-23.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	463.24	---	462.07	460.05	458.76	460.76	466.96	464.79	465.45	467.10	466.34	---
2	462.59	462.46	462.04	460.14	458.70	459.38	465.55	464.98	465.14	465.96	466.08	464.21
3	461.83	462.12	462.38	460.71	458.89	458.88	466.40	464.59	465.28	466.65	466.03	464.22
4	462.50	461.88	461.72	460.28	459.78	459.48	466.44	464.28	464.64	466.67	465.83	463.73
5	463.09	461.66	462.12	460.22	459.86	460.73	466.76	464.70	464.98	466.22	464.94	---
6	462.25	461.51	462.73	459.49	459.54	460.71	466.42	465.01	465.30	465.90	465.79	---
7	459.58	461.45	462.33	459.75	460.18	461.22	465.51	464.85	464.60	465.87	466.27	---
8	461.01	461.72	462.04	459.41	459.73	463.14	466.60	464.45	464.09	466.80	465.58	---
9	461.99	461.64	462.13	459.60	460.33	465.98	465.21	465.04	463.92	465.72	465.20	---
10	461.92	461.71	462.36	---	462.02	465.49	465.75	463.82	465.72	466.64	465.04	---
11	461.77	461.69	462.02	---	461.95	466.00	467.15	463.59	465.48	466.64	465.45	---
12	461.37	462.09	461.70	---	461.11	464.28	466.65	464.13	465.21	465.68	465.47	---
13	460.47	461.77	461.91	---	461.97	464.36	466.54	464.80	466.04	465.57	465.04	---
14	460.71	461.66	462.26	---	461.96	465.56	466.64	464.57	465.27	465.98	465.42	---
15	462.28	462.22	462.53	---	462.01	466.20	467.01	465.34	465.95	466.78	465.31	---
16	462.91	461.36	462.74	---	462.90	464.57	465.72	464.98	466.55	465.52	---	---
17	---	461.19	462.74	458.67	462.91	466.54	466.17	464.33	465.93	466.10	---	---
18	---	460.75	461.93	458.65	465.02	466.87	467.78	463.65	465.34	466.98	---	---
19	---	461.21	461.54	458.69	464.35	465.20	467.63	464.29	466.32	467.07	---	---
20	---	461.34	461.92	458.62	465.15	465.90	467.44	465.20	466.67	466.05	---	---
21	---	461.41	461.64	458.67	465.86	467.30	467.07	464.89	466.17	466.38	---	---
22	---	461.86	461.67	458.62	465.05	467.36	466.66	464.90	465.38	466.83	---	462.91
23	---	462.05	462.64	458.78	466.17	467.72	465.76	465.48	465.52	466.02	---	463.90
24	---	461.84	463.19	459.48	465.31	467.62	465.69	464.95	466.60	466.63	---	463.87
25	---	461.62	462.17	458.67	465.57	466.14	466.12	464.67	465.72	466.45	---	463.21
26	---	461.30	461.22	459.03	464.38	465.17	466.01	464.37	466.65	466.15	---	464.62
27	---	461.34	459.60	460.47	463.25	465.52	466.21	464.64	466.64	464.97	---	462.37
28	---	460.85	459.19	460.93	463.41	466.46	465.85	464.69	466.38	465.87	---	463.75
29	---	461.96	459.19	460.55	---	466.53	465.51	464.37	466.20	465.96	---	463.14
30	---	461.47	459.19	460.84	---	466.56	465.15	464.62	466.48	465.47	---	462.89
31	---	---	459.36	460.29	---	467.06	---	465.00	---	465.76	---	---
MEAN	---	---	461.69	---	462.36	464.67	466.35	464.64	465.65	466.21	---	---
MAX	---	---	463.19	---	466.17	467.72	467.78	465.48	466.67	467.10	---	---
MIN	---	---	459.19	---	458.70	458.88	465.15	463.59	463.92	464.97	---	---

09424000 COLORADO RIVER NEAR TOPOCK, AZ

LOCATION.--Lat 34°41'15", long 114°27'43", in SW¼NW¼ sec.13, T.15 N., R.21 W., Gila and Salt River meridian, Mohave County, Hydrologic Unit 15030101, on left bank in Mohave Canyon, 2.4 mi (3.9 km) southeast of Topock, 39 mi (63 km) upstream from Parker Dam, and 45 mi (72 km) downstream from Davis Dam.

DRAINAGE AREA.--176,300 mi² (456,600 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1917 to current year. Daily mean elevations published since October 1938.

REVISED RECORDS.--WSP 918: 1921. WSP 1313: 1918-19(M).

GAGE.--Water-stage recorder. Datum of gage is 423.02 ft (128.936 m) National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. Prior to Dec. 3, 1922, at site about 1 mi (2 km) upstream at different datum.

REMARKS.--Records fair. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

AVERAGE DISCHARGE.--17 years (water years 1918-34), 20,260 ft³/s (573.8 m³/s), 14,670,000 acre-ft/yr (18,100 hm³/yr); 44 years (water years 1935-78), 12,750 ft³/s (361.1 m³/s), 9,237,000 acre-ft/yr (11,400 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--1917-34: Maximum discharge probably exceeded 200,000 ft³/s (5,660 m³/s)

June 22, 1921; minimum, 1,480 ft³/s (41.9 m³/s) Aug. 17, 1934.

1934-78: Maximum discharge, 35,700 ft³/s (1,010 m³/s) Jan. 29, 1942; maximum elevation, 457.37 ft (139.406 m) July 9, 1959; minimum discharge, 375 ft³/s (10.6 m³/s) Feb. 14, 1935; minimum daily, 422 ft³/s (12.0 m³/s) Feb. 14, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge of about 300,000 ft³/s (8,500 m³/s), based on determination at Lees Ferry gaging station, occurred about July 10, 1884. Discharge estimated to be in excess of 400,000 ft³/s (11,300 m³/s) probably occurred within the period 1857-68 and most likely in 1862.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,400 ft³/s (578 m³/s) Mar. 24; maximum elevation, 455.61 ft (138.870 m) June 27; minimum daily discharge, 2,280 ft³/s (64.6 m³/s) Jan. 26; minimum elevation, 448.12 ft (136.587 m) Jan. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8300	7070	6660	4010	2860	6980	17300	12000	12500	16000	15000	11200
2	8030	7970	7140	4110	2520	4570	16500	12700	13200	15800	15200	11400
3	7010	7350	7430	5080	2430	2960	14000	12000	13100	14400	15000	11800
4	7940	7150	7180	4810	3340	2850	16400	11200	12600	16200	14800	10800
5	8400	6930	6240	4640	3800	5060	16200	11500	12300	15000	13100	10900
6	8450	6390	8330	3750	3310	5100	16500	12200	13300	14800	14800	10400
7	3980	6290	7680	3850	3680	5100	14100	12100	12800	14800	14500	11500
8	4830	6810	7410	3500	3820	7370	15800	11300	11600	15500	14500	11400
9	6590	6490	7010	3510	4000	11400	15200	12700	11300	15500	14400	12400
10	6880	6870	7620	3970	6210	14200	12900	11600	13100	14400	12500	12200
11	6460	6320	7600	3040	7020	13800	16300	10300	14500	16300	13700	10700
12	7100	7520	6340	2700	6270	13600	16200	10700	12800	14500	14000	10700
13	5120	7430	6780	2570	5470	10200	16000	11700	14400	13900	13900	10300
14	4130	6450	7580	3180	7740	13000	16000	11700	13500	13700	12700	10800
15	6240	7240	7780	4110	6300	14300	16600	11600	14100	15700	13800	10200
16	8260	7070	7870	2830	8160	13700	16400	13700	15100	14900	14400	11000
17	7580	5920	8530	2530	8060	13600	13500	11400	15100	13400	13700	11000
18	7910	5510	7910	2410	10300	16200	17400	10100	14100	15800	12600	10200
19	7370	5790	6140	2430	11900	15100	18000	10800	13700	16200	12800	10300
20	7560	6240	6760	2390	10500	12600	17900	12400	15700	15200	13000	10100
21	7070	5870	6720	2370	13500	16300	17400	13100	15300	14700	11300	9020
22	8520	6420	6630	2380	12900	17100	16400	12000	14000	15500	13400	8850
23	8750	6920	7080	2320	13000	18100	16200	13600	13500	15600	14000	9760
24	6360	7090	9180	3080	13500	18700	13200	13200	15200	14400	14000	11600
25	7680	6500	8750	2370	12900	16300	15500	12200	15000	15100	13600	8330
26	7140	5910	5930	2280	12500	15200	14200	12000	14300	15100	13500	11800
27	7200	6000	4830	3970	9340	12400	14600	11500	16100	13500	13300	10900
28	7510	5360	2930	4980	9740	15700	14500	12400	15200	13800	11800	10100
29	7160	6500	2660	4960	---	16100	13600	11400	15000	14600	12200	9650
30	7510	6580	2560	4740	---	16200	13500	11600	15000	14400	11500	9050
31	5950	---	2790	5210	---	16700	---	12300	---	13400	11400	---
TOTAL	218990	197960	206050	108080	215070	380490	468300	369000	417400	462100	418400	318360
MEAN	7064	6599	6647	3486	7681	12270	15610	11900	13910	14910	13500	10610
MAX	8750	7970	9180	5210	13500	18700	18000	13700	16100	16300	15200	12400
MIN	3980	5360	2560	2280	2430	2850	12900	10100	11300	13400	11300	8330
AC-FT	434400	392700	408700	214400	426600	754700	928900	731900	827900	916600	829900	631500
CAL YR 1977 TOTAL	3900080			MEAN 10690	MAX 19400	MIN 2020	AC-FT 7736000					
WTR YR 1978 TOTAL	3780200			MEAN 10360	MAX 18700	MIN 2280	AC-FT 7498000					

09424000 COLORADO RIVER NEAR TOPOCK, AZ--Continued

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	451.79	451.24	450.90	449.34	448.62	450.85	454.48	453.20	453.83	454.75	454.17	452.66
2	451.69	451.62	451.12	449.40	448.38	449.66	454.23	453.53	454.06	454.66	454.22	452.73
3	451.24	451.34	451.25	449.91	448.31	448.69	453.35	453.35	454.02	454.17	454.12	452.89
4	451.61	451.24	451.12	449.79	448.94	448.61	454.24	453.14	453.81	454.77	454.02	452.55
5	451.81	451.13	450.67	449.70	449.23	449.92	454.20	453.37	453.68	454.40	453.39	452.57
6	451.84	450.86	451.60	449.20	448.92	449.94	454.30	453.62	454.01	454.31	453.97	452.39
7	449.82	450.80	451.32	449.25	449.15	449.94	453.48	453.60	453.82	454.28	453.85	452.83
8	450.21	451.03	451.19	449.05	449.22	451.07	454.09	453.29	453.35	454.54	453.83	452.80
9	451.04	450.88	451.00	449.05	449.35	452.68	453.89	453.79	453.25	454.52	453.78	453.23
10	451.18	451.05	451.28	449.32	450.51	453.45	453.09	453.45	453.87	454.14	453.08	453.13
11	451.00	450.79	451.27	448.74	450.91	453.29	454.29	452.98	454.34	454.79	453.48	452.59
12	451.26	451.34	450.67	448.52	450.54	453.22	454.24	453.17	453.70	454.17	453.57	452.60
13	450.39	451.28	450.87	448.42	450.13	452.00	454.17	453.60	454.25	453.96	453.49	452.50
14	449.90	450.81	451.24	448.84	451.21	453.02	454.19	453.62	453.91	453.88	453.05	452.68
15	450.85	451.18	451.33	449.39	450.56	453.48	454.38	453.60	454.13	454.56	453.42	452.45
16	451.74	451.08	451.38	448.60	451.43	453.23	454.29	454.00	454.48	454.26	453.62	452.78
17	451.45	450.53	451.63	448.38	451.38	453.21	453.30	453.28	454.47	453.76	453.37	452.78
18	451.57	450.32	451.36	448.29	452.27	454.12	454.65	452.88	454.11	454.58	452.97	452.48
19	451.35	450.46	450.55	448.31	452.87	453.74	454.84	453.07	453.98	454.70	453.07	452.47
20	451.44	450.68	450.83	448.28	452.34	452.85	454.83	453.55	454.67	454.33	453.11	452.38
21	451.23	450.50	450.81	448.26	453.43	454.17	454.64	453.70	454.52	454.18	452.52	451.97
22	451.84	450.78	450.76	448.27	453.22	454.43	454.32	453.31	454.08	454.45	453.26	451.88
23	451.92	451.02	450.97	448.22	453.28	454.76	454.24	453.89	453.88	454.44	453.50	452.22
24	450.94	451.10	451.87	448.77	453.46	454.94	453.20	453.74	454.46	454.05	453.49	452.88
25	451.52	450.82	451.66	448.26	453.22	454.17	454.02	453.57	454.41	454.30	453.35	451.60
26	451.27	450.53	450.41	448.19	453.08	453.77	453.67	453.66	454.16	454.28	453.31	452.94
27	451.34	450.57	449.79	449.32	451.90	452.81	453.92	453.46	454.77	453.72	453.22	452.55
28	451.52	450.25	448.69	449.88	452.06	453.95	453.93	453.81	454.47	453.83	452.75	452.25
29	451.37	450.82	448.51	449.87	---	454.08	453.68	453.45	454.38	454.09	452.91	452.14
30	451.52	450.86	448.42	449.75	---	454.12	453.71	453.50	454.38	454.02	452.71	451.95
31	450.83	---	448.59	450.00	---	454.30	---	453.76	---	453.66	452.68	---
MEAN	451.24	450.90	450.74	448.99	451.00	452.66	454.06	453.48	454.11	454.28	453.40	452.53
MAX	451.92	451.62	451.87	450.00	453.46	454.94	454.84	454.00	454.77	454.79	454.22	453.23
MIN	449.82	450.25	448.42	448.19	448.31	448.61	453.09	452.88	453.25	453.66	452.52	451.60

WTR YR 1978 MEAN 452.29 MAX 454.94 MIN 448.19

COLORADO RIVER MAIN STEM
09424000 COLORADO RIVER NEAR TOPOCK, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1952 to July 1962.

INSTRUMENTATION.--Water temperature recorder from July 1952 to July 1962.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AN- ION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT												
03...	1400	7350	1070	8.1	20.5	320	200	76	32	100	2.4	4.9
NOV												
01...	0945	8170	1070	7.7	16.5	340	210	84	31	110	2.6	4.7
DEC												
01...	1030	7820	1070	8.0	14.0	340	210	85	32	96	2.3	5.0
JAN												
03...	1530	5620	1080	7.9	12.0	320	200	79	30	100	2.4	4.9
FEB												
01...	1320	2720	1090	8.0	13.0	340	210	84	31	100	2.4	4.8
MAR												
01...	0900	682	1070	8.0	13.0	340	200	83	31	100	2.4	4.7
APR												
03...	1400	12900	1080	8.0	14.0	340	210	86	30	98	2.3	5.0
MAY												
02...	0900	16100	1070	7.9	16.5	330	190	81	30	100	2.4	5.0
JUN												
01...	1025	14400	1070	8.0	20.0	340	200	85	30	100	2.4	5.2
JUL												
03...	1230	13300	1080	7.8	21.5	330	200	81	30	110	2.7	4.5
AUG												
01...	1000	16200	1070	7.9	21.0	330	200	80	31	97	2.3	4.9
SEP												
01...	0800	13800	1070	7.7	20.0	320	190	82	29	100	2.4	4.6

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 160 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (IONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS Fe)
OCT												
03...	150	0	290	91	.3	8.3	696	677	.95	--	140	20
NOV												
01...	160	0	300	90	.4	9.2	682	708	.93	--	130	0
DEC												
01...	160	0	320	88	.4	8.4	682	714	.93	--	150	10
JAN												
03...	150	0	310	89	.3	10	690	697	.94	--	140	0
FEB												
01...	160	0	280	92	.5	8.8	696	680	.93	--	140	0
MAR												
01...	160	0	290	90	.4	8.5	682	687	.93	--	140	0
APR												
03...	160	0	280	91	.3	9.0	690	678	.94	--	140	20
MAY												
02...	170	0	280	87	.3	8.9	682	676	.93	--	140	0
JUN												
01...	160	0	290	90	.3	8.4	680	688	.92	--	140	0
JUL												
03...	--	--	300	91	.3	8.7	680	704	.92	--	130	10
AUG												
01...	160	0	290	94	.3	9.0	676	686	.92	.22	140	0
SEP												
01...	160	0	270	88	.3	9.3	676	663	.92	.25	150	20

09424150 COLORADO RIVER AQUEDUCT NEAR PARKER DAM, AZ-CA

LOCATION.--Lat 34°18'58", long 114°09'23", in NW¼SW¼ sec.28, T.3 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, Hydrologic Unit 15030101, at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 mi (2.9 km) upstream from Parker Dam and 149 mi (240 km) downstream from Hoover Dam.

PERIOD OF RECORD.--January 1939 to current year (monthly diversions only since October 1942). Published as a supplement to records for Colorado River below Parker Dam, 1942-50. Percolation return flow (monthly flow only) October 1964 to September 1973 (discontinued); prior to October 1964 miscellaneous measurements only.

GAGE.--Venturi meters in pressure lines at intake pumping plant.

REMARKS.--Pumping began Jan. 7, 1939. Figures of monthly diversion shown represent water pumped from Lake Havasu less return surface flow from Gene and Copper Basin Reservoirs. No water returned as surface flow from these reservoirs this year. Percolation return flow from Gene and Copper Basin Reservoirs is estimated by the U.S. Bureau of Reclamation as 10 acre-ft/day (12,300 m³/day) for a yearly total of 3,650 acre-ft (4.50 hm³), which is used for accounting purposes.

COOPERATION.--Diversion records furnished by Metropolitan Water District of Southern California.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily diversion, 3,986 acre-ft (4.91 hm³), 2,010 ft³/s (56.9 m³/s) Oct. 25, 1970 and Oct. 29, 1977; no diversion at times.

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Month	Diversions			
	Maximum	Minimum	Mean	Total
October.....	3,986	3,746	3,813	118,201
November.....	3,843	3,713	3,813	114,379
December.....	3,825	3,693	3,799	117,773
CAL YR 1977.....	3,986	0	3,533	1,289,590
January.....	3,829	417	2,333	72,337
February.....	2,760	881	1,614	45,203
March.....	2,715	216	2,112	65,462
April.....	2,424	1,411	2,136	64,066
May.....	2,241	830	1,390	43,090
June.....	2,548	1,155	2,107	63,206
July.....	2,289	1,335	2,010	62,307
August.....	2,274	1,643	2,160	66,956
September.....	2,279	1,856	2,125	63,748
WTR YR 1978.....	3,986	216	2,451	896,728

COLORADO RIVER MAIN STEM

09424190 COLORADO RIVER AQUEDUCT NEAR SAN JACINTO, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°49'18", long 116°58'01", in NE¼ sec.15, T.4 S., R.1 W., San Bernardino County, at west portal of San Jacinto Tunnel, 1.7 mi (2.7 km) southeast of Gilman Hot Springs, and 2.5 mi (4.0 km) north of San Jacinto.

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

CHEMICAL ANALYSES: Water years 1975 to current year.

BIOLOGICAL DATA: Water years 1975 to current year.

SEDIMENT RECORDS: Water years 1975 to September 1977, partial-record station (discontinued).

COOPERATION.--Discharge values were furnished by Metropolitan Water District from the aqueduct records.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
20...	1000	1940	1060	7.8	23.0	1	--	8.4	K2	25
NOV										
17...	1000	1930	1070	8.2	18.0	2	--	9.1	<1	21
DEC										
23...	1045	1930	1080	8.4	14.0	2	--	9.7	<1	54
JAN										
24...	1000	450	1060	8.4	13.0	1	--	10.4	<1	92
FEB										
28...	1045	1320	1070	--	15.5	1	--	10.4	<1	K155
MAR										
31...	1110	905	1060	--	19.0	1	--	9.2	<1	--
APR										
25...	1000	1080	1060	8.5	20.0	1	--	8.6	<1	K5
MAY										
26...	1430	448	1080	8.4	23.5	--	1.4	8.4	K1	K1
JUN										
30...	1810	1040	1050	8.0	28.0	--	1.4	7.7	K1	K3
JUL										
20...	1400	1050	1050	7.8	29.5	--	1.1	7.7	K1	21
AUG										
18...	1050	1070	1060	7.8	27.0	--	1.5	7.8	K3	68
SEP										
26...	1430	1060	1110	8.0	27.5	--	.80	--	K4	K343

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)
OCT										
20...	310	190	78	29	97	40	2.4	5.0	150	0
NOV										
17...	330	200	80	31	110	42	2.6	5.0	150	0
DEC										
23...	340	220	81	33	100	39	2.4	5.0	150	0
JAN										
24...	330	200	82	31	100	39	2.4	5.3	160	1
FEB										
28...	330	200	82	31	100	39	2.4	5.2	160	--
MAR										
31...	340	200	83	31	110	41	2.6	5.7	160	--
APR										
25...	330	200	84	30	97	38	2.3	5.0	160	2
MAY										
26...	330	200	81	31	100	39	2.4	5.8	--	--
JUN										
30...	330	210	82	30	110	42	2.6	5.1	--	--
JUL										
20...	330	210	78	32	110	42	2.7	5.0	--	--
AUG										
18...	300	180	74	29	110	44	2.7	5.0	--	--
SEP										
26...	320	200	79	30	110	42	2.7	4.8	--	--

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

09424190 COLORADO RIVER AQUEDUCT NEAR SAN JACINTO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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, NO2+NO3 TOTAL (MG/L AS N)
OCT									
20...	120	3.8	280	91	.4	8.8	703	663	.06
NOV									
17...	120	1.5	290	89	.4	9.1	687	688	.23
DEC									
23...	120	1.0	310	91	.4	9.2	721	704	.16
JAN									
24...	130	1.0	290	87	.3	8.8	711	684	.11
FEB									
28...	130	--	260	95	.4	8.6	706	661	.18
MAR									
31...	130	--	300	90	.3	8.9	689	708	.08
APR									
25...	130	.8	260	87	.4	9.0	700	653	.08
MAY									
26...	130	--	280	91	.3	8.7	688	676	.11
JUN									
30...	120	--	290	93	.7	25	696	708	.05
JUL									
20...	120	--	290	110	.4	8.0	719	706	.08
AUG									
18...	120	--	290	93	.4	8.7	712	682	.07
SEP									
26...	120	--	320	96	.4	8.3	701	721	.05

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT									
20...	.09	--	--	--	.31	--	--	.02	.02
NOV									
17...	.04	--	--	--	.32	--	--	.04	.01
DEC									
23...	.18	--	--	--	.45	--	--	.05	.03
JAN									
24...	.04	.96	1.0	.46	.54	1.1	4.9	.01	.01
FEB									
28...	.05	.60	.65	.00	.70	.83	3.7	.03	.01
MAR									
31...	.09	.59	.68	.52	.16	.76	3.4	.02	.01
APR									
25...	.04	.39	.43	.14	.29	.51	2.3	.00	.00
MAY									
26...	.05	--	--	--	.49	--	--	.02	.01
JUN									
30...	.03	.51	.54	.00	--	.59	2.6	.02	.00
JUL									
20...	.00	.92	.92	.47	.45	1.0	4.4	.01	.00
AUG									
18...	.03	.55	.58	.17	.41	.65	2.9	.04	.03
SEP									
26...	.01	.76	.77	.29	.48	.82	3.6	.02	.02

09424190 COLORADO RIVER AQUEDUCT NEAR SAN JACINTO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)
OCT 20...	1000	1940	1060	7.8	23.0	4	2	2	600	400	200
JAN 24...	1000	450	1060	8.4	13.0	2	0	2	100	0	100
APR 25...	1000	1080	1060	8.5	20.0	3	0	3	100	0	100
JUL 20...	1400	1050	1050	7.8	29.5	3	0	4	200	100	100

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
OCT 20...	10	9	1	10	10	0	<50	<50	0	<10	<7
JAN 24...	--	--	--	0	0	0	0	0	0	5	1
APR 25...	1	0	2	0	0	0	0	0	0	5	0
JUL 20...	3	1	2	10	10	0	0	0	0	9	6

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 20...	3	170	--	10	<100	<96	4	10	2	8	.0
JAN 24...	4	90	--	40	--	--	--	20	10	10	.0
APR 25...	5	60	--	40	--	--	--	10	10	0	.0
JUL 20...	3	170	160	10	12	7	5	10	7	3	.1

DATE	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 20...	.0	.0	3	2	1	<10	<10	0	20	10	10
JAN 24...	.0	.0	5	1	4	0	0	0	30	10	20
APR 25...	.0	.0	2	0	2	0	0	0	20	0	20
JUL 20...	.1	.0	2	0	2	0	0	0	40	30	7

09424190 COLORADO RIVER AQUEDUCT NEAR SAN JACINTO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT								
20...	1000	1940	1060	7.8	23.0	--	5.6	.7
NOV								
17...	1000	1930	1070	8.2	18.0	3.4	--	--
DEC								
23...	1045	1930	1080	8.4	14.0	3.0	--	--
JAN								
24...	1000	450	1060	8.4	13.0	--	--	.2
FEB								
24...	1045	1320	1070	--	15.5	4.0	--	--
MAR								
31...	1110	905	1060	--	19.0	6.4	--	--
APR								
25...	1000	1080	1060	8.5	20.0	--	3.2	.3
MAY								
26...	1430	448	1080	8.4	23.5	4.2	--	--
JUN								
30...	1810	1040	1050	8.0	28.0	4.1	--	--
JUL								
20...	1400	1050	1050	7.8	29.5	--	4.4	.1
AUG								
18...	1050	1070	1060	7.8	27.0	3.9	--	--
SEP								
26...	1430	1060	1110	8.0	27.5	3.7	--	--

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 17,77 1000	MAR 31,78 1110	MAY 26,78 1430	JUN 30,78 1810	JUL 20,78 1400	AUG 18,78 1050
TOTAL CELLS/ML	1000	2000	2300	3600	3300	1700
DIVERSITY: DIVISION	1.8	0.2	0.9	1.2	1.1	1.5
..CLASS	1.8	0.2	0.9	1.5	1.1	1.5
..ORDER	2.4	0.2	1.3	1.8	1.2	1.8
...FAMILY	3.0	0.2	2.8	2.9	2.6	3.2
....GENUS	3.1	0.2	2.8	3.1	2.7	3.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...COELASTRACEAE												
...COELASTRUM	75	7	--	--	460#	20	120	3	390	12	120	7
...HYDRODICTYACEAE												
...PEDIASTRUM	--	--	--	--	460#	20	--	--	--	--	200	11
...MICRACTINIACEAE												
...GOLENKINIA	--	--	--	--	--	--	--	--	--	--	12	1
...MICRACTINIUM	--	--	--	--	--	--	--	--	--	--	48	3
...OOCYSTACEAE												
...ANKISTRODESMUS	50	5	--	--	--	--	--	--	79	2	*	0
...CHLORELLA	--	--	--	--	57	2	--	--	--	--	--	--
...CHODATELLA	--	--	--	--	--	--	58	2	--	--	--	--
...DICTYOSPHAERIUM	--	--	--	--	--	--	260	7	--	--	130	7
...KIRCHNERIELLA	6	1	--	--	--	--	--	--	98	3	--	--
...SELENASTRUM	--	--	--	--	29	1	--	--	--	--	--	--
...TETRAEDRON	--	--	--	--	--	--	29	1	20	1	12	1
...SCENEDESMACEAE												
...SCENEDESMUS	240#	24	--	--	540#	24	170	5	1400#	42	220	12
...TETRASPORALES												
...COCCOMYXACEAE												
...ELAKATOTHRIX	--	--	--	--	--	--	230	7	--	--	--	--
...PALMELLACEAE												
...SPHAEROCYSTIS	--	--	--	--	110	5	--	--	--	--	--	--
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
...CHLAMYDOMONAS	--	--	14	1	43	2	--	--	--	--	--	--
...ZYGNEHATALES												
...DESMIDIACEAE												
...COSMARIMUM	--	--	--	--	--	--	--	--	39	1	--	--
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
...CYCLOTELLA	140	14	--	--	--	--	29	1	39	1	12	1
..PENNALES												
...ACHNANTHACEAE												
...ACHNANTHES	6	1	--	--	72	3	58	2	140	4	100	6
...COCCONEIS	6	1	--	--	--	--	--	--	--	--	--	--

See footnotes at end of table.

09424190 COLORADO RIVER AQUEDUCT NEAR SAN JACINTO, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

...CYMBELLACEAE											
....CYMBELLA	--	-	--	-	410#	18	58	2	39	1	100 6
....DIATOMACEAE											
....DIATOMA	--	-	--	-	--	-	29	1	--	-	-- -
....FRAGILARIACEAE											
....FRAGILARIA	--	-	--	-	--	-	29	1	--	-	-- -
....SYNEDRA	31	3	--	-	--	-	--	-	670#	20	330# 19
....NAVICULACEAE											
....NAVICULA	19	2	14	1	100	4	1000#	29	220	7	24 1
....NITZSCHACEAE											
....NITZSCHIA	63	6	14	1	--	-	960#	27	140	4	18 1
..CHRYSTOPHYCEAE											
..CHRYSONOMADALES											
...OCHROMONADACEAE											
....DINOBRYON	--	-	--	-	--	-	150	4	--	-	-- -
....OCHROMONAS	--	-	--	-	--	-	120	3	--	-	-- -
CRYPTOPHYTA (CRYPTOMONADS)											
..CRYPTOPHYCEAE											
..CRYPTOMONIDALES											
...CRYPTOMONADACEAE											
....CRYPTOMONAS	50	5	--	-	--	-	--	-	--	-	-- -
CYANOPHYTA (BLUE-GREEN ALGAE)											
..CYANOPHYCEAE											
..CHROCOCCALES											
...CHROCOCCACEAE											
....AGMENELLUM			--	-	--	-	--	-	--	-	48 3
....ANACYSTIS	190#	19	--	-	--	-	120	3	39	1	24 1
..HORMOGONALES											
...OSCILLATORIACEAE											
....OSCILLATORIA	130	13	2000#	98	--	-	--	-	--	-	350# 20
DATE	NOV 17,77		MAR 31,78		MAY 26,78		JUN 30,78		JUL 20,78		AUG 18,78
TIME	1000		1110		1430		1810		1400		1050
ORGANISM	CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS
	/ML	CENT	/ML	CENT	/ML	CENT	/ML	CENT	/ML	CENT	/ML
EUGLENOPHYTA (EUGLENOIDS)											
..EUGLENOPHYCEAE											
...EUGLENALES											
....EUGLENACEAE											
....TRACHELOMONAS	--	-	--	-	14	1	--	-	--	-	-- -
PYRRHOPHYTA (FIRE ALGAE)											
..DINOPHYCEAE											
...PERIDINIALES											
....GLENODINIACEAE											
....GLENODINIUM	--	-	--	-	--	-	--	-	20	1	-- -
...PERIDINIACEAE											
....PERIDINIUM	--	-	--	-	--	-	120	3	--	-	-- -

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

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

PERIPHYTON

DATE	TIME	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
JAN 24...	1000	.300	.000	1.57	1.02	32
JUL 20...	1400	12.1	.000	--	--	Unknown

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
OCT					DEC				
03...	0645	1920	1060	23.0	08...	0640	1900	1070	15.0
04...	0645	1920	1060	23.0	12...	0645	1910	1080	15.0
05...	1730	1920	1060	24.0	13...	0645	1920	1070	15.0
06...	0640	1920	1060	24.0	14...	0645	1920	1080	15.0
10...	0640	1940	1060	23.5	15...	0645	1920	1080	15.0
11...	0650	1940	1060	23.5	19...	0645	1910	1080	14.0
13...	0645	1940	1070	23.0	20...	0650	1910	1080	14.0
14...	0645	1940	1060	23.0	21...	0650	1920	1080	14.0
17...	0645	1930	1060	23.0	22...	0645	1930	1080	13.0
18...	0640	1930	1060	23.0	23...	1045	1930	1080	14.0
20...	0640	1940	1060	23.0	27...	0650	1920	1070	14.0
20...	1000	1940	1060	23.0	28...	0900	1920	1070	14.0
21...	0650	1940	1040	23.0	29...	0900	1920	1070	14.0
25...	0645	1930	1030	22.0	JAN				
26...	0645	1930	1030	22.0	03...	0950	1920	1070	13.0
27...	0640	1930	1040	22.0	04...	0650	1910	1070	13.0
31...	0640	1930	1040	21.0	05...	0645	1910	1070	13.0
NOV					06...	0650	1910	1070	13.0
01...	0645	1930	1050	22.0	09...	0650	1910	1070	13.0
02...	0640	1920	1040	21.0	10...	0640	1910	1070	13.0
03...	0645	1920	1050	20.5	11...	0650	1930	1060	13.0
07...	0645	1930	1050	19.0	12...	0645	1930	1070	13.0
09...	0630	1930	1050	19.0	16...	0645	1560	1060	13.0
10...	0645	1930	1050	18.0	17...	0650	1530	1060	13.0
14...	0640	1930	1050	18.0	18...	0645	1530	1060	13.0
15...	0645	1930	1050	18.0	19...	0650	1140	1060	13.0
16...	0640	1930	1050	18.0	23...	1215	475	1060	13.5
17...	0640	1930	1050	18.0	24...	0640	450	1060	13.0
17...	1000	1930	1070	18.0	24...	1000	450	1060	13.0
21...	0640	1900	1070	16.0	25...	0700	443	1070	12.0
22...	0645	1900	1060	16.0	26...	0645	223	1030	12.0
23...	0640	1900	1070	16.0	30...	0650	220	1030	12.0
28...	0640	1900	1070	17.0	31...	0650	220	1050	12.0
29...	0700	1900	1060	17.0	FEB				
30...	0730	1900	1070	16.0	01...	0645	222	990	13.0
DEC					02...	0645	223	1050	13.0
01...	0645	1900	1070	16.0	06...	0950	926	1070	13.5
05...	0645	1900	1070	15.0	07...	0930	926	1080	13.5
06...	0650	1900	1070	15.0	08...	0650	450	1020	13.0
07...	0640	1900	1070	15.0	09...	0650	460	1070	14.0

09424190 COLORADO RIVER AQUEDUCT NEAR SAN JACINTO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
FEB					APR				
13...	0650	420	1060	13.0	19...	0645	1040	1050	19.0
14...	0645	420	1060	14.0	20...	0650	1090	1060	19.0
15...	0650	476	1050	13.0	24...	0645	1080	1050	20.0
16...	0645	476	1050	13.0	25...	0645	1080	1060	20.0
21...	0700	693	1050	14.0	25...	1000	1080	1060	20.0
22...	0645	620	1050	14.0	26...	0645	1080	1040	20.0
23...	0650	660	1070	14.0	27...	0640	1050	1050	20.0
24...	0650	1310	1070	14.0	MAY				
27...	0926	1320	1060	15.0	01...	0650	1050	1040	20.0
28...	0700	1070	1070	15.0	02...	0650	1050	1040	20.0
28...	1045	1320	1070	15.5	04...	0650	1040	1040	20.0
MAR					05...	0640	815	1050	20.0
01...	1600	1320	1070	15.0	08...	0620	850	1050	20.0
02...	0650	1320	1070	15.0	09...	0650	850	1020	20.0
06...	1700	1320	1020	15.0	10...	0650	850	1050	20.0
07...	0650	1320	1070	15.0	11...	0640	850	1050	20.0
08...	0650	1320	1070	15.0	15...	0645	850	1060	28.0
09...	0645	1320	1070	15.0	16...	0650	850	1050	24.0
13...	0645	1320	1070	15.0	17...	0640	435	1050	24.0
14...	1000	1310	1070	15.0	18...	0650	440	1050	21.0
15...	0645	900	1070	15.0	22...	0640	449	1040	24.0
17...	1500	900	1070	15.0	23...	0650	449	1050	24.0
20...	0645	900	1070	16.0	24...	0640	449	1050	24.0
21...	0650	904	1060	16.0	25...	0650	449	1050	24.0
22...	0650	885	1070	17.0	26...	1430	448	1080	23.5
23...	0650	892	1060	17.0	30...	0650	675	1050	25.0
27...	0650	911	1070	18.0	31...	0640	679	1050	25.0
28...	0650	911	1070	18.0	JUN				
31...	1110	905	1060	19.0	01...	0640	648	1050	25.0
APR					02...	0640	648	1050	25.0
03...	0650	845	1040	18.0	05...	1530	1020	1050	24.0
04...	0645	836	1050	18.0	06...	0650	1050	1060	26.0
05...	0645	1050	1050	18.0	07...	0645	1050	1060	24.0
06...	1500	1050	1050	19.0	08...	0645	1050	1060	24.0
10...	0645	1040	1050	19.0	12...	1000	1050	1060	25.0
11...	0645	1040	1050	19.0	13...	0700	1050	1060	25.0
12...	0640	1040	1050	19.0	14...	0815	1060	1060	25.0
13...	0640	1040	1060	19.0	15...	0655	1020	1050	25.0
17...	0640	1040	1030	19.0	19...	0650	1050	1060	25.0
18...	0645	1040	1050	19.0	20...	0650	1050	1060	25.0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
JUN					SEP				
30...	1810	1040	1050	28.0	05...	0640	1070	1050	27.0
JUL					06...	0645	1070	1050	27.0
03...	0645	1040	1050	26.0	07...	0645	1070	1060	26.0
05...	0645	1040	1050	26.0	11...	0645	1030	1050	25.0
06...	0640	1040	1060	26.0	12...	0640	1050	1060	25.0
10...	0645	1040	1060	26.0	13...	0650	1050	1050	25.0
11...	0645	1040	1060	26.0	14...	0645	1050	1060	25.0
12...	0645	1040	1050	26.0	18...	0645	1050	1060	25.0
13...	0640	1040	1050	26.0	19...	0640	1050	1060	25.0
14...	0645	1040	1050	26.0	20...	0645	1050	1060	25.0
17...	0645	1050	1050	26.0	21...	0640	1050	1060	24.0
18...	0645	1060	1050	26.0	25...	0645	1060	1060	24.0
20...	0645	1060	998	26.0	26...	0645	1060	1060	24.0
20...	1400	1050	1050	29.5	26...	1430	1060	1110	27.5
24...	0645	840	1060	26.0	27...	0645	1060	1060	24.0
25...	0645	840	1060	26.0	28...	0645	1060	1060	24.0
26...	0650	840	1070	27.5					
27...	0650	840	1060	28.0					
31...	0645	1050	1060	28.0					
AUG									
01...	0650	1050	1060	28.0					
02...	0645	1050	1070	28.0					
03...	0645	1050	1060	28.0					
07...	0645	1050	1060	28.0					
08...	0645	1020	1060	28.0					
09...	0645	1020	1060	28.0					
10...	0645	1040	1060	28.0					
14...	0645	1040	1060	28.0					
15...	0645	1050	1060	28.0					
16...	0640	1070	1060	27.0					
17...	0645	1070	1070	27.0					
18...	1050	1070	1060	27.0					
21...	0645	1070	987	26.5					
22...	0650	1070	1050	27.0					
23...	0645	1050	1050	27.0					
24...	0645	1050	1050	25.0					
28...	0640	1050	1060	25.0					
29...	0650	1050	1050	25.0					
30...	0645	1050	1050	25.0					
31...	0645	1070	1050	25.0					

09427500 LAKE HAVASU NEAR PARKER DAM, AZ-CA

LOCATION.--Lat 34°18'58", long 114°09'23", in NW¼SW¼ sec.28, T.3 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, Hydrologic Unit 15030101, at intake pumping plant for Colorado River aqueduct of Metropolitan Water District of Southern California, 1.8 mi (2.9 km) upstream from Parker Dam on Colorado River, and 149 mi (240 km), downstream from Hoover Dam.

DRAINAGE AREA.--182,700 mi² (473,200 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

PERIOD OF RECORD.--July 1938 to current year. Published as "Parker Reservoir near Parker Dam" 1938.

REVISED RECORDS.--WRD Ariz. 1975: 1974 (elevation).

GAGE.--Water-stage recorder. Datum of gage is 400.54 ft (122.085 m) National Geodetic Vertical Datum of 1929. Gage readings have been reduced to elevations NGVD.

REMARKS.--Lake is formed by concrete-arch dam; dam was completed and storage began July 1, 1938. Usable capacity--based on April 1957 re-survey by Bureau of Reclamation between elevations 430.54 ft (131.229 m) and 450.54 ft (137.325 m)--619,400 acre-ft (764 hm³) between elevations 400.54 ft (122.085 m), sill of regulating gates, and 450.54 ft (137.325 m), top of regulating gates. Prior to Oct. 1, 1956, different capacity table used. Dead storage, 28,600 acre-ft (35.3 hm³) below elevation 400.54 ft (122.085 m), based on original survey. About 0.07 ft (0.021 m) fall indicated between gage and Parker Dam under normal operating conditions. Drawdown below elevation 440.54 ft (134.277 m) not legally permissible except by consent of the Metropolitan Water District of Southern California or in an emergency affecting the safety of the dam. Lake is used for flood control, power development, re-regulation of river for irrigation demand, and as a basin from which water is pumped by Metropolitan Water District of Southern California to Colorado River aqueduct. Figures given herein represent usable contents. For record of diversion to Colorado River aqueduct, see record for Colorado River aqueduct near Parker Dam elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 693,000 acre-ft (854 hm³), by temporary use of flashboards, Apr. 18, 1943, June 4, 1953; maximum elevation, 450.77 ft (137.395 m) June 26, 1958; minimum contents, 71,400 acre-ft (88.0 hm³) June 25, 1942, elevation, 412.09 ft (125.605 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 622,200 acre-ft (767 hm³) May 27, elevation, 450.68 ft (137.367 m); minimum, 528,500 acre-ft (652 hm³) Feb. 18, elevation, 445.75 ft (135.865 m).

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570000	564000	555000	550000	557000	564000	573000	598000	615000	614000	590000	575000
2	569000	566000	553000	551000	556000	563000	573000	601000	617000	614000	591000	574000
3	567000	569000	552000	553000	553000	557000	568000	605000	618000	610000	594000	574000
4	566000	570000	550000	556000	551000	553000	570000	608000	617000	612000	593000	575000
5	567000	570000	548000	557000	551000	553000	573000	609000	614000	614000	587000	575000
6	574000	567000	550000	557000	546000	549000	578000	609000	616000	615000	583000	573000
7	574000	563000	552000	557000	543000	542000	575000	609000	618000	613000	581000	575000
8	571000	563000	553000	556000	542000	537000	576000	608000	618000	611000	579000	573000
9	571000	561000	553000	557000	540000	539000	575000	613000	613000	610000	578000	572000
10	571000	563000	553000	560000	541000	544000	568000	616000	610000	605000	573000	573000
11	571000	560000	554000	560000	541000	546000	570000	616000	612000	606000	571000	570000
12	572000	560000	551000	559000	536000	548000	574000	615000	609000	604000	568000	571000
13	571000	560000	548000	556000	535000	544000	579000	614000	610000	604000	567000	569000
14	564000	558000	547000	554000	535000	545000	579000	611000	608000	600000	564000	572000
15	561000	560000	549000	556000	532000	546000	580000	608000	611000	600000	563000	571000
16	561000	563000	548000	554000	534000	548000	579000	614000	612000	598000	565000	572000
17	561000	563000	548000	553000	530000	544000	572000	611000	616000	592000	568000	573000
18	560000	558000	548000	552000	529000	545000	573000	608000	613000	593000	568000	573000
19	560000	553000	545000	552000	534000	546000	578000	603000	609000	595000	566000	573000
20	563000	550000	544000	552000	534000	540000	584000	602000	611000	596000	564000	574000
21	561000	548000	546000	552000	539000	541000	587000	602000	615000	593000	560000	573000
22	563000	546000	552000	552000	543000	547000	587000	600000	618000	591000	561000	571000
23	565000	549000	552000	552000	546000	554000	587000	606000	614000	591000	565000	567000
24	564000	554000	555000	546000	548000	564000	581000	611000	612000	592000	569000	568000
25	565000	557000	555000	547000	548000	569000	583000	616000	610000	594000	571000	563000
26	565000	558000	556000	544000	551000	571000	587000	619000	606000	599000	572000	565000
27	566000	560000	559000	543000	550000	565000	592000	616000	609000	601000	573000	568000
28	567000	559000	557000	544000	558000	566000	595000	617000	610000	599000	572000	571000
29	566000	559000	554000	546000	---	567000	595000	614000	613000	597000	573000	572000
30	566000	557000	551000	550000	---	569000	597000	611000	611000	595000	573000	572000
31	563000	---	550000	556000	---	571000	---	611000	---	590000	575000	---
MAX	574000	570000	559000	560000	558000	571000	597000	619000	618000	615000	594000	575000
MIN	560000	546000	544000	543000	529000	537000	568000	598000	606000	590000	560000	563000
WTR YR 1978	MAX	619000	MIN	529000								

09427500 LAKE HAVASU NEAR PARKER DAM, AZ-CA--Continued

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.99	447.67	447.20	446.96	447.32	447.69	448.16	449.46	450.31	450.26	449.04	448.30
2	447.94	447.80	447.11	446.98	447.28	447.62	448.17	449.61	450.40	450.25	449.13	448.24
3	447.84	447.95	447.04	447.12	447.13	447.33	447.89	449.80	450.45	450.05	449.26	448.22
4	447.80	448.01	446.96	447.25	447.00	447.10	448.00	449.97	450.41	450.17	449.21	448.26
5	447.84	448.00	446.82	447.32	447.00	447.13	448.17	450.03	450.28	450.27	448.90	448.27
6	448.24	447.84	446.92	447.32	446.71	446.87	448.45	450.04	450.38	450.33	448.72	448.17
7	448.22	447.65	447.03	447.33	446.58	446.52	448.28	450.04	450.48	450.22	448.58	448.25
8	448.04	447.63	447.13	447.29	446.49	446.23	448.31	449.98	450.49	450.10	448.50	448.17
9	448.06	447.55	447.13	447.31	446.38	446.35	448.25	450.21	450.22	450.08	448.43	448.14
10	448.06	447.63	447.12	447.46	446.44	446.61	447.91	450.39	450.08	449.81	448.19	448.16
11	448.06	447.47	447.14	447.49	446.44	446.70	447.99	450.37	450.15	449.87	448.04	448.02
12	448.14	447.46	446.99	447.41	446.14	446.81	448.22	450.30	450.00	449.79	447.90	448.05
13	448.04	447.48	446.84	447.25	446.11	446.63	448.50	450.28	450.06	449.79	447.87	447.97
14	447.72	447.40	446.78	447.16	446.12	446.64	448.51	450.13	449.99	449.56	447.69	448.12
15	447.53	447.50	446.91	447.27	445.92	446.74	448.53	449.99	450.10	449.57	447.66	448.08
16	447.54	447.64	446.85	447.19	446.04	446.84	448.51	450.27	450.19	449.49	447.76	448.12
17	447.53	447.62	446.83	447.13	445.84	446.60	448.13	450.12	450.35	449.19	447.89	448.15
18	447.48	447.35	446.82	447.05	445.79	446.66	448.19	449.96	450.24	449.22	447.90	448.18
19	447.47	447.11	446.64	447.04	446.06	446.71	448.42	449.71	450.02	449.33	447.79	448.15
20	447.62	446.94	446.60	447.04	446.04	446.40	448.73	449.66	450.10	449.39	447.72	448.20
21	447.53	446.81	446.73	447.04	446.34	446.46	448.93	449.69	450.30	449.24	447.46	448.18
22	447.63	446.74	447.04	447.03	446.56	446.79	448.92	449.57	450.47	449.11	447.51	448.06
23	447.77	446.90	447.04	447.06	446.74	447.18	448.91	449.88	450.25	449.14	447.73	447.84
24	447.69	447.18	447.22	446.74	446.85	447.68	448.59	450.11	450.16	449.16	447.98	447.92
25	447.74	447.32	447.23	446.77	446.82	447.97	448.71	450.37	450.09	449.26	448.06	447.62
26	447.76	447.40	447.29	446.62	447.01	448.05	448.91	450.51	449.89	449.52	448.14	447.76
27	447.80	447.47	447.42	446.58	446.94	447.73	449.16	450.39	450.03	449.61	448.19	447.88
28	447.85	447.44	447.31	446.62	447.38	447.78	449.31	450.42	450.09	449.52	448.11	448.05
29	447.81	447.42	447.18	446.71	---	447.85	449.33	450.28	450.21	449.44	448.16	448.13
30	447.82	447.31	447.02	446.92	---	447.98	449.42	450.10	450.14	449.34	448.16	448.10
31	447.66	---	446.93	447.26	---	448.04	---	450.13	---	449.09	448.27	---
MEAN	447.81	447.46	447.01	447.09	446.55	447.09	448.52	450.06	450.21	449.65	448.19	448.09
MAX	448.24	448.01	447.42	447.49	447.38	448.05	449.42	450.51	450.49	450.33	449.26	448.30
MIN	447.47	446.74	446.60	446.58	445.79	446.23	447.89	449.46	449.89	449.09	447.46	447.62

WTR YR 1978 MEAN 448.15 MAX 450.51 MIN 445.79

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA

LOCATION.--Lat 34°17'44", long 114°08'22", in NW¼NW¼ sec.3, T.2 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, Hydrologic Unit 15030104, on north end of powerplant at Parker Dam, 13 mi (21 km) northeast of Parker, Ariz., and 14 mi (23 km) upstream from Headgate Rock Dam.

DRAINAGE AREA.--182,700 mi² (473,200 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to September 1934 (gage heights and fragmentary discharge records), October 1934 to current year. Prior to October 1937, published as "near Parker, Ariz."

REVISED RECORDS.--WSP 1313: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 300.54 ft (91.605 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 3.8 mi (6.1 km) downstream at datum 346.23 ft (105.531 m) N.G.V.D.

REMARKS.--Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, by Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1938. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Parker Dam, elsewhere in this report.

AVERAGE DISCHARGE.--44 years, 11,950 ft³/s (338.4 m³/s), 8,658,000 acre-ft/yr (10,700 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,400 ft³/s (1,200 m³/s) Feb. 8, 1937; no flow at Parker Dam for parts of several days in 1942 when gates in dam were closed; minimum daily discharge, 920 ft³/s (26.1 m³/s) Jan. 11, 1978.

An unregulated discharge of probably less than 1,350 ft³/s (38.2 m³/s) occurred Aug. 18, 1934 (lowest unregulated discharge since 1917 and probably since a much earlier date).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,300 ft³/s (547 m³/s) Mar. 30; maximum gage height, 72.01 ft (21.949 m) June 9, 10; minimum daily, 920 ft³/s (26.1 m³/s) Jan. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6320	5300	5650	1930	1890	3970	15300	10800	9900	14400	14200	10100
2	6650	4900	6140	1940	1850	4030	16100	10900	11600	15300	14300	10600
3	6590	3950	6190	1950	2780	4010	15500	9700	12000	15000	13700	10600
4	6450	4760	6490	1990	3450	3990	14700	9020	11900	14500	14300	9280
5	6360	5100	5770	1990	2990	3990	13300	11000	12300	13300	15400	9240
6	2900	6020	5800	1990	5190	6590	12500	11200	11400	13100	15600	10200
7	2920	5900	5200	1950	4170	7480	14400	11500	10600	14500	15100	9660
8	4760	5860	5020	1950	4430	8800	14500	11000	9660	15500	15000	11200
9	4700	4750	5400	1610	4230	9090	15300	9990	11600	15300	14600	11700
10	5230	4350	5950	1200	5280	11000	14700	9240	12500	15300	13600	11300
11	4920	5800	5850	920	6480	11900	14200	9260	12900	15300	14600	11200
12	4830	5910	6180	1200	8570	11800	13200	10200	12700	14600	14600	9850
13	4340	5640	6340	1890	5840	10700	12700	11300	12500	13200	13300	9840
14	5700	5240	6170	1890	7570	12000	14800	12300	12600	14900	13400	8510
15	6500	4350	5100	1890	7730	12500	15300	12300	11600	14700	13400	9670
16	6500	4050	6500	1890	6440	12400	16100	11500	13300	15500	12400	9650
17	6690	3890	6710	1890	9750	14500	15500	11800	13000	15300	11500	9440
18	6760	5510	6790	1890	10000	14600	15700	11000	14300	15300	11900	9480
19	6280	6380	6200	1890	9990	14500	15100	12400	14800	15200	12600	9410
20	4850	5940	5240	1890	10500	14600	13800	12800	14100	14200	12800	8380
21	6550	5210	3600	1890	10700	14800	15000	12500	12800	16000	12500	7420
22	6180	5320	1920	1890	10400	13600	15600	12100	11600	15700	11700	8490
23	6120	3880	4960	1890	10400	13500	15500	10400	14000	16400	11100	10300
24	5940	2860	5830	4930	12100	13300	15100	9670	15200	14600	10600	10200
25	5670	3430	7000	1890	12300	13400	13200	9050	15100	14200	12000	10100
26	5440	3220	3800	3510	10600	13900	11900	10000	14800	13500	11700	9940
27	5080	3450	1900	3950	9530	14400	11500	11600	14300	12400	11800	9160
28	5790	3910	1930	4390	5370	14900	12800	11600	14000	14500	11400	7460
29	6120	4580	1980	4010	---	15100	12700	12000	13000	15100	10500	8070
30	6170	5770	1980	2980	---	14200	12100	12300	14500	15100	10300	8410
31	6050	---	1960	1850	---	15400	---	11800	---	14800	9120	---
TOTAL	175360	145230	155550	68920	200530	348950	428100	342230	384560	456700	399020	288860
MEAN	5657	4841	5018	2223	7162	11260	14270	11040	12820	14730	12870	9629
MAX	6760	6380	7000	4930	12300	15400	16100	12800	15200	16400	15600	11700
MIN	2900	2860	1900	920	1850	3970	11500	9020	9660	12400	9120	7420
AC-FT	347800	288100	308500	136700	397800	692100	849100	678800	762800	905900	791500	573000

WTR YR 1978 TOTAL 3394010 MEAN 9299 MAX 16400 MIN 920 AC-FT 6732000

COLORADO RIVER MAIN STEM

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1954 to August 1970.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, U.7 UM-MF (COLS./ 100 ML)	HARD- NESS, NITRA- TE (MG/L AS CaCO3)	HARD- NESS, NITRA- TE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT												
03...	0730	--	1070	--	23.5	--	--	--	--	--	--	--
06...	1135	4610	1080	7.7	22.5	2	5.6	1	330	200	76	32
11...	0730	--	1070	--	23.0	--	--	--	--	--	--	--
17...	0730	--	1070	--	23.5	--	--	--	--	--	--	--
25...	0730	--	1070	--	22.0	--	--	--	--	--	--	--
31...	0830	--	1080	--	20.0	--	--	--	--	--	--	--
NOV												
07...	1215	4700	1070	7.8	20.5	3	6.7	1	330	200	79	31
07...	1325	--	1070	--	19.5	--	--	--	--	--	--	--
14...	1000	--	1070	--	18.5	--	--	--	--	--	--	--
21...	1000	--	1080	--	17.0	--	--	--	--	--	--	--
28...	0730	--	1080	--	16.0	--	--	--	--	--	--	--
DEC												
05...	0800	--	1090	--	--	--	--	--	--	--	--	--
05...	1230	4670	1080	7.8	15.5	2	9.2	1	330	200	81	32
12...	0730	--	1090	--	15.0	--	--	--	--	--	--	--
19...	0730	--	1090	--	14.5	--	--	--	--	--	--	--
27...	1230	--	1110	--	13.5	--	--	--	--	--	--	--
JAN												
03...	0730	--	1090	--	13.5	--	--	--	--	--	--	--
09...	0730	--	1090	--	13.5	--	--	--	--	--	--	--
09...	1230	1290	1100	7.1	13.0	3	10.5	38	350	230	86	32
16...	0730	--	1090	--	12.0	--	--	--	--	--	--	--
23...	0800	--	1100	--	12.0	--	--	--	--	--	--	--
30...	0730	--	1090	--	12.0	--	--	--	--	--	--	--
FEB												
06...	0830	--	1090	--	13.0	--	--	--	--	--	--	--
06...	1240	1950	1090	7.9	14.0	2	10.2	1	340	210	82	34
13...	0730	--	1090	--	13.0	--	--	--	--	--	--	--
21...	0800	--	1090	--	13.0	--	--	--	--	--	--	--
27...	0730	--	1090	--	13.5	--	--	--	--	--	--	--
MAR												
06...	0730	--	1080	--	13.5	--	--	--	--	--	--	--
06...	1210	4900	1080	7.8	15.5	10	8.0	42	340	210	86	30
13...	0800	--	1080	--	14.5	--	--	--	--	--	--	--
20...	0800	--	1070	--	16.5	--	--	--	--	--	--	--
27...	0800	--	1080	--	16.0	--	--	--	--	--	--	--
APR												
03...	0800	--	1080	--	18.0	--	--	--	--	--	--	--
10...	0935	--	1070	--	18.0	--	--	--	--	--	--	--

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA-Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Water temperature recorder from February 1954 to August 1970.

REMARKS.--Prior to October 1968, published as 09428000.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLU- 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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT												
03...	--	--	--	--	--	--	--	--	--	676	--	.92
06...	100	2.4	4.8	150	0	310	86	.3	8.6	693	696	.94
11...	--	--	--	--	--	--	--	--	--	680	--	.92
17...	--	--	--	--	--	--	--	--	--	680	--	.92
25...	--	--	--	--	--	--	--	--	--	682	--	.93
31...	--	--	--	--	--	--	--	--	--	690	--	.94
NOV												
07...	95	2.3	5.1	150	0	290	89	.4	9.4	710	674	.97
07...	--	--	--	--	--	--	--	--	--	680	--	.92
14...	--	--	--	--	--	--	--	--	--	682	--	.93
21...	--	--	--	--	--	--	--	--	--	692	--	.94
28...	--	--	--	--	--	--	--	--	--	690	--	.94
DEC												
05...	--	--	--	--	--	--	--	--	--	698	--	.95
05...	110	2.6	5.1	160	0	310	91	.2	8.9	700	718	.95
12...	--	--	--	--	--	--	--	--	--	700	--	.95
19...	--	--	--	--	--	--	--	--	--	698	--	.95
27...	--	--	--	--	--	--	--	--	--	710	--	.97
JAN												
03...	--	--	--	--	--	--	--	--	--	698	--	.95
09...	--	--	--	--	--	--	--	--	--	698	--	.95
09...	100	2.3	5.1	140	0	310	92	.4	9.6	733	713	1.00
16...	--	--	--	--	--	--	--	--	--	700	--	.95
23...	--	--	--	--	--	--	--	--	--	702	--	.95
30...	--	--	--	--	--	--	--	--	--	698	--	.95
FEB												
06...	--	--	--	--	--	--	--	--	--	698	--	.95
06...	100	2.3	5.0	160	0	290	92	.4	9.3	719	693	.98
13...	--	--	--	--	--	--	--	--	--	696	--	.95
21...	--	--	--	--	--	--	--	--	--	692	--	.94
27...	--	--	--	--	--	--	--	--	--	696	--	.95
MAR												
06...	--	--	--	--	--	--	--	--	--	694	--	.94
06...	100	2.4	4.8	160	0	270	90	.5	11	711	672	.97
13...	--	--	--	--	--	--	--	--	--	690	--	.94
20...	--	--	--	--	--	--	--	--	--	684	--	.93
27...	--	--	--	--	--	--	--	--	--	690	--	.94
APR												
03...	--	--	--	--	--	--	--	--	--	690	--	.94
10...	--	--	--	--	--	--	--	--	--	678	--	.92

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR												
10...	1245	18400	1080	8.3	18.5	3	9.8	1	510	160	74	50
17...	0730	--	1080	--	18.5	--	--	--	--	--	--	--
24...	0800	--	1080	--	19.0	--	--	--	--	--	--	--
MAY												
01...	0730	--	1080	--	19.0	--	--	--	--	--	--	--
08...	0800	--	1080	--	20.0	--	--	--	--	--	--	--
08...	1255	14300	1080	8.0	20.0	2	7.8	1	530	210	86	29
15...	0800	--	1080	--	--	--	--	--	--	--	--	--
22...	0800	--	1090	--	21.0	--	--	--	--	--	--	--
30...	0800	--	1090	--	22.0	--	--	--	--	--	--	--
JUN												
05...	0800	--	1090	--	22.0	--	--	--	--	--	--	--
12...	0800	--	1080	--	23.0	--	--	--	--	--	--	--
12...	1310	19300	1090	7.8	23.0	2	7.0	1	530	200	81	31
19...	0800	--	1080	--	24.5	--	--	--	--	--	--	--
26...	0800	--	1080	--	23.5	--	--	--	--	--	--	--
JUL												
03...	1200	--	1080	--	22.0	--	--	--	--	--	--	--
10...	0800	--	1080	--	24.0	--	--	--	--	--	--	--
10...	1215	18000	1080	7.9	23.5	2	7.2	1	520	200	80	30
17...	0945	--	1080	--	25.0	--	--	--	--	--	--	--
24...	0745	--	1080	--	24.5	--	--	--	--	--	--	--
31...	0800	--	1080	--	25.0	--	--	--	--	--	--	--
AUG												
07...	0730	--	1080	--	24.5	--	--	--	--	--	--	--
07...	1245	18200	1070	8.1	25.5	2	6.2	2	510	190	76	29
14...	0800	--	1080	--	25.0	--	--	--	--	--	--	--
21...	0745	--	1080	--	25.5	--	--	--	--	--	--	--
28...	0800	--	1080	--	25.0	--	--	--	--	--	--	--
SEP												
05...	0730	--	1080	--	24.0	--	--	--	--	--	--	--
11...	0800	--	1080	--	24.0	--	--	--	--	--	--	--
11...	1145	13600	1080	7.8	25.0	2	6.1	2	530	200	83	29
18...	0730	--	1080	--	24.0	--	--	--	--	--	--	--
25...	0740	--	1090	--	22.0	--	--	--	--	--	--	--

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
APR												
10...	110	2.7	4.8	160	0	290	90	.4	4.0	700	688	.95
17...	--	--	--	--	--	--	--	--	--	690	--	.94
24...	--	--	--	--	--	--	--	--	--	692	--	.94
MAY												
01...	--	--	--	--	--	--	--	--	--	688	--	.94
08...	--	--	--	--	--	--	--	--	--	688	--	.94
08...	99	2.4	5.5	150	0	290	92	.3	6.1	720	683	.98
15...	--	--	--	--	--	--	--	--	--	690	--	.94
22...	--	--	--	--	--	--	--	--	--	698	--	.95
30...	--	--	--	--	--	--	--	--	--	694	--	.94
JUN												
05...	--	--	--	--	--	--	--	--	--	688	--	.94
12...	--	--	--	--	--	--	--	--	--	684	--	.93
12...	100	2.4	5.5	160	0	280	87	.4	8.9	696	673	.95
19...	--	--	--	--	--	--	--	--	--	684	--	.93
26...	--	--	--	--	--	--	--	--	--	690	--	.94
JUL												
03...	--	--	--	--	--	--	--	--	--	684	--	.93
10...	--	--	--	--	--	--	--	--	--	684	--	.93
10...	100	2.4	4.8	150	0	290	92	.3	8.7	704	680	.96
17...	--	--	--	--	--	--	--	--	--	680	--	.92
24...	--	--	--	--	--	--	--	--	--	682	--	.93
31...	--	--	--	--	--	--	--	--	--	682	--	.93
AUG												
07...	--	--	--	--	--	--	--	--	--	682	--	.93
07...	94	2.3	5.0	150	0	280	90	.3	8.6	707	658	.96
14...	--	--	--	--	--	--	--	--	--	690	--	.94
21...	--	--	--	--	--	--	--	--	--	686	--	.93
28...	--	--	--	--	--	--	--	--	--	686	--	.93
SEP												
05...	--	--	--	--	--	--	--	--	--	682	--	.93
11...	--	--	--	--	--	--	--	--	--	688	--	.94
11...	100	2.4	4.9	150	0	290	95	.3	9.0	718	686	.96
18...	--	--	--	--	--	--	--	--	--	688	--	.94
25...	--	--	--	--	--	--	--	--	--	692	--	.94

DATE	TIME	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
UCT								
06...	1135	.09	.07	.34	.43	.01	.00	4
NOV								
07...	1215	.09	.12	.39	.48	.03	.01	4
DEC								
05...	1230	.11	.09	.33	.44	.00	.00	3
JAN								
09...	1230	.19	.18	.70	.89	.03	.03	2
FEB								
06...	1240	.17	.18	.29	.46	.01	.00	2
MAR								
06...	1210	.15	.15	.36	.51	.05	.02	2
APR								
10...	1245	.08	.07	.48	.56	.01	.01	3
MAY								
08...	1255	.10	.14	.58	.68	.03	.01	3
JUN								
12...	1310	.12	.14	.58	.70	.01	.00	4
JUL								
10...	1215	.10	.12	.36	.46	.00	.00	2
AUG								
07...	1245	.08	.13	.31	.39	.00	.02	3
SEP								
11...	1145	.07	.08	.42	.49	.02	.00	1

COLORADO RIVER MAIN STEM

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CAESIUM, TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
OCT 06...	200	160	130	<10	<10	80	10	<100	30
NOV 07...	500	160	140	2	2	90	20	19	20
DEC 05...	200	210	150	1	4	130	30	11	0
JAN 09...	0	180	150	0	17	70	20	5	20
FEB 06...	100	180	140	3	1	70	10	5	10
MAR 06...	100	180	140	3	22	390	10	66	20
APR 10...	100	170	130	3	9	140	0	33	10
MAY 08...	100	250	140	2	6	190	20	13	30
JUN 12...	300	200	140	2	5	110	10	8	30
JUL 10...	300	200	130	1	7	160	30	4	20
AUG 07...	100	190	140	0	6	150	<10	5	20
SEP 11...	200	190	140	0	4	160	10	0	30

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY, TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 06...	0	.0	1	<10	40	2.7	.00	3
NOV 07...	8	.0	4	0	20	2.7	.00	1
DEC 05...	0	.0	2	0	20	3.1	.00	0
JAN 09...	10	.0	4	0	10	3.4	.00	3
FEB 06...	10	.1	5	0	10	3.4	.00	2
MAR 06...	0	.0	4	0	70	3.4	.00	3
APR 10...	0	.0	0	0	10	3.4	.00	2
MAY 08...	20	.1	2	0	20	4.4	.00	0
JUN 12...	10	.0	0	0	20	2.8	.00	0
JUL 10...	10	.0	0	0	10	3.3	.00	0
AUG 07...	9	.1	2	0	20	3.4	.00	0
SEP 11...	10	.1	2	0	10	4.1	.00	0

09429000 PALO VERDE CANAL NEAR BLYTHE, CA

LOCATION.--Lat 33°43'55", long 114°30'40", in NW¼NE¼ sec.19, T.5 S., R.24 E., San Bernardino meridian, Riverside County, Hydrologic Unit 15030104, at canal intake structure on west side of Palo Verde diversion dam, 10 mi (16 km) northeast of Blythe and 44 mi (71 km) downstream from Headgate Rock Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1922 to December 1923, January 1925 to current year (prior to October 1950, monthly discharge only).

REVISED RECORD.--WSP 1213: 1946-48.

GAGE.--Recording gages above and below intakes to record head. Since May 18, 1964, recorder to show gate openings. Datum of gage is: Forebay gage, National Geodetic Vertical Datum of 1929; tailrace gage, 274.13 ft (83.555 m) NGVD. Aug. 7, 1950, to Nov. 30, 1952, water-stage recorder on tailrace and auxiliary recorder 0.5 mi (0.8 km) downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure 0.2 mi (0.3 km) upstream, at different datums.

REMARKS.--Records good. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River for irrigation of 92,121 acres (373 km²) during the 1977 calendar year. Return flows to Colorado River are measured by 11 wasteways and drains extending throughout the project; 5 of these are equipped with water stage recorder and Parshall flume, 3 are equipped with Sparling flowmeters. Return flows have not been subtracted; combined monthly return flows are given in table below.

AVERAGE DISCHARGE.--28 years (water years 1951-78), 1,209 ft³/s (34.24 m³/s), 875,900 acre-ft/yr (1,080 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,230 ft³/s (63.2 m³/s) July 20, 1977; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	794	781	970	667	546	891	1920	1550	1720	1790	1820	1380
2	687	878	1020	27	522	854	1810	1580	1780	1930	1940	1360
3	789	953	946	0	549	712	1740	1580	1680	2000	1920	1220
4	827	983	795	0	569	610	1800	1560	1700	2040	1850	1230
5	713	1090	719	0	533	609	1800	1610	1650	2010	1880	1270
6	659	967	755	0	599	676	1920	1630	1710	1960	1790	1390
7	770	929	717	0	628	771	1980	1480	1800	2000	1550	1460
8	760	867	701	0	617	877	1880	1390	1720	2040	1740	1420
9	677	889	675	242	653	1030	1730	1490	1710	2050	1660	1350
10	751	874	639	385	661	1180	1830	1650	1950	2030	1790	1300
11	742	912	665	348	712	1180	1800	1770	1900	2040	1830	1200
12	766	859	764	322	782	1120	1810	1810	1850	1970	1650	1300
13	859	762	792	315	865	1320	1910	1520	1900	1970	1500	1390
14	968	903	827	308	959	1360	1890	1340	1870	1990	1530	1350
15	860	812	736	305	904	1350	1770	1540	1930	2030	1470	1300
16	795	863	768	314	793	1350	1780	1630	1940	1960	1440	1160
17	1070	892	780	302	911	1410	1970	1740	2000	2000	1480	1090
18	1020	885	670	305	1010	1530	1920	1760	1730	2000	1490	1080
19	881	743	800	304	1020	1540	1870	1690	1730	2000	1440	1150
20	788	673	784	331	1120	1510	1870	1120	1770	2060	1380	1060
21	817	866	723	370	1200	1540	2000	1270	1810	2110	1470	1110
22	835	836	687	366	1340	1670	1920	1700	1850	2130	1440	1070
23	802	730	685	387	1340	1710	1570	1810	1830	2090	1450	993
24	771	668	657	437	1480	1750	1820	1760	1770	1910	1500	988
25	765	747	528	518	1500	1590	1760	1660	1680	1820	1550	1080
26	828	776	637	579	1310	1440	1880	1580	1730	1900	1450	1040
27	924	723	585	661	1230	1620	1840	1450	1750	2010	1340	1030
28	1040	783	608	689	1110	1680	1740	1280	1810	2020	1300	1210
29	1120	867	713	623	---	1870	1730	1370	1730	1950	1330	1290
30	866	921	680	628	---	1790	1640	1520	1780	1890	1330	1130
31	830	---	797	551	---	1790	---	1620	---	1910	1410	---
TOTAL	25774	25432	22823	10284	25463	40330	54900	48460	53780	61610	48720	36401
MEAN	831	848	736	332	909	1301	1830	1563	1793	1987	1572	1213
MAX	1120	1090	1020	689	1500	1870	2000	1810	2000	2130	1940	1460
MIN	659	668	528	0	522	609	1570	1120	1650	1790	1300	988
AC-FT	51120	50440	45270	20400	50510	79990	108900	96120	106700	122200	96640	72200

WTR YR 1978 TOTAL 453977 MEAN 1244 MAX 2130 MIN 0 AC-FT 900500

DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM

09429000 PALO VERDE CANAL NEAR BLYTHE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1970 to current year.

REMARKS.--No flow Jan. 3-8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AU- SURP- TION RATIO
UCT											
03...	1130	773	1100	7.7	21.0	330	200	60	31	110	2.6
11...	0730	--	1150	--	22.0	--	--	--	--	--	--
11...	0815	--	1150	--	23.0	--	--	--	--	--	--
17...	1310	--	1090	--	24.5	--	--	--	--	--	--
25...	1110	--	1150	--	21.0	--	--	--	--	--	--
31...	1115	--	1120	--	20.5	--	--	--	--	--	--
NOV											
07...	1125	1000	1140	7.7	19.0	350	210	87	31	120	2.6
14...	0830	--	1160	--	19.0	--	--	--	--	--	--
21...	0825	--	1150	--	18.5	--	--	--	--	--	--
28...	0740	--	1170	--	17.0	--	--	--	--	--	--
DEC											
05...	1405	728	1130	8.0	16.5	350	220	85	33	110	2.6
06...	0700	--	1210	--	14.0	--	--	--	--	--	--
12...	1100	--	1110	--	13.5	--	--	--	--	--	--
19...	1030	--	1160	--	14.5	--	--	--	--	--	--
27...	1110	--	1110	--	14.0	--	--	--	--	--	--
JAN											
09...	0930	433	1180	7.7	13.0	380	240	95	34	110	2.5
16...	1020	--	1170	--	13.5	--	--	--	--	--	--
23...	1150	--	1160	--	13.5	--	--	--	--	--	--
30...	1255	--	1110	--	14.0	--	--	--	--	--	--
31...	0700	--	1180	--	13.0	--	--	--	--	--	--
FEB											
06...	1130	676	1180	8.0	14.0	360	220	88	33	120	2.8
13...	0930	--	1090	--	13.5	--	--	--	--	--	--
21...	1110	--	1100	--	13.0	--	--	--	--	--	--
27...	1110	--	1100	--	14.0	--	--	--	--	--	--
MAR											
06...	1250	684	1130	8.0	14.0	340	200	81	33	110	2.6
13...	1400	--	1090	--	15.5	--	--	--	--	--	--
20...	0900	--	1090	--	16.5	--	--	--	--	--	--
27...	0930	--	1090	--	18.5	--	--	--	--	--	--
APR											
03...	1145	1750	1090	7.8	18.0	340	210	85	31	100	2.4
10...	0800	--	1090	--	17.0	--	--	--	--	--	--
17...	0750	--	1090	--	18.5	--	--	--	--	--	--
24...	0810	--	1090	--	18.5	--	--	--	--	--	--
MAY											
01...	1030	1500	1110	7.7	19.0	340	200	85	32	100	2.5

09429000 PALO VERDE CANAL NEAR BLYTHE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAL- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS PER AC-FT)
OCT										
03...	4.9	150	0	310	93	.4	8.9	704	712	.96
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	736	--	1.00
17...	--	--	--	--	--	--	--	696	--	.95
25...	--	--	--	--	--	--	--	734	--	1.00
31...	--	--	--	--	--	--	--	714	--	.97
NOV										
07...	5.4	160	0	320	96	.4	9.7	732	749	1.00
14...	--	--	--	--	--	--	--	740	--	1.01
21...	--	--	--	--	--	--	--	738	--	1.00
28...	--	--	--	--	--	--	--	748	--	1.02
DEC										
05...	5.0	160	0	320	98	.4	8.8	722	739	.98
06...	5.2	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	708	--	.96
19...	--	--	--	--	--	--	--	736	--	1.00
27...	--	--	--	--	--	--	--	708	--	.96
JAN										
09...	5.0	170	0	330	100	.4	8.8	754	767	1.03
16...	--	--	--	--	--	--	--	752	--	1.02
23...	--	--	--	--	--	--	--	742	--	1.01
30...	--	--	--	--	--	--	--	708	--	.96
31...	5.1	--	--	--	--	--	--	--	--	--
FEB										
06...	4.7	170	0	300	110	.4	9.5	756	750	1.03
13...	--	--	--	--	--	--	--	698	--	.95
21...	--	--	--	--	--	--	--	704	--	.96
27...	--	--	--	--	--	--	--	706	--	.96
MAR										
06...	4.9	170	0	300	90	.3	7.7	724	711	.98
13...	--	--	--	--	--	--	--	698	--	.95
20...	--	--	--	--	--	--	--	696	--	.95
27...	--	--	--	--	--	--	--	700	--	.95
APR										
03...	5.0	160	0	290	91	.4	9.2	698	691	.95
10...	--	--	--	--	--	--	--	694	--	.94
17...	--	--	--	--	--	--	--	696	--	.95
24...	--	--	--	--	--	--	--	698	--	.95
MAY										
01...	5.2	170	0	310	93	.4	9.1	710	719	.97

DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM

09429000 PALO VERDE CANAL NEAR BLYTHE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HAR- 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)	SODIUM AU- SURP- PLUS RATIO
MAY											
02...	0700	--	1100	--	19.0	--	--	--	--	--	--
08...	1135	--	1100	--	20.5	--	--	--	--	--	--
15...	1120	--	1100	--	22.0	--	--	--	--	--	--
22...	0730	--	1110	--	20.0	--	--	--	--	--	--
30...	0710	--	1110	--	23.5	--	--	--	--	--	--
JUN											
05...	1150	1760	1100	7.6	19.5	340	200	84	31	110	2.6
12...	1055	--	1100	--	24.0	--	--	--	--	--	--
19...	1030	--	1110	--	24.5	--	--	--	--	--	--
26...	0745	--	1110	--	24.5	--	--	--	--	--	--
27...	0730	--	1200	--	24.0	--	--	--	--	--	--
JUL											
03...	1420	2040	1100	7.9	25.5	330	180	83	30	100	2.4
10...	1115	--	1090	--	26.0	--	--	--	--	--	--
17...	0735	--	1090	--	25.5	--	--	--	--	--	--
24...	1110	--	1200	--	27.0	--	--	--	--	--	--
31...	1210	--	1080	--	28.0	--	--	--	--	--	--
AUG											
07...	0945	1590	1090	7.8	26.0	320	200	80	29	110	2.7
14...	0800	--	1090	--	25.5	--	--	--	--	--	--
21...	0735	--	1100	--	26.0	--	--	--	--	--	--
25...	0745	--	1100	--	24.5	--	--	--	--	--	--
SEP											
05...	1425	1340	1120	7.8	25.5	340	210	82	32	110	2.6
11...	1135	--	1100	--	24.5	--	--	--	--	--	--
18...	1405	--	1100	--	22.0	--	--	--	--	--	--
25...	1420	--	1100	--	23.5	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAY										
02...	5.3	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	700	--	.95
15...	--	--	--	--	--	--	--	702	--	.95
22...	--	--	--	--	--	--	--	712	--	.97
30...	--	--	--	--	--	--	--	702	--	.95
JUN										
05...	5.4	170	0	280	96	.4	9.5	700	700	.95
12...	--	--	--	--	--	--	--	696	--	.95
19...	--	--	--	--	--	--	--	704	--	.96
26...	--	--	--	--	--	--	--	706	--	.96
27...	5.2	--	--	--	--	--	--	--	--	--
JUL										
03...	4.8	180	0	280	90	.5	9.0	696	686	.95
10...	--	--	--	--	--	--	--	692	--	.94
17...	--	--	--	--	--	--	--	690	--	.94
24...	--	--	--	--	--	--	--	756	--	1.03
31...	--	--	--	--	--	--	--	684	--	.93
AUG										
07...	5.0	150	0	300	95	.5	9.0	692	703	.94
14...	--	--	--	--	--	--	--	696	--	.95
21...	--	--	--	--	--	--	--	702	--	.95
25...	--	--	--	--	--	--	--	696	--	.95
SEP										
05...	4.9	160	0	300	100	.5	8.7	710	722	.97
11...	--	--	--	--	--	--	--	696	--	.95
18...	--	--	--	--	--	--	--	700	--	.95
25...	--	--	--	--	--	--	--	700	--	.95

09429000 PALO VERDE CANAL NEAR BLYTHE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	BORON, DIS- SOLVED (UG/L AS B)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
UCT							
03...	1130	--	140	--	20	--	--
11...	0730	--	--	<10	--	.0	10
NOV							
07...	1125	--	160	--	10	--	--
DEC							
05...	1405	--	150	--	10	--	--
06...	0700	--	--	8	--	.0	10
JAN							
09...	0930	--	150	--	10	--	--
31...	0700	--	--	9	--	.0	20
FEB							
06...	1130	--	150	--	0	--	--
MAR							
06...	1250	--	150	--	10	--	--
APR							
03...	1145	--	150	--	0	--	--
MAY							
01...	1030	--	140	--	10	--	--
02...	0700	--	--	3	--	.0	20
JUN							
05...	1150	--	140	--	40	--	--
27...	0730	--	--	6	--	.0	20
JUL							
03...	1420	.09	160	--	20	--	--
AUG							
07...	0945	.23	150	--	10	--	--
SEP							
05...	1425	1.0	160	--	10	--	--

DATE	TIME	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	BORON, DIS- SOLVED (UG/L AS B)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
UCT							
03...	1200	--	530	--	20	--	--
NOV							
07...	1020	--	470	--	10	--	--
DEC							
05...	0800	--	480	--	20	--	--
06...	0915	--	--	8	--	.1	30
JAN							
03...	0900	--	480	--	20	--	--
31...	1145	--	--	15	--	.0	30
FEB							
06...	1055	--	510	--	10	--	--
MAR							
06...	1040	--	490	--	10	--	--
APR							
03...	1020	--	470	--	10	--	--
MAY							
01...	1040	--	470	--	10	--	--
02...	0945	--	--	5	--	.1	40
JUN							
05...	1120	--	490	--	20	--	--
27...	1000	--	--	9	--	.0	40
JUL							
03...	1000	.71	640	--	20	--	--
AUG							
07...	1100	.63	580	--	10	--	--

09429000 PALO VERDE CANAL NEAR BLYTHE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	PCB, TOTAL (UG/L)	ALURIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DOD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DUT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELURIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
UCI 11...	0730	.0	.00	--	.0	.00	.00	.00	.01	.00	.00	.00
DEC 06...	0700	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
JAN 31...	0700	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
MAY 02...	0700	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUN 27...	0730	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00

[illegible]

WTR YR 1978	TOTAL	2595560	MEAN	7111	MAX	12400	MIN	1270	AC-FT	5148000
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DIVERSIONS AND RETURN FLOWS BETWEEN PALO VERDE DAM AND IMPERIAL DAM

09429130 PALO VERDE IRRIGATION DISTRICT OLIVE LAKE DRAIN NEAR BLYTHE, CA

LOCATION.--Lat 33°40'36", long 114°32'09", in SW¼SW¼ sec.1, T.6 S., R.23 E., San Bernardino meridian, Riverside County, Hydrologic Unit 0.3 mi (0.5 km) upstream from mouth, and 5 mi (8 km) northeast of Blythe.

PERIOD OF RECORD.--October 1968 to September 1970 (partial-record station), October 1970 to current year.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AUX- ILIARY RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT												
03...	0730	9.0	1630	7.9	13.0	540	290	140	45	160	3.0	6.0
NOV												
01...	0930	6.0	1590	7.5	18.0	520	280	140	42	160	3.0	6.2
DEC												
01...	0830	9.0	1660	7.7	8.0	540	330	160	46	160	2.9	6.1
JAN												
03...	1010	6.0	1650	7.5	14.5	560	300	150	44	160	3.0	6.5
FEB												
01...	0820	1.0	1690	7.7	14.0	560	320	160	45	160	2.9	7.1
MAR												
13...	1000	9.0	1580	7.8	16.0	550	310	150	43	150	2.8	6.1
APR												
03...	0825	10	1300	7.8	16.0	420	240	110	36	120	2.5	5.5
MAY												
01...	0810	12	1610	7.5	16.5	530	280	140	44	160	3.0	6.5
JUN												
01...	0745	9.0	1520	7.5	21.0	490	270	130	41	150	2.9	6.8
JUL												
06...	0940	E12	1620	7.5	22.0	560	300	150	44	160	3.0	5.6
AUG												
01...	1120	17	1650	7.4	23.0	560	310	150	46	160	2.9	6.5
SEP												
06...	1400	9.0	1580	7.4	25.5	540	330	150	39	150	2.8	5.8

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	BURUN, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT												
03...	300	0	420	150	.4	18	1040	1090	1.41	--	190	40
NOV												
01...	300	0	420	140	.4	18	1060	1070	1.44	--	190	20
DEC												
01...	320	0	440	140	.4	19	1060	1130	1.44	--	210	20
JAN												
03...	310	0	450	150	.5	19	1120	1130	1.52	--	190	20
FEB												
01...	320	0	440	150	.4	18	1140	1140	1.55	--	200	30
MAR												
13...	300	0	400	140	.4	16	1050	1050	1.43	--	190	10
APR												
03...	220	0	330	110	.3	12	856	832	1.16	--	160	20
MAY												
01...	300	0	410	140	.4	16	1060	1070	1.44	--	190	0
JUN												
01...	270	0	390	140	.4	14	1010	1010	1.37	--	180	0
JUL												
06...	320	0	430	140	.4	18	1070	1110	1.46	--	190	10
AUG												
01...	310	0	430	150	.4	18	1110	1120	1.51	.23	200	20
SEP												
06...	250	0	420	140	.4	19	1060	1050	1.44	.32	200	20

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CA

LOCATION.--Lat 33°21'41", long 114°43'20", in SE¼SE¼ sec.26, T.9 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030104, at gaging station, at State Highway 78 bridge, 3.3 mi (5.3 km) upstream from mouth, and 5 mi (8 km) south of Palo Verde.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTANTAN- EOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- JUST- MENT RATIO
OCT											
03...	1200	577	2360	7.1	25.0	550	280	140	48	350	6.5
11...	0915	--	2580	--	24.0	--	--	--	--	--	--
11...	1000	--	2750	--	24.0	--	--	--	--	--	--
17...	0750	--	2390	--	24.5	--	--	--	--	--	--
25...	1415	--	2580	--	24.0	--	--	--	--	--	--
31...	1355	--	2480	--	24.0	--	--	--	--	--	--
NOV											
07...	1020	512	2370	7.8	23.0	530	280	140	44	340	6.4
14...	1330	--	2140	--	20.5	--	--	--	--	--	--
21...	1200	--	2180	--	20.5	--	--	--	--	--	--
28...	1420	--	2460	--	20.5	--	--	--	--	--	--
DEC											
05...	0800	537	2370	7.9	18.5	510	270	130	45	330	6.4
06...	0915	--	2560	--	17.0	--	--	--	--	--	--
12...	0945	--	2420	--	18.0	--	--	--	--	--	--
19...	0935	--	2520	--	16.5	--	--	--	--	--	--
27...	0825	--	2360	--	17.0	--	--	--	--	--	--
JAN											
03...	0900	505	2310	7.7	16.0	500	260	130	42	340	6.6
10...	0840	--	2720	--	--	--	--	--	--	--	--
16...	0910	--	2400	--	16.5	--	--	--	--	--	--
23...	1000	--	2340	--	15.0	--	--	--	--	--	--
30...	1200	--	2460	--	15.5	--	--	--	--	--	--
31...	1145	--	2450	--	18.0	--	--	--	--	--	--
FEB											
06...	1055	400	2470	7.9	18.0	530	280	130	50	360	6.8
13...	0755	--	2660	--	14.5	--	--	--	--	--	--
21...	1320	--	2490	--	18.5	--	--	--	--	--	--
27...	1015	--	2260	--	18.0	--	--	--	--	--	--
MAR											
06...	1040	475	2310	7.8	19.0	490	250	120	45	330	6.5
13...	0950	--	2400	--	17.0	--	--	--	--	--	--
20...	1035	--	2370	--	18.5	--	--	--	--	--	--
27...	1015	--	2550	--	18.5	--	--	--	--	--	--
APR											
03...	1020	585	2310	7.8	19.0	480	240	120	43	340	6.8
10...	1050	--	2400	--	19.0	--	--	--	--	--	--
17...	1025	--	2320	--	19.0	--	--	--	--	--	--
24...	0920	--	2590	--	20.0	--	--	--	--	--	--
MAY											
01...	1040	693	2380	7.6	19.5	510	260	130	45	340	6.6

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CA--Continued

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

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAN- BONATE (MG/L AS CO3)	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)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-F-T)
OCT										
03...	6.0	320	0	560	350	1.1	20	1650	1630	2.24
11...	--	--	--	--	--	--	--	1680	--	2.28
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	1550	--	2.11
25...	--	--	--	--	--	--	--	1680	--	2.26
31...	--	--	--	--	--	--	--	1620	--	2.20
NOV										
07...	6.2	300	0	550	310	1.1	20	1540	1560	2.09
14...	--	--	--	--	--	--	--	1370	--	1.86
21...	--	--	--	--	--	--	--	1420	--	1.93
28...	--	--	--	--	--	--	--	1610	--	2.19
DEC										
05...	6.2	290	0	540	320	1.1	20	1560	1540	2.12
06...	6.3	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	1550	--	2.11
19...	--	--	--	--	--	--	--	1630	--	2.22
27...	--	--	--	--	--	--	--	1520	--	2.07
JAN										
03...	5.7	290	0	510	310	1.1	19	1490	1500	2.03
10...	--	--	--	--	--	--	--	1770	--	2.41
16...	--	--	--	--	--	--	--	1550	--	2.11
23...	--	--	--	--	--	--	--	1490	--	2.03
30...	--	--	--	--	--	--	--	1580	--	2.15
31...	6.6	--	--	--	--	--	--	--	--	--
FEB										
06...	6.0	300	0	540	350	1.1	20	1580	1610	2.15
13...	--	--	--	--	--	--	--	1720	--	2.34
21...	--	--	--	--	--	--	--	1590	--	2.16
27...	--	--	--	--	--	--	--	1460	--	1.99
MAR										
06...	6.0	290	0	520	320	.9	16	1490	1500	2.03
13...	--	--	--	--	--	--	--	1560	--	2.12
20...	--	--	--	--	--	--	--	1510	--	2.05
27...	--	--	--	--	--	--	--	1660	--	2.26
APR										
03...	6.1	290	0	530	310	1.1	18	1490	1510	2.03
10...	--	--	--	--	--	--	--	1540	--	2.09
17...	--	--	--	--	--	--	--	1490	--	2.03
24...	--	--	--	--	--	--	--	1690	--	2.30
MAY										
01...	7.0	310	0	530	320	1.1	19	1530	1550	2.08

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AN- ION RATIO
MAY											
02...	0945	--	2600	--	20.0	--	--	--	--	--	--
08...	0940	--	2420	--	22.0	--	--	--	--	--	--
15...	0935	--	2490	--	23.5	--	--	--	--	--	--
22...	1335	--	2670	--	23.5	--	--	--	--	--	--
30...	1020	--	2680	--	22.0	--	--	--	--	--	--
JUN											
05...	1120	698	2360	7.6	25.0	480	280	120	43	360	7.2
12...	1220	--	2440	--	25.5	--	--	--	--	--	--
19...	1200	--	2710	--	25.0	--	--	--	--	--	--
26...	1115	--	2810	--	25.5	--	--	--	--	--	--
27...	1000	--	2800	--	24.0	--	--	--	--	--	--
JUL											
03...	1000	616	2860	8.0	28.0	530	390	140	44	430	8.1
10...	1010	--	2730	--	18.5	--	--	--	--	--	--
17...	1150	--	2860	--	28.0	--	--	--	--	--	--
24...	0950	--	2780	--	28.5	--	--	--	--	--	--
31...	1000	--	2610	--	25.5	--	--	--	--	--	--
AUG											
07...	1100	722	2540	8.1	29.0	500	250	130	42	390	7.6
14...	1100	--	2460	--	27.0	--	--	--	--	--	--
21...	1000	--	2660	--	28.0	--	--	--	--	--	--
28...	1345	--	2650	--	26.5	--	--	--	--	--	--
SEP											
11...	1025	--	2360	--	25.5	--	--	--	--	--	--
18...	1035	--	2580	--	21.5	--	--	--	--	--	--
25...	1015	--	2490	--	24.0	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAY										
02...	6.3	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	1550	--	2.11
15...	--	--	--	--	--	--	--	1590	--	2.16
22...	--	--	--	--	--	--	--	1710	--	2.33
30...	--	--	--	--	--	--	--	1720	--	2.34
JUN										
05...	6.7	310	--	510	350	1.1	18	1520	1560	2.07
12...	--	--	--	--	--	--	--	1570	--	2.14
19...	--	--	--	--	--	--	--	1730	--	2.35
26...	--	--	--	--	--	--	--	1810	--	2.46
27...	6.8	--	--	--	--	--	--	--	--	--
JUL										
03...	6.5	170	0	620	430	1.2	21	1850	1780	2.52
10...	--	--	--	--	--	--	--	1750	--	2.38
17...	--	--	--	--	--	--	--	1830	--	2.49
24...	--	--	--	--	--	--	--	1800	--	2.45
31...	--	--	--	--	--	--	--	1680	--	2.28
AUG										
07...	7.2	300	0	580	380	1.2	20	1630	1700	2.22
14...	--	--	--	--	--	--	--	1590	--	2.16
21...	--	--	--	--	--	--	--	1730	--	2.35
28...	--	--	--	--	--	--	--	1720	--	2.34
SEP										
11...	--	--	--	--	--	--	--	1510	--	2.05
18...	--	--	--	--	--	--	--	1660	--	2.26
25...	--	--	--	--	--	--	--	1610	--	2.19

DIVERSIONS AND RETURN FLOWS BETWEEN PALO VERDE DAM AND IMPERIAL DAM

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DOD, TOTAL (UG/L)	UDE, TOTAL (UG/L)	DUT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	EIHIOW, TOTAL (UG/L)
DEC 06...	0915	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
JAN 31...	1145	.0	.00	.00	.0	.00	.00	.00	.03	.00	.00	.00
MAY 02...	0945	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUN 27...	1000	.0	.00	.00	.0	.00	.00	.00	.01	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TKI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
DEC 06...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN 31...	.00	.00	.00	.00	.01	.00	.00	.00	.04	.00	.00
MAY 02...	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
JUN 27...	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00

09429225 PALO VERDE IRRIGATION DISTRICT ANDERSON DRAIN NEAR PALO VERDE, CA

LOCATION.--Lat 33°21'19", long 114°43'00", in SW¼ sec.36, T.9 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030104, 0.1 mi (0.2 km) upstream from pump into Outfall drain, and 5.5 mi (8.8 km) south of Palo Verde.

PERIOD OF RECORD.--Water year 1969 (partial-record station), October 1969 to current year.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.
No flow many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DISE- SOLVED (MG/L AS CA)	MAGNE- SIUM, DISE- SOLVED (MG/L AS MG)	SODIUM, DISE- SOLVED (MG/L AS NA)	SODIUM AD- SURP- TION RATIO	POTAS- SIUM, DISE- SOLVED (MG/L AS K)
OCT 03...	1110	.76	1430	7.5	17.0	380	190	86	40	190	4.2	7.3
NOV 01...	1200	.80	3970	7.8	20.0	600	86	120	72	710	13	7.5
DEC 01...	1445	.76	2740	7.7	11.0	610	200	140	64	410	7.2	7.1
JUN 01...	1245	1.2	2530	7.7	27.0	570	160	120	66	400	7.3	9.5

DATE	BICARB- ONATE (MG/L AS HCO3)	CARB- ONATE (MG/L AS CO3)	SULFATE DISE- SOLVED (MG/L AS SO4)	CHLO- RIDE, DISE- SOLVED (MG/L AS CL)	FLUO- RIDE, DISE- SOLVED (MG/L AS F)	SILICA, DISE- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DISE- SOLVED (MG/L)	SOLIDS, SUM OF CONSTIT- UENTS, DISE- SOLVED (MG/L)	SOLIDS, DISE- SOLVED (TONS PER AC-FT)	BORON, DISE- SOLVED (UG/L AS B)	IRON, DISE- SOLVED (UG/L AS FE)
OCT 03...	230	0	380	140	.5	14	930	971	1.26	240	30
NOV 01...	620	0	420	420	.9	21	2670	2580	3.63	960	30
DEC 01...	500	0	660	270	.8	23	1850	1820	2.52	630	20
JUN 01...	500	0	610	250	.7	23	1670	1730	2.27	610	10

COLORADO RIVER MAIN STEM

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA
(National stream-quality accounting network, pesticide, radiochemical, and tritium network station)

LOCATION.--Lat 32°52'59", long 114°27'55", at Imperial Dam. The Arizona end of the dam is in SW¼NW¼ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic Unit 15030104; the California end is in NW¼SW¼ sec.9, T.15 S., R.24 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030104. Imperial Dam is 5 mi (8 km) upstream from Laguna Dam, 15 mi (24 km) northeast of Yuma, Ariz., 90 mi (145 km) downstream from Palo Verde Dam, and 147 mi (237 km) downstream from Parker Dam.

DRAINAGE AREA.--188,500 mi² (488,200 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1903-34 (yearly discharge only, published in WSP 1313), July 1934 to current year (monthly discharge only since October 1942). Prior to October 1942 published as "near Picacho, Calif." October 1942 to September 1971 published as "at Imperial Dam" (monthly discharge shown as "flow reaching Imperial Dam," listed as supplement to "flow passing Imperial Dam").

GAGE.--None. This record is synthesized from records of several other stations (see REMARKS). July 13, 1934, to Sept. 30, 1942, water-stage recorder at site 14.5 mi (23.3 km) upstream at datum 167.38 ft (51.017 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records show flow of Colorado River reaching Imperial Dam, and are based on combined monthly total flow of Colorado River below Imperial Dam (sta 09429500), All-American Canal near Imperial Dam (sta 09523000), Gila Gravity Main Canal at Imperial Dam (sta 09522500), and diversions to Mittry Lake (sta 09522400). Records for 1903-34 and for October 1942 to September 1960 were computed as combined flow of Colorado River at Yuma (sta 09521000) and the canals diverting at Imperial and Laguna Dams, less the flow of Gila River near Dome (sta 09520500); for some of these periods drainage and waste return flows and channel losses between the gaging stations and Imperial Dam were considered, and for other periods they were neglected. Records for July 1934 to September 1942 show daily discharge of Colorado River at gaging station near Picacho, Calif.

Natural flow of Colorado River at this point affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas. Diversions to Mittry Lake, which began June 23, 1970, are included in river records in table below. Additional regulation, beginning Jan. 31, 1966, to equalize supplies for downstream water users, is provided by pumped storage in reservoir on Senator Wash, about 2 mi (3 km) upstream from Imperial Dam. Monthend contents of Senator Wash Reservoir—capacity, 13,840 acre-ft (17.1 hm³)—is given in table below.

COOPERATION.--Records of Sparling meter readings of diversion to Mittry Lake and contents of Senator Wash Reservoir furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--44 years (water years 1935-78), 10,970 ft³/s (310.7 m³/s), 7,948,000 acre-ft/yr (9,800 hm³/yr).

EXTREMES FOR PERIOD OF 1934-78.--Maximum discharge, 40,800 ft³/s (1,160 m³/s) Sept. 5, 1939; minimum, 538 ft³/s (15.2 m³/s) Aug. 3, 1934, minimum daily since regulation of Hoover Dam began, 1,450 ft³/s (41.1 m³/s) Feb. 17, 1935.

COLORADO RIVER ABOVE IMPERIAL DAM, DIVERSIONS TO MITTRY LAKE, AND MONTHEND CONTENTS OF SENATOR WASH RESERVOIR,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Month	Discharge of Colorado River		Diversions to Mittry Lake (acre-feet)* (09522400)	Monthend contents, Senator Wash Reservoir (acre-feet)
	Mean (cubic feet per second)	Runoff (acre-feet)		
October.....	5,292	325,400	575	5,030
November.....	4,658	277,200	493	8,510
December.....	5,035	309,600	612	13,660
CAL YR 1977.....	7,880	5,705,000	7,380	-----
January.....	2,778	170,800	595	11,120
February.....	6,123	340,100	522	6,890
March.....	8,948	550,200	547	6,370
April.....	11,720	697,500	365	5,890
May.....	9,163	563,400	389	6,270
June.....	9,904	589,300	615	6,660
July.....	11,510	707,500	618	8,850
August.....	10,800	664,100	619	6,510
September.....	8,422	501,100	587	4,120
WTR YR 1978.....	7,868	5,696,000	6,540	-----

* Included in first two columns of table.

NOTE.--Discharge of Colorado River, in first two columns of table above, is combined discharge of Colorado River below Imperial Dam (sta 09429500) and diversions to All-American Canal, Gila Gravity Main Canal, and Mittry Lake.

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER-QUALITY RECORDS

LOCATION.--Water samples collected above trash racks at All-American Canal headworks at west end of Imperial Dam.

PERIOD OF RECORD.--August 1969 to current year.

Prior to October 1971, published as sta 09429500, Colorado River at Imperial Dam, Ariz.-Calif.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURES: October 1974 to current year.

REMARKS.--Replaces water-quality station 09525500 Yuma Main Canal below Colorado River Siphon, at Yuma, Ariz. Stream discharges reported with analyses represent total flow reaching Imperial Dam. Since January 1971, daily specific-conductance measurements have been made using a composite of four water samples taken at 6-hour intervals. Composites of four water samples per day are analyzed for major chemical constituents weekly.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	CULI- FURN, FECAL, 0.7 UM-HF (CULS./ 100 ML)	HARD- NESS (MG/L AS (ACD3)	HARD- NESS, NONCAR- BONATE (MG/L CACU3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
UCT												
03...	--	--	1350	8.3	--	--	--	370	216	94	33	150
05...	0915	6750	1260	8.0	24.5	8.0	26	--	--	--	--	--
10...	--	--	1390	8.0	--	--	--	365	211	93	32	160
17...	--	--	1410	7.9	--	--	--	375	216	94	34	160
18...	1030	5290	--	--	23.5	--	--	--	--	--	--	--
24...	--	--	1350	7.9	--	--	--	370	214	94	33	150
31...	--	--	1360	8.0	--	--	--	370	216	92	34	150
NOV												
07...	--	--	1400	8.0	--	--	--	375	214	94	34	160
09...	0915	5020	1360	8.2	17.5	8.5	87	--	--	--	--	--
14...	--	--	1380	7.9	--	--	--	375	219	94	34	155
21...	--	--	1410	7.9	--	--	--	375	216	95	34	160
21...	1130	5183	--	--	15.0	--	--	--	--	--	--	--
28...	--	--	1470	8.0	--	--	--	395	228	99	36	170
DEC												
05...	--	--	1310	7.9	--	--	--	370	216	91	35	140
07...	0900	5680	1320	7.8	15.0	8.8	27	--	--	--	--	--
12...	--	--	1340	7.9	--	--	--	370	218	93	34	145
19...	--	--	1320	7.9	--	--	--	370	218	93	34	145
19...	1105	6050	--	--	13.0	--	--	--	--	--	--	--
26...	--	--	1490	8.0	--	--	--	405	236	104	35	170
JAN												
02...	--	--	1630	7.9	--	--	--	430	246	109	38	190
09...	--	--	1630	8.0	--	--	--	430	246	109	38	190
11...	0900	2540	1560	7.9	12.0	9.8	280	--	--	--	--	--
16...	--	--	1520	7.9	--	--	--	395	228	102	34	180
23...	--	--	1530	8.0	--	--	--	410	240	103	37	175
24...	1105	2020	--	--	12.5	--	--	--	--	--	--	--
30...	--	--	1520	7.9	--	--	--	405	234	101	37	175
FEB												
06...	--	--	1480	8.1	--	--	--	395	228	98	37	170
08...	0910	4020	1390	8.0	15.5	9.7	67	--	--	--	--	--
13...	--	--	1310	8.1	--	--	--	370	219	90	35	140
20...	--	--	1190	8.0	--	--	--	350	210	86	33	120
21...	1050	8680	--	--	14.0	--	--	--	--	--	--	--
27...	--	--	1190	8.0	--	--	--	350	209	86	33	120
MAR												
06...	--	--	1340	8.0	--	--	--	370	212	94	33	145
08...	0830	6140	1390	8.0	17.5	8.1	100	--	--	--	--	--
13...	--	--	1190	8.0	--	--	--	350	208	87	32	120

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

COOPERATION.--Daily water temperature record furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,880 micromhos Nov. 21, 1969; minimum daily, 939 micromhos Sept. 26, 1976.
 WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 20, 1977; minimum daily, 9.0°C Dec. 26, 1974, Jan. 4, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,640 micromhos Jan. 3, 4; minimum daily, 1,160 micromhos Mar. 19.
 WATER TEMPERATURES: Maximum daily, 32.0°C July 28, 29, 30; minimum daily, 13.0°C Dec. 22, 23, 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)	SOLIDS, DIS- SOLVED PER AC-FT)
OCT											
03...	3.4	5.8	188	0	345	130	.5	10	866	862	1.18
05...	--	--	--	--	--	--	--	--	--	--	--
10...	3.6	5.8	188	0	350	142	.5	8.2	882	885	1.20
17...	3.6	5.7	194	0	355	142	.5	10	902	898	1.23
18...	--	--	--	--	--	--	--	--	--	--	--
24...	3.4	5.2	184	0	345	152	.6	10	858	861	1.17
31...	3.4	5.4	188	0	345	155	.5	10	866	866	1.18
NOV											
07...	3.6	5.6	196	0	355	140	.4	11	894	898	1.22
09...	--	5.2	--	--	--	--	--	--	--	--	--
14...	3.5	5.4	190	0	350	138	.5	9.2	884	881	1.20
21...	3.6	5.5	192	0	355	142	.4	10	902	898	1.23
21...	--	--	--	--	--	--	--	--	--	--	--
28...	3.7	5.2	204	0	370	152	.5	9.0	936	943	1.27
DEC											
05...	3.2	5.2	186	0	340	125	.5	7.8	840	837	1.14
07...	--	--	--	--	--	--	--	--	--	--	--
12...	3.3	5.3	186	0	345	130	.5	9.2	858	855	1.17
19...	3.5	5.5	186	0	340	128	.5	8.8	846	847	1.15
19...	--	--	--	--	--	--	--	--	--	--	--
26...	3.7	5.6	206	0	370	158	.5	9.2	958	954	1.30
JAN											
02...	4.0	5.5	222	0	390	182	.5	11	1050	1040	1.43
09...	4.0	5.5	222	0	390	182	.5	11	1050	1040	1.43
11...	--	--	--	--	--	--	--	--	--	--	--
16...	3.9	5.4	204	0	370	168	.5	9.5	974	970	1.32
23...	3.8	5.4	208	0	370	170	.5	10	982	974	1.34
24...	--	--	--	--	--	--	--	--	--	--	--
30...	3.6	5.4	208	0	370	165	.5	9.5	970	966	1.32
FEB											
06...	3.7	5.2	204	0	365	160	.5	9.0	946	946	1.29
08...	--	--	--	--	--	--	--	--	--	--	--
13...	3.2	5.3	184	0	335	128	.5	8.0	842	833	1.15
20...	2.8	5.1	170	0	310	108	.5	8.5	758	756	1.03
21...	--	--	--	--	--	--	--	--	--	--	--
27...	2.8	5.4	172	0	310	108	.5	9.5	756	758	1.03
MAR											
06...	3.3	5.3	192	0	340	150	.6	10	856	854	1.16
08...	--	--	--	--	--	--	--	--	--	--	--
13...	2.8	5.3	174	0	310	108	.4	8.0	760	758	1.03

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEDUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	CULI- FURN, FECAL, 0.7 UM-MF (CULS./ 100 ML)	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)
MAR												
20...	--	--	1170	8.0	--	--	--	340	199	86	31	120
21...	1100	11600	--	--	19.5	--	--	--	--	--	--	--
27...	--	--	1200	8.1	--	--	--	345	200	88	31	125
APR												
05...	--	--	1190	8.2	--	--	--	345	204	90	29	120
10...	--	--	1200	8.1	--	--	--	345	198	89	30	125
12...	0930	12300	1230	8.1	20.0	7.2	115	--	--	--	--	--
17...	--	--	1210	8.0	--	--	--	350	202	91	30	125
24...	--	--	1210	8.0	--	--	--	350	202	90	31	125
25...	1000	12400	--	--	20.5	--	--	--	--	--	--	--
MAY												
01...	--	--	1230	7.9	--	--	--	350	199	90	31	130
08...	--	--	1280	7.9	--	--	--	365	202	94	32	135
10...	0905	9410	1270	8.0	22.5	8.1	115	--	--	--	--	--
15...	--	--	1270	8.1	--	--	--	360	204	94	31	135
22...	--	--	1230	8.0	--	--	--	350	199	90	31	130
23...	1115	10270	--	--	24.0	--	--	--	--	--	--	--
29...	--	--	1280	8.0	--	--	--	365	209	94	32	135
JUN												
05...	--	--	1270	8.0	--	--	--	360	204	92	32	135
12...	--	--	1280	8.0	--	--	--	365	211	92	33	135
14...	0915	9900	1300	8.0	27.0	7.2	26	--	--	--	--	--
19...	--	--	1240	8.0	--	--	--	355	206	92	31	130
26...	--	--	1230	7.8	--	--	--	350	202	94	28	130
26...	1100	10700	--	--	26.0	--	--	--	--	--	--	--
JUL												
05...	--	--	1240	7.8	--	--	--	355	206	93	30	130
10...	--	--	1210	7.9	--	--	--	350	208	87	32	125
12...	0930	12400	1270	8.0	27.5	7.6	30	--	--	--	--	--
17...	--	--	1250	7.9	--	--	--	350	202	90	31	135
24...	--	--	1240	7.9	--	--	--	350	206	89	31	130
24...	1110	11900	--	--	29.5	--	--	--	--	--	--	--
31...	--	--	1240	7.9	--	--	--	350	204	90	31	130
AUG												
07...	--	--	1250	8.0	--	--	--	355	212	90	32	130
09...	0900	20000	1300	7.9	30.0	6.6	32	--	--	--	--	--
14...	--	--	1240	7.9	--	--	--	350	204	90	31	130
21...	--	--	1270	8.0	--	--	--	360	211	92	32	135
28...	--	--	1270	8.0	--	--	--	360	211	90	33	135
28...	1115	9600	--	--	28.5	--	--	--	--	--	--	--

[illegible]

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	CULI- FURN, FECAL, 0.7 UM-MF (CULS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACU3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
SEP												
04...	--	--	1290	8.1	--	--	--	360	212	90	33	140
11...	--	--	1270	8.0	--	--	--	360	214	92	32	135
13...	0920	9500	1200	7.8	25.5	7.8	26	--	--	--	--	--
18...	--	--	1280	7.9	--	--	--	360	212	90	33	135
23...	--	--	1300	7.8	--	--	--	365	219	90	34	140
25...	1030	7770	--	--	26.5	--	--	--	--	--	--	--

[illegible]

COLORADO RIVER MAIN STEM

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09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECUV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT												
05...	0915	.12	.14	.28	.40	.03	.01	--	--	170	--	--
18...	1030	.08	--	.31	.39	.03	--	--	--	170	--	--
NOV												
09...	0915	.12	.15	.34	.46	.02	.00	3	3	200	10	3
21...	1130	.15	--	.41	.56	.03	--	--	--	230	--	--
DEC												
07...	0900	.18	.16	.23	.41	.02	.00	--	--	190	--	--
19...	1105	.22	--	.79	1.0	.02	--	--	--	180	--	--
JAN												
11...	0900	.24	.26	.38	.62	.03	.01	--	--	250	--	--
24...	1105	.14	--	.19	.33	.04	--	--	--	230	--	--
FEB												
08...	0910	.20	.20	.36	.56	.02	.02	2	3	200	1	0
21...	1050	.21	--	.45	.66	.07	--	--	--	160	--	--
MAR												
08...	0830	.20	.20	.51	.71	.04	.00	--	--	190	--	--
21...	1100	.11	--	.63	.74	.14	--	--	--	170	--	--
APR												
12...	0930	.09	.14	.36	.45	.03	.03	--	--	710	--	--
25...	1000	.17	--	.48	.65	.05	--	--	--	160	--	--
MAY												
10...	0905	.10	.15	.37	.47	.03	.00	12	2	180	3	1
23...	1115	.11	--	.53	.64	.02	--	--	--	200	--	--
JUN												
14...	0915	.15	.16	.73	.88	.03	.01	--	--	180	--	--
26...	1100	.09	.13	.42	.51	.04	.01	--	--	180	--	--
JUL												
12...	0930	.09	.10	.54	.63	.02	.03	--	--	170	--	--
24...	1110	.08	.12	.35	.43	.03	.01	--	--	170	--	--
AUG												
09...	0900	.08	.07	1.4	1.5	.03	.00	3	3	180	1	<1
28...	1115	.08	.11	.31	.39	.04	.01	--	--	190	--	--
SEP												
13...	0920	.12	.13	.50	.62	.03	.01	--	--	180	--	--
25...	1030	.08	.11	.34	.42	.02	.01	--	--	180	--	--

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERLUKY TOTAL RECOVERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT												
05...	--	--	470	--	--	--	--	.0	--	--	--	2.5
18...	--	--	310	--	--	--	--	--	--	--	--	3.1
NOV												
09...	<10	2	210	250	<100	40	0	.0	4	20	20	2.9
21...	--	--	250	--	--	--	--	--	--	--	--	3.1
DEC												
07...	--	--	400	--	--	--	--	--	--	--	--	2.9
19...	--	--	410	--	--	--	--	--	--	--	--	3.3
JAN												
11...	--	--	190	--	--	--	--	--	--	--	--	3.1
24...	--	--	140	--	--	--	--	--	--	--	--	2.8
FEB												
08...	2	2	190	0	7	20	10	.0	5	10	10	--
21...	--	--	1100	--	--	--	--	--	--	--	--	3.1
MAR												
08...	--	--	320	--	--	--	--	--	--	--	--	3.5
21...	--	--	750	--	--	--	--	--	--	--	--	3.3
APR												
12...	--	--	310	--	--	--	--	--	--	--	--	3.8
25...	--	--	300	--	--	--	--	--	--	--	--	3.0
MAY												
10...	5	0	430	10	36	40	10	.0	1	20	10	--
23...	--	--	430	--	--	--	--	--	--	--	--	3.1
JUN												
14...	--	--	490	--	--	--	--	--	--	--	--	3.4
26...	--	--	570	--	--	--	--	--	--	--	--	3.5
JUL												
12...	--	--	390	--	--	--	--	--	--	--	--	4.0
24...	--	--	450	--	--	--	--	--	--	--	--	3.2
AUG												
09...	5	2	440	10	3	50	5	.0	1	20	10	--
28...	--	--	290	--	--	--	--	--	--	--	--	3.8
SEP												
13...	--	--	510	--	--	--	--	--	--	--	--	3.5
25...	--	--	330	--	--	--	--	--	--	--	--	3.0

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDO, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDI, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
OCT											
05...	0915	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00
NOV											
09...	0915	.0	.00	.0	.00	.00	.00	--	.00	.00	--
JAN											
11...	0900	.0	.00	.0	.00	.00	.00	.01	.00	.00	.00
FEB											
08...	0910	.0	.00	.0	.00	.00	.00	.01	.00	.00	.00
MAR											
08...	0830	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00
APR											
12...	0930	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00
MAY											
10...	0905	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUL											
12...	0930	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00
AUG											
09...	0900	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00
SEP											
13...	0920	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00

COLORADO RIVER MAIN STEM

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOTAL THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 05...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NOV 09...	.00	.00	.00	--	--	--	--	--	.00	.00	.00
JAN 11...	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
FEB 08...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR 08...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR 12...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 10...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL 12...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 09...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SEP 13...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TIME	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M
NOV 09...	0915	1700	--	--
FEB 08...	0910	1800	--	--
MAY 10...	0905	8300	2.99	2.20
JUN 14...	0915	2300	--	--
JUL 12...	0930	1300	--	--
AUG 09...	0900	2600	.472	.236
SEP 13...	0920	4800	--	--

COLORADO RIVER MAIN STEM

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	1350	1440	1540	1330	1200	1190	1230	1240	1260	1220	1290
2	1390	1310	1420	1630	1330	1210	1180	1240	1260	1240	1240	1300
3	1350	1300	1350	1640	1370	1270	1190	1250	1270	1240	1240	1320
4	1330	1340	1320	1640	1420	1310	1180	1250	1300	1240	1240	1290
5	1320	1350	1310	1540	1450	1330	1190	1260	1270	1230	1260	1270
6	1310	1390	1290	1530	1480	1340	1200	1290	1250	1240	1250	1260
7	1320	1400	1280	1570	1440	1350	1210	1310	1250	1280	1250	1310
8	1320	1400	1290	1620	1400	1300	1220	1280	1230	1260	1230	1310
9	1370	1350	1300	1630	1370	1280	1200	1260	1270	1270	1230	1290
10	1390	1320	1310	1590	1350	1260	1200	1250	1290	1210	1220	1300
11	1450	1330	1340	1540	1350	1240	1200	1260	1310	1240	1240	1270
12	1400	1350	1340	1550	1340	1220	1210	1290	1280	1250	1250	1240
13	1390	1390	1330	1530	1310	1190	1200	1310	1260	1230	1240	1240
14	1400	1380	1310	1530	1270	1180	1220	1300	1240	1240	1240	1250
15	1410	1340	1310	1510	1220	1210	1230	1270	1250	1250	1240	1260
16	1420	1320	1310	1520	1280	1230	1220	1260	1250	1250	1260	1260
17	1410	1330	1310	1530	1230	1230	1210	1240	1270	1250	1260	1320
18	1340	1370	1340	1530	1240	1200	1210	1250	1260	1250	1280	1280
19	1310	1420	1320	1530	1270	1160	1210	1270	1240	1240	1280	1280
20	1310	1440	1310	1530	1190	1170	1200	1260	1240	1250	1290	1290
21	1310	1410	1300	1520	1210	1180	1220	1260	1230	1250	1270	1280
22	1320	1340	1310	1520	1230	1180	1220	1230	1230	1240	1260	1290
23	1350	1310	1330	1530	1260	1190	1230	1240	1240	1240	1260	1310
24	1350	1320	1370	1530	1230	1200	1210	1250	1270	1240	1270	1330
25	1330	1340	1440	1540	1220	1190	1200	1270	1260	1220	1290	1300
26	1310	1360	1490	1530	1200	1170	1210	1280	1230	1230	1310	1250
27	1310	1420	1340	1530	1190	1200	1220	1310	1230	1270	1290	1250
28	1340	1470	1270	1510	1210	1190	1250	1320	1250	1260	1270	1250
29	1360	1450	1310	1610	---	1190	1270	1280	1240	1280	1260	1260
30	1360	1450	1380	1520	---	1200	1240	1260	1260	1250	1260	1280
31	1360	---	1480	1380	---	1200	---	1260	---	1240	1270	---
MEAN	1360	1370	1340	1550	1300	1220	1210	1270	1260	1250	1260	1280
WTR YR 1978	MEAN	1300		MAX	1640		MIN	1160				

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 1230

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.5	22.0	17.0	17.0	16.0	16.5	21.5	23.0	28.0	28.0	31.0	30.5
2	26.0	21.0	16.5	16.5	16.5	17.0	21.0	22.0	26.5	28.5	31.0	30.5
3	26.5	21.5	16.5	16.0	17.0	17.0	20.5	23.0	26.5	28.0	31.0	31.0
4	26.0	21.0	16.5	15.0	16.0	18.0	20.5	24.0	26.5	28.0	31.0	30.5
5	27.0	21.5	16.0	15.0	16.0	18.0	20.5	24.5	26.0	28.0	31.0	30.0
6	26.5	20.0	16.0	15.5	16.0	18.0	20.5	23.5	28.0	28.0	31.5	29.5
7	27.0	19.5	16.0	15.5	16.0	19.0	20.5	23.5	28.0	28.5	31.5	30.5
8	28.0	19.0	16.0	16.0	16.5	19.0	20.0	23.5	29.0	29.0	31.5	30.0
9	28.5	18.5	16.0	15.0	16.0	19.0	19.0	24.5	30.0	29.0	31.0	29.5
10	28.5	17.0	16.0	14.5	17.0	19.0	20.0	24.5	29.5	29.5	31.0	28.5
11	28.5	17.0	16.0	14.5	16.5	19.0	20.5	24.5	29.0	30.0	31.5	28.5
12	28.5	18.0	16.0	14.5	15.5	18.0	21.5	25.5	29.0	29.5	30.5	28.5
13	25.5	18.5	16.0	14.5	15.5	16.5	22.0	26.0	29.0	---	30.5	28.0
14	25.0	18.5	15.5	14.5	15.5	18.0	21.5	27.0	29.0	50.0	30.0	27.0
15	24.5	18.5	17.0	15.5	15.5	18.5	21.5	26.5	29.0	50.5	29.0	27.0
16	25.0	18.5	15.5	15.0	15.5	19.0	21.0	25.0	28.5	51.0	30.0	27.5
17	25.5	18.0	15.5	15.5	14.5	19.0	20.5	24.0	26.5	50.5	26.5	28.0
18	25.5	19.0	15.5	15.5	14.5	20.0	21.0	24.0	29.5	51.5	29.0	26.0
19	26.0	19.0	15.5	15.5	14.5	19.0	21.5	24.5	29.5	51.0	29.0	25.0
20	24.5	18.0	14.5	16.0	14.5	19.5	22.0	25.5	29.5	51.0	29.5	23.5
21	24.5	16.5	14.5	16.0	15.5	20.5	21.5	26.0	29.5	51.0	29.5	23.0
22	24.5	16.5	13.0	16.0	16.0	21.0	21.5	26.5	30.0	51.0	30.0	23.5
23	24.5	15.5	13.0	16.0	17.0	20.5	21.5	26.0	30.0	50.5	29.5	25.5
24	24.5	15.5	13.0	14.0	17.0	20.5	22.0	25.0	30.0	51.0	30.0	26.5
25	24.5	16.5	14.0	13.5	17.0	20.5	23.5	25.0	30.0	51.0	29.0	28.0
26	24.0	16.5	14.5	13.5	17.0	21.0	23.0	24.5	29.5	51.0	28.0	28.0
27	24.0	18.0	15.0	14.0	17.0	21.5	23.0	24.5	28.5	51.0	26.5	28.5
28	23.5	18.0	15.5	14.5	17.0	21.5	23.5	25.0	28.5	52.0	29.0	29.0
29	24.0	17.0	16.0	15.0	---	21.5	23.5	26.0	28.0	52.0	29.0	29.0
30	23.5	16.0	16.5	15.0	---	21.5	23.5	27.0	28.0	52.0	29.5	29.0
31	23.0	---	16.5	16.0	---	21.5	---	27.0	---	51.5	30.0	---
MEAN	25.5	18.5	15.5	15.0	16.0	19.5	21.5	25.0	29.0	50.0	30.0	28.0
WLR YR 1978	MEAN	23.0		MAX	52.0	MIN	13.0					

[illegible]

COLORADO RIVER MAIN STEM

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09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 9,77 0915	FEB 8,78 0910	MAY 10,78 0905	JUN 14,78 0915				
TOTAL CELLS/ML	1700	1800	8300	2300				
DIVERSITY: DIVISION	1.7	0.8	1.4	1.7				
..CLASS	1.9	0.8	1.7	1.7				
...ORDER	2.7	1.3	2.3	1.9				
...FAMILY	3.1	1.6	2.6	2.9				
....GENUS	0.0	2.1	0.0	0.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHAKACIACEAE								
....SCHRUEDERIA	96	6	--	--	--	--	--	--
...COELASTRACEAE								
....COELASTRUM	--	--	--	--	--	--	--	--
...MICKACTINIACEAE								
....MICKACTINIUM	--	--	64	4	--	--	--	--
...DUCYSTACEAE								
....ANKISTRODESMUS	29	2	32	2	--	--	--	--
...DICTYOSPHAERIUM	--	--	64	4	--	--	--	--
....KIRCHNERIELLA	--	--	--	--	--	--	--	--
...DUCYSTIS	--	--	--	--	360	4	180	8
....TETRAEURUM	--	--	--	--	72	1	--	--
...SCENEDESMACEAE								
....CRUCIGENIA	--	--	--	--	--	--	--	--
...SCENEDESMUS	76	5	48	3	360	4	530#	23
...TETRASTRUM	--	--	--	--	290	3	--	--
...TETRASPORALES								
...PALMELLACEAE								
...SPHAERUCYSTIS	310#	18	--	--	--	--	--	--
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	--	--	--	--	--	--	--
...CHLAMYDOMONAS	38	2	48	3	72	1	--	--
...CHLOROGONIUM	--	--	--	--	--	--	--	--
...POLYBLEPHARIDACEAE								
...SPERMATOZOOPSIS	--	--	--	--	72	1	--	--
...ZYGNEATALES								
...DESMIDIACEAE								
...COSMARIUM	--	--	--	--	--	--	120	5
...STAUSTRUM	--	--	--	--	--	--	--	--
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...CUSCINOUSCACEAE								
....CYCLUTELLA	110	6	1100#	60	3000#	36	--	--
...MELOSIKA	340#	20	220	13	--	--	--	--
...STEPHANODISCUS	38	2	--	--	--	--	--	--
...PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	--	--	--	220	3	--	--
...COCCONEIS	19	1	--	--	72	1	29	1
...RHODICOSPHENIA	--	--	--	--	--	--	--	--
...CYMBELLACEAE								
....CYMBELLA	--	--	--	--	--	--	44	2
...DIATOMACEAE								
....DIATOMA	--	--	--	--	72	1	--	--
...FRAGILARIACEAE								
....FRAGILARIA	--	--	--	--	--	--	--	--
...SYNEURA	86	5	--	--	140	2	73	3
...NAVICULACEAE								
....GYROSIGMA	--	--	--	--	--	--	44	2
...NAVICULA	29	2	80	5	72	1	88	4
...PINNULARIA	--	--	--	--	--	--	--	--
...NITZSCHACEAE								
....NITZSCHIA	86	5	96	5	290	3	290	13
...TABELLARIACEAE								
....TABELLARIA	--	--	--	--	--	--	180	8
..CHRYSOPHYCEAE								
...CHRYSDOMONADALES								
...UNKNOWN 216020106002000	48	3	--	--	360	4	--	--
...UNKNOWN 216020106005000	--	--	--	--	360	4	--	--
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	38	2	--	--	--	--	--	--

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

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

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 9,77 0915		FEB 8,78 0910		MAY 10,78 0905		JUN 14,78 0915	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...HORMOGUNALES								
...NOSTOCACEAE								
....CYLINDROSPERMUM	--	-	--	-	--	-	--	-
....OSCILLATORIACEAE								
....USCILLATORIA	290#	17	--	-	2400#	28	--	-
....SPIRULINA	--	-	48	3	--	-	--	-
...RIVULARIACEAE								
...RAPHIIDIOPSIS	--	-	--	-	--	-	--	-
...CHROOCUCCALES								
...UNKNOWN 218010101021000	38	2	--	-	140	2	700#	30
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	19	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...CERATIACEAE								
....CERATIUM	--	-	--	-	--	-	59	3

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

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

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 12,78 0930	AUG 9,78 0900	SEP 13,78 0920
TOTAL CELLS/ML	1500	880	4800
DIVERSITY: DIVISION	1.5	1.0	1.3
..CLASS	1.5	1.0	1.3
...ORDER	1.5	1.3	2.4
...FAMILY	1.6	2.1	3.0
....GENUS	0.0	2.2	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCEAE						
...CHARACIAEAE						
...SCHROEDERIA	--	-	--	-	--	-
...COELASTRACEAE						
...COELASTRUM	--	-	230# 27		--	-
...MICRACTINIAEAE						
...MICRACTINIUM	--	-	16 2		--	-
...UOCYSTACEAE						
...ANKISTROUESMUS	--	-	8 1		55 1	
...DICTYUSPHERIUM	--	-			110 2	
...KIRCHNERIELLA	--	-	--	-	* 0	
...OUCYSTIS	--	-	--	-	--	-
...TETRAEDRON	--	-	* 0		--	-
...SCENEDESMACEAE						
...CRUCIGENIA	230# 19		--	-	--	-
...SCENEDESMUS	230# 19		260# 30		250 5	
...TETRASTRUM	--	-	--	-	--	-
...TETRASPORALES						
...PALMELLACEAE						
...SPHAEROCYSTIS	--	-	--	-	55 1	
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	-	--	-	110 2	
...CHLAMYDOMONAS	--	-	--	-	83 2	
...CHLOROGONIUM	--	-	--	-	* 0	
...POLYBLEPHARIDACEAE						
...SPERMATIZOOPSIS	--	-	--	-	* 0	
...ZYGNEMATALES						
...UESMIDIACEAE						
...CUSMAKUM	--	-	--	-	--	-
...STAUSTRUM	--	-	--	-	* 0	
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	--	-	250# 28		570 12	
...MELUSIRA	--	-	8 1		--	-
...STEPHANODISCUS	--	-	* 0		--	-
...PENNALES						
...ACHNANTHACEAE						
...ACHNANTHES	--	-	* 0		--	-
...CUCCONEIS	--	-	--	-	28 1	
...RHODICUSPHENIA	--	-	--	-	* 0	
...CYMBELLACEAE						
...CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
...DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
...FRAGILARIA	29 2		--	-	--	-
...SYNEDRA	100 8		--	-	--	-
...NAVICULACEAE						
...GYROSIGMA	--	-	--	-	* 0	
...NAVICULA	44 3		--	-	69 1	
...PINNULARIA	29 2		--	-	--	-
...NITZSCHIAEAE						
...NITZSCHIA	--	-	93 11		250 5	
...TABELLARIAEAE						
...TABELLARIA	--	-	--	-	--	-
..CHRYSOPHYCEAE						
..CHRYSOMONADACEAE						
...UNKNOWN 216020106002000	--	-	--	-	--	-
...UNKNOWN 216020106005000	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	--	-	41 1	

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

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

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 12, 78 0930		AUG 9, 78 0900		SEP 13, 78 0920	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...NOSTOCACEAE						
....CYLINDROSPERMUM	--	-	--	-	530	7
....OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	1300#	27
....SPIRULINA	--	-	--	-	--	-
....RIVULARIACEAE						
....RAPHIIDIOPSIS	--	-	--	-	140	3
...CHROOCOCCALES						
...UNKNOWN 218010101021000	590#	47	--	-	1300#	28
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...CERATIACEAE						
...CERATIUM	--	-	--	-	--	-

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

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

COLORADO RIVER MAIN STEM

09429600 COLORADO RIVER BELOW LAGUNA DAM, AZ-CA

LOCATION.--Lat 32°48'44", long 114°30'51", in SE¼NE¼ sec.35, T.15 S., R.24 E., San Bernardino meridian, in California, Imperial County, Hydrologic Unit 15030107, on right bank 1.4 mi (2.3 km) downstream from Laguna Dam, 2.8 mi (4.5 km) northeast of Bard, Calif., and 10 mi (16 km) northeast of Yuma, Ariz.

DRAINAGE AREA.--188,600 mi² (488,500 km²), approximately, including 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 120.84 ft (36.832 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records good. Natural flow of Colorado River at this point is affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas. Flow past station consists mainly of water released through Imperial Dam, sludge from the desilting basins at Imperial Dam, seepage through Imperial Dam, and seepage from the All-American Canal and the Gila Gravity Main Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,030 ft³/s (142 m³/s) Aug. 18, 1977, gage height, 12.88 ft (3.926 m); minimum 71 ft³/s (2.01 m³/s) May 29, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,080 ft³/s (87.2 m³/s) Mar. 2, gage height, 9.98 ft (3.042 m); minimum daily, 209 ft³/s (5.92 m³/s) Dec. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	250	218	247	495	1150	2530	368	301	643	649	574	530
2	250	315	244	1110	774	2850	341	490	486	368	435	441
3	327	501	244	1060	632	943	339	770	441	346	387	481
4	325	508	242	1160	639	425	320	853	429	335	390	766
5	325	493	244	1540	645	477	311	852	426	327	382	918
6	325	496	241	1170	694	473	309	859	429	300	376	911
7	325	522	225	999	651	600	322	847	322	284	368	905
8	325	536	209	893	589	551	296	842	261	501	362	892
9	325	511	224	960	389	463	302	877	251	589	360	901
10	325	405	218	1320	322	311	297	917	298	486	351	892
11	325	278	223	1950	321	300	432	885	354	360	362	870
12	325	269	356	2070	314	299	630	766	332	349	368	870
13	325	265	462	1970	311	258	563	681	311	354	362	870
14	325	243	449	1830	320	279	427	630	322	343	357	911
15	330	271	414	1850	275	425	361	612	362	349	314	921
16	360	260	415	1730	238	544	351	628	338	360	308	895
17	370	223	354	1720	241	504	347	760	314	365	311	889
18	330	375	304	1610	247	469	345	785	314	365	314	876
19	265	493	302	1540	250	386	365	785	311	368	332	905
20	269	474	307	1500	254	376	358	773	314	349	354	918
21	255	325	305	1350	259	369	343	772	314	338	351	910
22	248	266	295	1300	260	358	321	775	316	341	346	846
23	242	260	277	1260	349	349	329	778	314	341	341	787
24	237	260	274	928	464	333	282	808	308	346	330	730
25	244	257	275	789	423	329	260	847	306	346	314	882
26	238	215	277	806	291	715	267	744	300	360	322	904
27	221	218	231	716	263	944	271	727	308	371	324	909
28	220	255	1660	719	286	460	284	734	316	360	322	917
29	218	253	850	718	---	493	318	727	324	349	322	915
30	220	250	329	748	---	626	300	728	586	475	319	792
31	219	---	290	766	---	541	---	721	---	637	379	---
TOTAL	8888	10215	10987	38577	11851	18980	10359	23274	10650	12011	11037	25154
MEAN	287	341	354	1244	423	612	345	751	355	387	356	838
MAX	370	536	1660	2070	1150	2850	630	917	643	649	574	921
MIN	218	215	209	495	238	258	260	301	251	284	308	441
AC-FT	17630	20260	21790	76520	23510	37650	20550	46160	21120	23820	21890	49890
WTR YR 1978	TOTAL	191983	MEAN	526	MAX	2850	MIN	209	AC-FT	380800		

09429600 COLORADO RIVER BELOW LAGUNA DAM, AZ-CA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1976

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SURP- TION RATIO
OCT											
03...	0110	321	1450	8.1	25.5	380	228	105	29	165	3.7
10...	0120	327	1370	8.3	28.0	370	221	97	31	150	3.4
17...	0125	238	1610	7.8	22.0	390	224	102	33	200	4.4
24...	0230	238	1420	7.9	--	380	226	95	35	180	3.6
31...	0120	217	1410	7.8	23.5	375	221	94	34	160	3.6
NOV											
07...	0140	504	1390	7.9	--	375	221	94	34	155	3.5
14...	0545	548	1500	7.7	16.0	385	224	100	35	175	3.9
21...	0145	393	1540	7.8	17.0	390	224	99	35	180	4.0
28...	0130	266	1440	7.8	16.5	365	228	97	35	165	3.7
DEC											
05...	0445	200	1470	7.9	20.0	385	222	98	34	170	3.8
12...	0135	223	1370	7.8	20.5	375	221	95	34	150	3.4
19...	0200	292	1480	7.9	14.5	365	222	98	34	170	3.8
26...	0310	261	1530	7.8	16.5	390	226	101	34	180	4.0
JAN											
02...	0135	1070	1400	7.9	16.5	375	218	97	32	155	3.5
09...	0125	735	1590	7.9	14.5	420	244	103	40	185	3.9
16...	0035	1590	1510	7.9	15.5	395	230	102	34	175	3.8
23...	0200	1170	1530	7.9	16.5	405	238	103	36	175	3.8
30...	0330	772	1600	7.9	14.0	415	241	106	37	185	3.9
FEB											
06...	0050	634	1460	8.1	16.5	390	226	98	35	165	3.6
13...	0140	300	1520	8.0	18.0	385	221	101	32	180	4.0
20...	0300	261	1380	7.9	16.0	370	214	93	34	155	3.5
27...	0050	281	1440	7.9	17.0	375	219	97	32	165	3.7
MAR											
06...	0105	294	1320	7.9	16.5	365	216	96	31	140	3.2
13...	0130	290	1490	7.8	17.0	385	221	100	35	175	3.9
20...	0050	379	1350	7.9	19.0	365	216	97	30	150	3.4
27...	0130	1490	1200	8.0	21.5	345	200	90	29	125	2.9
APR											
03...	0050	338	1390	8.0	20.0	375	218	96	33	155	3.5
10...	0045	242	1310	8.2	19.5	365	208	95	31	140	3.2
17...	0140	338	1390	8.0	20.0	375	219	98	32	155	3.5
24...	0500	280	1310	7.8	20.0	365	208	95	31	140	3.2
MAY											
01...	0030	303	1310	8.1	18.5	365	208	94	32	140	3.2
08...	0115	835	1330	8.0	23.5	375	212	96	33	140	3.1
15...	0115	194	1360	8.0	24.0	380	222	98	33	145	3.2

09429600 COLORADO RIVER BELOW LAGUNA DAM, AZ-CA--Continued

COOPERATION.--Daily specific conductance record furnished by Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,800 micromhos Feb. 9; minimum daily, 1,190 micromhos Mar. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAN- BONATE (MG/L AS CO3)	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. L DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT											
03...		6.0	186	0	355	155	.6	11	922	919	1.25
10...		5.7	182	0	345	158	.5	9.5	870	867	1.18
17...		6.0	202	0	380	188	.5	13	1020	1020	1.39
24...		5.2	188	0	350	150	.6	10	898	899	1.22
31...		5.5	186	0	350	148	.5	10	896	895	1.22
NOV											
07...		5.6	188	0	350	140	.4	9.8	888	882	1.21
14...		5.5	196	0	360	170	.5	12	954	954	1.30
21...		5.7	202	0	365	175	.5	12	972	973	1.32
28...		5.2	192	0	360	150	.5	8.9	918	917	1.25
DEC											
05...		5.2	198	0	360	158	.6	11	942	935	1.28
12...		5.5	188	0	345	158	.5	9.5	876	871	1.19
19...		5.5	198	0	360	160	.5	11	944	938	1.28
26...		5.8	200	0	365	172	.5	9.8	976	968	1.33
JAN											
02...		5.2	192	0	350	142	.5	10	894	887	1.22
09...		5.7	214	0	385	175	.5	10	1020	1010	1.39
16...		5.4	202	0	365	165	.5	9.0	964	957	1.31
23...		5.4	204	0	370	170	.5	10	982	970	1.34
30...		5.5	212	0	380	182	.6	10	1030	1010	1.40
FEB											
06...		5.4	200	0	360	155	.5	10	930	929	1.26
13...		5.4	200	0	360	175	.5	11	966	964	1.31
20...		5.2	190	0	335	145	.5	10	884	873	1.20
27...		5.6	190	0	340	165	.5	10	918	910	1.25
MAR											
06...		5.3	182	0	330	150	.6	10	838	834	1.14
13...		5.6	200	0	345	172	.4	10	942	941	1.28
20...		5.6	182	0	325	145	.4	10	856	854	1.16
27...		5.2	176	0	310	108	.5	8.4	764	764	1.04
APR											
03...		5.5	192	0	335	148	.5	8.8	876	877	1.19
10...		5.4	192	0	325	128	.5	10	830	830	1.13
17...		5.6	190	0	330	152	.4	8.8	880	876	1.20
24...		5.4	192	0	325	128	.5	9.0	834	829	1.13
MAY											
01...		5.6	192	0	325	128	.6	9.2	826	830	1.13
08...		5.6	198	0	330	150	.4	9.2	846	843	1.15
15...		5.6	192	0	335	140	.5	9.8	866	862	1.18
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SURP- PLUS RATIO
MAY											
22...	0025	763	1300	8.0	23.5	365	208	94	32	140	3.2
29...	0100	719	1340	8.0	26.0	380	221	96	34	140	3.1
JUN											
05...	0100	415	1400	8.0	25.0	385	228	98	34	155	3.4
12...	0035	316	1350	7.9	26.5	375	226	95	34	145	3.2
19...	0140	295	1330	7.9	29.5	365	211	94	32	145	3.3
26...	0040	232	1360	7.8	27.0	370	218	96	32	150	3.4
JUL											
03...	0110	362	1310	7.8	26.0	360	214	93	31	140	3.2
10...	0200	530	1340	8.0	29.5	370	218	93	34	145	3.3
17...	0030	300	1320	7.8	29.5	360	211	90	33	145	3.3
24...	0050	269	1330	8.0	28.5	360	209	90	33	145	3.3
31...	0205	586	1310	7.9	31.0	350	202	86	33	145	3.4
AUG											
07...	0100	335	1360	7.9	29.0	370	219	93	34	150	3.4
14...	0235	314	1340	7.8	29.0	365	216	92	33	145	3.3
21...	0140	308	1330	7.9	29.0	365	216	91	34	145	3.3
28...	0110	290	1390	7.9	26.5	370	216	97	31	155	3.5
SEP											
04...	0010	924	1340	8.0	29.0	365	218	94	32	145	3.3
11...	0200	892	1320	7.9	27.0	360	211	91	32	145	3.3
18...	0115	921	1330	7.9	25.5	365	214	93	32	145	3.3
25...	0030	816	1350	7.9	27.0	370	221	94	33	145	3.3

09429600 COLORADO RIVER BELOW LAGUNA DAM, AZ-CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAY										
22...	5.5	192	0	325	128	.6	9.2	828	830	1.13
29...	5.4	194	0	335	130	.6	9.0	856	846	1.17
JUN										
05...	5.6	192	0	340	130	.6	9.8	886	888	1.20
12...	5.5	182	0	335	140	.5	9.2	854	855	1.16
19...	5.4	188	0	335	128	.5	9.0	840	842	1.14
26...	5.5	186	0	340	135	.6	8.8	858	860	1.17
JUL										
03...	5.5	178	0	335	125	.4	8.8	824	827	1.12
10...	5.6	186	0	335	132	.5	8.8	844	846	1.15
17...	5.5	182	0	335	128	.5	7.8	834	835	1.13
24...	5.5	184	0	335	130	.4	9.0	836	839	1.14
31...	5.7	180	0	330	126	.5	9.0	830	825	1.13
AUG										
07...	5.4	184	0	340	138	.5	9.8	862	862	1.17
14...	5.5	182	0	335	134	.5	9.5	850	845	1.16
21...	5.6	182	0	335	130	.5	9.2	840	841	1.14
28...	5.5	188	0	345	142	.5	9.8	878	879	1.19
SEP										
04...	5.5	180	0	340	130	.5	9.5	846	846	1.15
11...	5.6	182	0	335	128	.4	8.5	836	836	1.14
18...	5.5	184	0	335	130	.5	8.5	846	841	1.15
25...	5.5	182	0	340	135	.4	9.0	852	852	1.16

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	1420	1540	1360	1450	1240	1410	1330	1300	1310	1310	1310
2	1450	1440	1550	1420	1360	1220	1410	1320	1400	1310	1340	1350
3	1480	1410	1540	1600	1580	1210	1400	1280	1430	1320	1330	1370
4	1430	1360	1540	1660	1420	1260	1400	1270	1420	1320	1370	1350
5	1430	1350	1500	1660	1420	1260	1280	1280	1430	1320	1380	1330
6	1420	1370	1480	1570	1470	1320	1290	1290	1400	1330	1390	1310
7	1410	1390	1460	1570	1540	1350	1290	1290	1370	1320	1380	1300
8	1420	1420	1460	1570	1580	1360	1300	1340	1440	1320	1390	1330
9	1420	1470	1400	1610	1800	1520	1280	1310	1370	1300	1360	1350
10	1380	1570	1400	1630	1600	1550	1310	1290	1380	1350	1390	1350
11	1410	1540	1400	1610	1580	1490	1310	1270	1320	1330	1340	1330
12	1460	1510	1380	1570	1560	1510	1240	1290	1360	1350	1340	1310
13	1500	1500	1360	1560	1530	1490	1270	1330	1380	1340	1350	1290
14	1520	1560	1400	1550	1540	1370	1420	1360	1540	1370	1350	1280
15	1520	1470	1460	1540	1520	1280	1390	1370	1320	1350	1340	1290
16	1530	1420	1590	1520	1400	1260	1590	1330	1310	1320	1330	1310
17	1610	1400	1500	1540	1580	1310	1410	1300	1330	1330	1330	1320
18	1620	1410	1500	1550	1590	1430	1370	1270	1320	1330	1330	1330
19	1590	1380	1510	1550	1390	1380	1350	1300	1330	1370	1330	1310
20	1540	1370	1510	1550	1390	1360	1340	1320	1340	1320	1320	1310
21	1460	1540	1510	1550	1400	1340	1340	1290	1320	1320	1340	1320
22	1420	1580	1500	1540	1380	1360	1330	1300	1310	1330	1350	1310
23	1400	1570	1490	1540	1350	1360	1310	1280	1350	1330	1330	1350
24	1420	1550	1510	1550	1310	1360	1330	1300	1350	1340	1330	1350
25	1410	1540	1520	1560	1500	1290	1310	1300	1350	1330	1350	1350
26	1430	1510	1550	1570	1490	1300	1280	1290	1380	1320	---	1330
27	1450	1440	1600	1570	1440	1210	1320	1320	1350	1290	---	1300
28	1400	1440	1460	1590	1340	1190	1270	1330	1330	1310	1410	1300
29	1410	1470	1280	1570	---	1260	1290	1350	1320	1330	1400	1300
30	1410	1500	1320	1620	---	1230	1340	1310	1330	1330	1360	1310
31	1410	---	1380	1570	---	1270	---	1280	---	1310	1360	---
MEAN	1460	1460	1470	1560	1460	1330	1330	1310	1360	1330	1350	1320
WTR YR 1978	MEAN	1400		MAX	1800		MIN	1190				

(National stream-quality accounting network and pesticide station)

DRAINAGE AREA.--246,700 mi² (639,000 km²), approximately, including all closed basins entirely within the drainage boundary, also 3,959 mi² (10,254 km²) in Great Divide basin in southern Wyoming (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Supplementary water-stage recorder 1,680 ft (510 m) upstream at same datum.

REMARKS.--This record shows water passing northerly international boundary. Minor diversions to the United States below this station by pumping from ground water for irrigation in the floodway between river and Yuma levee.

COOPERATION.--Records furnished by International Boundary and Water Commission, U.S. Section (discharge figures rounded in accordance with Geological Survey standard practice).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,390 ft³/s (719 m³/s) Jan. 1, 1953; maximum elevation, 114.34 ft (34.851 m) Aug. 18, 1977; minimum discharge, 495 ft³/s (14.0 m³/s) Sept. 28, 1970; minimum elevation, 101.82 ft (31.035 m) Sept. 18, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,190 ft³/s (147 m³/s) Mar. 3, elevation, 108.26 ft (32.998 m); minimum discharge, 674 ft³/s (19.1 m³/s) Oct. 1; elevation, 102.23 ft (31.160 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	748	773	1170	1700	1200	3280	3410	2020	1350	2420	3200	1580
2	764	800	1460	1480	1280	4810	3410	1750	1380	2520	3190	1500
3	776	798	1730	1510	982	4450	3600	1440	1390	2680	3290	1470
4	764	764	1900	1390	1050	2460	3600	1480	1390	2680	3320	1510
5	776	752	1930	1550	1040	2550	3700	1400	1520	2690	3370	1510
6	776	878	2000	1640	1180	2390	3760	1390	1520	2780	3370	1510
7	764	729	2020	1400	1160	2330	3760	1380	1510	2780	3320	1470
8	752	764	1990	1090	1270	2340	3910	1380	1640	2800	3200	1480
9	776	729	2100	1180	1300	2410	3890	1400	1650	2800	3200	1510
10	764	812	2070	1290	1450	2410	4050	1360	1650	2810	3200	1410
11	764	752	2230	2010	1420	2630	4050	1380	1710	2880	3190	1400
12	788	788	2230	2160	1400	2630	4070	1350	1740	2890	3160	1380
13	776	788	2290	2160	1710	2660	4060	1370	1740	2920	3160	1380
14	764	848	2290	2100	2020	2680	4070	1360	1890	2920	2950	1390
15	776	848	2360	2010	2150	2660	4030	1360	1870	2920	2940	1390
16	788	860	2370	2010	2140	2660	4050	1380	1870	2920	2890	1380
17	788	860	2360	1970	2280	2680	3980	1410	1900	2900	2820	1380
18	788	860	2360	1940	2410	2680	3900	1380	1920	2920	2760	1360
19	797	848	2360	1940	2410	2680	3920	1400	1980	2920	2660	1380
20	764	896	2360	1750	2520	2900	3890	1390	2020	2920	2660	1360
21	788	956	2360	1750	2550	2900	3900	1390	1990	2930	2660	1360
22	812	956	2360	1640	2520	2880	3880	1400	2060	2930	2450	1350
23	812	956	2290	1550	2560	3070	3920	1380	2070	2930	2310	1350
24	884	968	2280	1500	2520	3120	3890	1400	2070	2940	2190	1360
25	872	956	2160	1070	2520	3230	3670	1400	2120	2950	2090	1380
26	896	968	2150	1120	2520	3360	3420	1380	2120	2950	1990	1390
27	896	956	2090	1080	2560	3300	3180	1360	2230	2990	1990	1360
28	896	948	2550	1090	2550	3330	2860	1390	2250	3020	1990	1390
29	872	944	3100	1080	---	3340	2580	1360	2210	3020	2000	1400
30	872	980	1900	1250	---	3340	2270	1390	2160	3020	1920	1430
31	814	---	1850	1240	---	3340	---	1360	---	2980	1840	---
TOTAL	24867	25735	66670	48650	52672	91500	110680	43990	54920	88730	85280	42520
MEAN	802	858	2151	1569	1881	2952	3689	1419	1831	2862	2751	1417
MAX	896	980	3100	2160	2560	4810	4070	2020	2250	3020	3370	1580
MIN	748	729	1170	1070	982	2330	2270	1350	1350	2420	1840	1350
AC-FT	49320	51050	132200	96500	104500	181500	219500	87250	108900	176000	169200	84340
CAL YR 1977	TOTAL	740622	MEAN	2029	MAX	11300	MIN	729	AC-FT	1469000		
WTR YR 1978	TOTAL	736214	MEAN	2017	MAX	4810	MIN	729	AC-FT	1460000		

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1961-68 available from district office in Tucson, Ariz.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	CUL- FURN, FECAL, 0.7 UM-MF (CULS./ 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
OCT												
03...	0830	752	1620	8.2	24.5	--	--	450	263	120	31	220
04...	0820	800	1750	7.8	23.5	7.4	190	--	--	--	--	--
11...	0820	800	1750	8.2	--	--	--	445	266	114	34	210
17...	0830	800	1790	7.9	25.0	--	--	445	260	114	34	215
18...	0820	764	--	--	22.5	--	--	--	--	--	--	--
25...	0830	872	1700	7.9	25.0	--	--	435	256	112	36	205
31...	0835	884	1700	7.9	--	--	--	435	260	108	40	205
NOV												
07...	0830	729	1720	7.9	--	--	--	435	253	109	40	210
08...	0830	764	1760	7.8	16.5	8.1	120	--	--	--	--	--
14...	0830	872	1730	7.9	--	--	--	435	254	111	36	210
21...	0900	932	1710	7.9	16.0	--	--	430	253	108	34	205
28...	0835	920	1690	7.9	20.0	--	--	430	253	108	34	200
DEC												
05...	0830	1920	1570	7.9	--	--	--	410	244	105	36	180
06...	0845	2000	1590	7.8	15.0	8.8	1500	--	--	--	--	--
12...	0830	2230	1510	7.9	15.0	--	--	405	242	101	37	170
19...	0830	2360	1530	8.0	15.5	--	--	405	242	103	36	175
27...	0830	2190	1690	7.9	16.5	--	--	435	253	110	34	200
JAN												
03...	0835	1520	1650	7.9	15.0	--	--	425	244	112	35	195
09...	0830	1220	1710	7.9	--	--	--	435	252	113	37	205
10...	0845	--	--	--	--	--	420	--	--	--	--	--
16...	0845	2080	1580	7.9	14.0	--	--	410	241	106	35	165
23...	0840	1520	1620	7.9	15.0	--	--	420	244	109	36	190
24...	0845	1560	--	--	15.5	--	--	--	--	--	--	--
30...	0830	1210	1720	7.9	--	--	--	425	243	113	35	210
FEB												
06...	0800	1200	1640	8.1	--	--	--	420	243	108	37	195
07...	0840	1150	1750	7.9	15.5	8.8	150	--	--	--	--	--
13...	0830	1690	1600	8.1	--	--	--	410	234	107	35	190
21...	0830	2540	1440	8.0	14.5	--	--	385	224	104	31	160
27...	0845	2560	1470	8.0	17.0	--	--	395	238	102	34	165
MAR												
06...	0835	2460	1500	8.0	16.5	--	--	405	241	102	37	170
07...	0830	2300	1580	8.0	17.0	8.1	97	--	--	--	--	--
13...	0830	2650	1460	7.9	--	--	--	340	234	98	35	165
20...	0830	2950	1370	8.0	--	--	--	375	226	100	31	150
21...	0900	2930	--	--	19.5	--	--	--	--	--	--	--
27...	0830	3270	1320	8.0	20.0	--	--	370	219	100	29	140

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

COOPERATION.--Quarterly pesticide analysis performed by Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,230 micromhos Dec. 9, 1969; minimum, 1,020 micromhos Sept. 27, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,840 micromhos Oct. 18; minimum, 1,270 micromhos Mar. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM AD- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SU4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIU2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, TOTALS (IONS PER AC-FT)
UCT											
03...	4.5	6.0	228	0	405	232	.6	14	1160	1150	1.58
04...	--	--	--	--	--	--	--	--	--	--	--
11...	4.5	6.0	218	0	400	220	.5	14	1120	1110	1.52
17...	4.4	6.0	226	0	400	228	.5	14	1130	1130	1.54
18...	--	--	--	--	--	--	--	--	--	--	--
25...	4.5	5.6	218	0	395	208	.6	12	1080	1080	1.47
31...	4.5	5.6	214	0	395	208	.5	12	1090	1080	1.48
NOV											
07...	4.4	5.7	222	0	395	212	.6	12	1100	1090	1.50
08...	--	5.7	--	--	--	--	--	--	--	--	--
14...	4.4	5.6	220	0	395	215	.6	13	1100	1100	1.50
21...	4.5	5.7	216	0	395	210	.5	13	1080	1080	1.47
28...	4.2	5.4	216	0	390	205	.5	12	1080	1070	1.47
DEC											
05...	3.9	5.4	202	0	370	185	.6	11	1010	994	1.37
06...	--	--	--	--	--	--	--	--	--	--	--
12...	3.7	5.6	198	0	355	175	.5	10	966	953	1.31
19...	3.8	5.6	198	0	360	178	.5	11	972	968	1.32
27...	4.2	5.9	222	0	385	205	.5	12	1090	1070	1.48
JAN											
03...	4.1	5.5	220	0	380	195	.5	11	1050	1040	1.43
09...	4.3	5.8	224	0	390	208	.5	11	1090	1080	1.48
10...	--	--	--	--	--	--	--	--	--	--	--
16...	4.0	5.5	206	0	375	182	.5	10	1010	1000	1.37
23...	4.0	5.7	214	0	375	190	.5	11	1030	1020	1.40
24...	--	--	--	--	--	--	--	--	--	--	--
30...	4.4	5.6	222	0	390	210	.6	11	1100	1090	1.50
FEB											
06...	4.1	5.4	216	0	380	195	.6	11	1050	1040	1.43
07...	--	--	--	--	--	--	--	--	--	--	--
13...	4.1	5.4	214	0	365	192	.5	11	1020	1010	1.39
21...	3.5	5.3	190	0	335	168	.5	11	910	910	1.24
27...	3.6	5.6	192	0	340	175	.5	12	936	930	1.27
MAR											
06...	3.7	5.6	200	0	350	175	.6	11	954	952	1.30
07...	--	--	--	--	--	--	--	--	--	--	--
13...	3.6	5.6	190	0	340	170	.5	11	924	921	1.26
20...	3.4	5.6	182	0	330	150	.4	10	870	868	1.18
21...	--	--	--	--	--	--	--	--	--	--	--
27...	3.2	5.6	184	0	320	138	.5	9.5	836	834	1.14

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	CULI- FORM, FECAL, 0.7 UM-MF (CULS./ 100 ML)	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)
APR												
03...	0820	3620	1350	8.2	--	--	--	375	219	97	32	145
10...	0830	4100	1340	8.1	--	--	--	370	216	97	31	145
11...	0830	4050	1350	7.9	18.5	8.2	250	--	--	--	--	--
17...	0830	3930	1350	8.0	--	--	--	375	221	98	32	145
24...	0830	3850	1350	7.9	20.0	--	--	375	216	98	32	145
25...	1030	3700	--	--	21.0	--	--	--	--	--	--	--
MAY												
01...	0830	1950	1420	8.1	--	--	--	390	232	102	33	155
08...	0830	1410	1510	8.0	--	--	--	405	233	103	36	170
09...	0830	1420	1500	7.9	22.0	8.1	14000	--	--	--	--	--
15...	0815	1380	1560	8.1	--	--	--	410	244	103	37	180
22...	0840	1410	1490	8.0	24.5	--	--	395	228	103	34	170
23...	0910	1400	--	--	22.5	--	--	--	--	--	--	--
30...	0830	1390	1550	7.9	23.5	--	--	410	236	103	37	180
JUN												
05...	0830	1560	1560	8.0	--	--	--	410	241	103	37	180
12...	0830	1740	1530	8.0	--	--	--	405	240	103	36	175
13...	0830	1740	1500	8.0	26.5	6.8	100	--	--	--	--	--
19...	0830	1990	1430	8.0	26.5	--	--	385	224	100	33	160
26...	0830	2120	1410	7.9	--	--	--	385	228	98	34	155
28...	0830	2260	--	--	--	--	87	--	--	--	--	--
JUL												
03...	0820	2680	1400	7.9	27.0	--	--	380	224	98	33	155
05...	0830	2660	--	--	--	--	77	--	--	--	--	--
10...	0800	2900	1400	7.9	28.0	6.6	--	380	224	97	34	155
11...	0835	--	--	--	--	--	55	--	--	--	--	--
17...	0830	2930	1380	7.9	--	--	36	375	224	94	34	150
24...	0830	2940	1350	8.0	29.0	--	--	375	226	94	34	145
25...	0820	2940	--	--	29.5	--	47	--	--	--	--	--
31...	0830	3020	1360	7.9	--	--	--	380	231	94	35	145
AUG												
02...	0830	3180	--	--	--	--	39	--	--	--	--	--
07...	0830	3300	1360	7.9	--	--	--	380	229	95	35	145
08...	0830	3190	1380	7.9	29.0	6.2	100	--	--	--	--	--
14...	0830	2930	1400	7.9	--	--	--	380	228	96	34	155
16...	0830	2880	--	--	--	--	83	--	--	--	--	--
21...	0830	2640	1490	8.0	--	--	--	395	236	99	36	170
24...	0830	2170	--	--	--	--	55	--	--	--	--	--
28...	0820	1980	1510	8.0	25.5	--	--	395	232	102	34	175
30...	0920	1880	--	--	27.0	--	100	--	--	--	--	--

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

		SODIUM AD- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CALCI- UM, BICAR- BONATE (MG/L AS HCO3)	CALCI- UM, BICAR- BONATE (MG/L AS CO3)	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)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (TONS PER AC-FT)	
APR													
03...		3.3	5.4	190	0	325	142	.5	8.8	852	850	1.16	
10...		3.3	5.4	188	0	325	140	.5	11	850	848	1.16	
11...		--	--	--	--	--	--	--	--	--	--	--	
17...		3.3	5.4	188	0	325	142	.4	8.0	854	849	1.16	
24...		3.3	5.5	192	0	325	142	.5	9.5	858	853	1.17	
25...		--	--	--	--	--	--	--	--	--	--	--	
MAY													
01...		3.4	5.6	192	0	340	155	.6	10	896	897	1.22	
08...		3.7	5.6	210	0	350	172	.5	11	954	952	1.30	
09...		--	--	--	--	--	--	--	--	--	--	--	
15...		3.9	5.6	202	0	370	182	.5	10	992	989	1.35	
22...		3.7	5.6	204	0	345	170	.6	11	946	940	1.29	
23...		--	--	--	--	--	--	--	--	--	--	--	
30...		3.9	5.6	210	0	365	180	.6	10	990	985	1.35	
JUN													
05...		3.9	5.7	206	0	365	182	.6	11	984	986	1.34	
12...		3.8	5.6	202	0	360	175	.5	11	970	967	1.32	
13...		--	--	--	--	--	--	--	--	--	--	--	
19...		3.5	5.5	196	0	345	152	.5	9.5	902	903	1.23	
26...		3.4	5.5	192	0	345	148	.6	9.0	892	891	1.21	
28...		--	--	--	--	--	--	--	--	--	--	--	
JUL													
03...		3.5	5.6	190	0	340	148	.5	9.2	886	884	1.20	
05...		--	--	--	--	--	--	--	--	--	--	--	
10...		3.5	5.6	190	0	340	148	.5	9.5	884	884	1.20	
11...		--	--	--	--	--	--	--	--	--	--	--	
17...		3.4	5.6	184	0	340	145	.6	8.5	870	869	1.18	
24...		3.3	5.5	182	0	335	138	.4	9.0	854	852	1.16	
25...		--	--	--	--	--	--	--	--	--	--	--	
31...		3.2	5.7	182	0	335	142	.6	9.8	860	858	1.17	
AUG													
02...		--	--	--	--	--	--	--	--	--	--	--	
07...		3.2	5.7	184	0	335	142	.5	10	862	860	1.17	
08...		--	--	--	--	--	--	--	--	--	--	--	
14...		3.5	5.5	186	0	340	150	.5	9.8	880	883	1.20	
16...		--	--	--	--	--	--	--	--	--	--	--	
21...		3.7	5.6	194	0	355	168	.5	10	944	941	1.28	
24...		--	--	--	--	--	--	--	--	--	--	--	
28...		3.8	5.6	198	0	360	170	.5	11	960	957	1.31	
30...		--	--	--	--	--	--	--	--	--	--	--	
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	CULI- FURM, FECAL, 0.7 UM-MF (CULS./ 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	
SEP													
05...		0900	1560	1480	8.0	28.0	--	--	390	230	98	35	170
06...		0830	1560	--	--	--	--	340	--	--	--	--	--
11...		0840	1390	1490	7.9	25.5	--	--	395	231	98	37	170
12...		0830	1400	1480	7.8	26.0	7.0	220	--	--	--	--	--
18...		0840	1380	1520	7.9	--	--	--	400	236	100	37	175
19...		0855	1360	--	--	24.5	--	170	--	--	--	--	--
25...		0840	1390	1510	8.0	25.5	--	--	395	231	98	37	175
26...		0830	1430	--	--	--	--	K3000	--	--	--	--	--

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM AD- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTIT- UENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
SEP											
05...	3.8	5.6	196	0	355	164	.5	10	938	956	1.28
06...	--	--	--	--	--	--	--	--	--	--	--
11...	3.7	5.6	200	0	355	165	.5	10	946	941	1.29
12...	--	--	--	--	--	--	--	--	--	--	--
18...	3.8	5.6	200	0	360	172	.5	11	964	961	1.31
19...	--	--	--	--	--	--	--	--	--	--	--
25...	3.8	5.6	200	0	360	168	.5	11	958	955	1.30
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOVER- ABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT												
04...	0820	.43	.51	.29	.72	.13	.10	--	--	280	--	--
16...	0820	.34	--	.57	.91	.11	--	--	--	290	--	--
NOV												
08...	0830	.36	.35	.32	.68	.13	.07	4	3	270	1	3
21...	0900	.27	--	.47	.74	.08	--	--	--	270	--	--
DEC												
06...	0845	.23	.24	.32	.55	.01	.01	--	--	240	--	--
19...	0830	.27	--	.69	.96	.04	--	--	--	230	--	--
JAN												
10...	0845	--	--	--	1.2	--	--	--	--	--	--	--
24...	0845	.18	--	.34	.52	.09	--	--	--	260	--	--
FEB												
07...	0840	.32	.31	.54	.86	.11	.07	3	3	270	2	2
21...	0830	.26	--	.49	.75	.10	--	--	--	210	--	--
MAR												
07...	0830	.25	.33	.78	1.0	.08	.01	--	--	240	--	--
21...	0900	.18	--	.82	1.0	.12	--	--	--	200	--	--
APR												
11...	0830	.12	.20	.87	.99	.07	.02	--	--	180	--	--
25...	1030	.18	--	.53	.71	.06	--	--	--	190	--	--
MAY												
09...	0830	.19	.25	.58	.77	.11	.06	4	3	230	2	2
23...	0910	.20	--	.65	.85	.07	--	--	--	260	--	--
JUN												
13...	0830	.29	.21	.70	.99	.06	.04	--	--	230	--	--
JUL												
10...	0800	.13	.15	.52	.65	.04	.01	--	--	200	--	--
24...	0830	.15	.18	.52	.67	.04	.01	--	--	200	--	--
AUG												
08...	0830	.12	.14	.33	.45	.03	.03	3	2	210	0	<1
28...	0820	.15	.22	.32	.47	.07	.03	--	--	240	--	--
SEP												
12...	0830	.25	.28	.53	.78	.09	.04	--	--	210	--	--
25...	0840	.25	.28	.45	1.2	.06	.04	--	--	240	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDO, TOTAL (UG/L)	DDO, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDO, TOTAL (UG/L)
OCT											
04...	0820	.0	--	.00	--	--	.0	--	.00	--	.00
NOV											
08...	0830	.0	--	.00	--	--	.0	--	.00	--	.00
08...	0835	ND	--	ND	--	ND	ND	--	ND	--	ND
JAN											
10...	0845	--	--	--	--	--	--	--	--	--	--
FEB											
07...	0840	.0	--	.00	--	--	.0	--	.00	--	.00
07...	0850	ND	--	ND	--	ND	ND	--	ND	--	ND
MAR											
07...	0830	.0	--	.00	--	--	.0	--	.00	--	.00
APR											
11...	0830	.0	--	.00	--	--	.0	--	.00	--	.00
MAY											
04...	0830	.0	--	.00	--	--	.0	--	.00	--	.00
09...	0835	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUL											
11...	0835	.0	--	.00	--	--	.0	--	.00	--	.00
AUG											
08...	0830	.0	--	.00	--	--	.0	--	.00	--	.00
08...	0835	ND	--	ND	--	ND	ND	--	ND	--	ND
SEP											
12...	0830	.0	--	.00	--	--	.0	--	.00	--	.00

DATE	DDO, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDO, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
OCT											
04...	--	.00	--	.00	--	.00	--	.00	--	.00	.00
NOV											
08...	--	.00	--	--	--	.00	--	.00	--	--	--
08...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
FEB											
07...	--	.00	--	.01	--	.00	--	.00	--	.00	.00
07...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
MAR											
07...	--	.00	--	.01	--	.00	--	.00	--	.00	.00
APR											
11...	--	.00	--	.00	--	.00	--	.00	--	.00	.00
MAY											
09...	--	.00	--	.00	--	.00	--	.00	--	.00	.00
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUL											
11...	--	.00	--	.00	--	.00	--	.00	--	.00	.00
AUG											
08...	--	.00	--	.00	--	.00	--	.00	--	.00	.00
08...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
SEP											
12...	--	.00	--	.00	--	.00	--	.00	--	.00	.00

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ETHION, TOTAL IN BOT- TUM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TUM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TUM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TUT. IN BOT- TUM TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TUT. IN BOT- TUM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TUM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TUM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TUM MA- TERIAL (UG/L)	MALA- THION, TOTAL IN BOT- TUM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
OCT 04...	--	.00	--	.00	--	.00	--	.00	--	.00
NOV 08...	--	.00	--	.00	--	.00	--	--	--	--
08...	--	ND	--	ND	--	ND	--	ND	--	ND
JAN 10...	--	--	--	--	--	--	--	--	--	--
FEB 07...	--	.00	--	.00	--	.00	--	.00	--	.00
07...	--	ND	--	ND	--	ND	--	ND	--	ND
MAR 07...	--	.00	--	.00	--	.00	--	.00	--	.00
APR 11...	--	.00	--	.00	--	.00	--	.00	--	.00
MAY 09...	--	.00	--	.00	--	.00	--	.00	--	.00
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUL 11...	--	.00	--	.00	--	.00	--	.00	--	.00
AUG 08...	--	.00	--	.00	--	.00	--	.00	--	.00
08...	--	ND	--	ND	--	ND	--	ND	--	ND
SEP 12...	--	.00	--	.00	--	.00	--	.00	--	.00

DATE	METHYL PARA- THION, TUT. IN BOT- TUM MATL. (UG/KG)	METHYL THI- ON, TUT. IN BOT- TUM MATL. (UG/L)	METHYL THI- ON, TUT. IN BOT- TUM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 04...	--	.00	--	.00	--	.00	--	.15	.00	.00
NOV 08...	--	--	--	--	--	--	--	.00	.00	.00
08...	--	ND	--	ND	--	ND	--	ND	ND	ND
JAN 10...	--	--	--	--	--	--	--	.00	.00	.00
FEB 07...	--	.00	--	.00	--	.00	--	.01	.00	.00
07...	--	ND	--	ND	--	ND	--	ND	ND	ND
MAR 07...	--	.00	--	.00	--	.00	--	.00	.00	.00
APR 11...	--	.00	--	.00	--	.00	--	.00	.00	.00
MAY 09...	--	.00	--	.00	--	.00	--	.00	.00	.00
09...	ND	ND	ND	ND	ND	ND	ND	--	--	--
JUL 11...	--	.00	--	.00	--	.00	--	.00	.00	.00
AUG 08...	--	.00	--	.00	--	.00	--	--	--	--
08...	--	ND	--	ND	--	ND	--	--	--	--
SEP 12...	--	.00	--	.00	--	.00	--	.00	.00	.00

COLORADO RIVER MAIN STEM

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09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEg. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
UNCE-DAILY

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	1710	1680	1600	1670	1600	1340	1420	1550	1420	1370	1580
2	1800	1730	1650	1500	1510	1330	1350	1440	1570	1430	1360	1580
3	1820	1730	1650	1650	1650	1270	1350	1470	1570	1400	1370	1570
4	1770	1690	1560	1740	1610	1410	1340	1450	1580	1390	1360	1530
5	1790	1670	1570	1750	1630	1450	1350	1460	1560	1390	1360	1480
6	1780	1680	1520	1660	1640	1500	1310	1460	1550	1390	1370	1450
7	1770	1720	1490	1670	1680	1540	1340	1480	1520	1370	1360	1470
8	1780	1720	1470	1720	1690	1540	1330	1510	1510	1410	1370	1470
9	1760	1730	1470	1710	1740	1540	1370	1490	1490	1400	1360	1470
10	1750	1770	1470	1720	1660	1520	1340	1460	1560	1400	1370	1470
11	1750	1780	1490	1570	1630	1500	1330	1460	1550	1360	1350	1490
12	1790	1750	1510	1650	1620	1490	1330	1490	1530	1360	1360	1460
13	1760	1750	1490	1600	1600	1460	1320	1560	1520	1360	1380	1470
14	1780	1730	1490	1600	1570	1440	1330	1540	1470	1360	1400	1470
15	1780	1740	1490	1590	1520	1430	1350	1560	1450	1380	1390	1450
16	1780	1700	1500	1580	1490	1420	1390	1540	1470	1400	1400	1490
17	1790	1680	1480	1570	1540	1370	1350	1510	1460	1380	1380	1480
18	1840	1670	1480	1600	1470	1390	1350	1480	1480	1380	1410	1520
19	1770	1660	1530	1600	1510	1400	1360	1470	1430	1370	1450	1500
20	1760	1650	1500	1620	1520	1370	1360	1480	1430	1370	1450	1480
21	1770	1710	1490	1610	1440	1360	1350	1490	1400	1370	1490	1510
22	1710	1730	1490	1610	1460	1360	1350	1490	1400	1370	1470	1500
23	1720	1710	1490	1620	1470	1370	1370	1510	1370	1380	1450	1530
24	1690	1670	1520	1620	1470	1360	1350	1530	1410	1350	1460	1530
25	1700	1680	1580	1720	1490	1380	1370	1520	1450	1370	1490	1510
26	1660	1670	1610	1720	1490	1360	1400	1530	1410	1360	1510	1470
27	1640	1640	1690	1760	1470	1320	1420	1560	1390	1370	1530	1430
28	1670	1690	1620	1750	1460	1330	1460	1550	1360	1360	1510	1430
29	1680	1690	1400	1740	---	1330	1470	1580	1390	1390	1500	1420
30	1700	1700	1490	1720	---	1320	1430	1550	1400	1420	1490	1420
31	1700	---	1520	1770	---	1320	---	1540	---	1360	1500	---
MEAN	1750	1710	1530	1660	1560	1410	1360	1500	1470	1380	1420	1490
WTR YR 1978	MEAN	1520		MAX	1840		MIN	1270				

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

				PHYTU- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M				
DATE	TIME									
NOV										
08...	0830			2400	9.53	7.64				
FEB										
07...	0840			5200	--	--				
MAY										
09...	0830			5300	32.3	29.3				
JUN										
13...	0830			980	--	--				
JUL										
11...	0835			4200	--	--				
AUG										
08...	0830			2100	60.0	54.9				
SEP										
12...	0830			3900	--	--				
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 NATURAL DIS- SOLVED (UG/L AS U)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
NOV										
08...	0830	<12	<.4	6.2	.8	5.8	.9	.09	3.6	--
MAY										
09...	0830	<12	.9	11	1.1	9.7	1.1	.14	--	5.2

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 8,77 0830	FEB 7,78 0840	MAY 9,78 0830	JUN 13,78 0830
TOTAL CELLS/ML	2400	5200	5300	980
DIVERSITY: DIVISION	1.8	0.3	1.4	1.5
..CLASS	1.8	0.3	1.4	1.5
..ORDER	2.5	0.4	2.0	1.9
...FAMILY	3.2	0.5	2.2	2.3
....GENUS	0.0	0.9	2.2	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICHACTINIACEAE								
...GOLENKINIA	--	-	45	1	--	-	--	-
...DUCYSTACEAE								
....ANKISTRODESUS	72	3	--	-	--	-	15	1
...CHODATELLA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	*	0	--	-	--	-	--	-
...FRANCEIA	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	24	1	--	-	--	-	--	-
...UOCYSTIS	95	4	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	160#	18
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	--	-
...SCENEDESMUS	170	7	45	1	880#	17	--	-
...TETRASPORALES								
...PALMELLACEAE								
...BLUEUCYSTIS	--	-	--	-	--	-	--	-
...VULVOCALLES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	72	3	90	2	--	-	--	-
...ZYGNEMATALES								
...DESMIDIACEAE								
...COSMARIUM	--	-	--	-	--	-	--	-
...STAUSTRUM	--	-	--	-	34	1	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
..PENNALLES								
...NAVICULACEAE								
...ENTOMONEIS	--	-	--	-	--	-	--	-
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTETRA	160	6	4300#	83	2200#	42	120	12
...MELOSIRA	520#	22	540	10	--	-	15	1
...STEPHANODISCUS	--	-	--	-	34	1	--	-
..PENNALLES								
...ACHNANTHACEAE								

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

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

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 8,77 0830		FEB 7,78 0840		MAY 9,78 0830		JUN 13,78 0830	
	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
ORGANISM								
CHRYSTOPHYTA								
.BACILLARIOPHYCEAE								
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	15	1
...CYMBELLACEAE								
....AMPHURA	*	0	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	24	1	--	-	--	-	--	-
...FRAGILARIACEAE								
....SYNEURA	120	5	--	-	440	8	29	3
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....DIPLONEIS	--	-	--	-	--	-	15	1
....NAVICULA	110	4	--	-	270	5	59	6
...PINNULARIA	--	-	--	-	--	-	--	-
...NITZSCHACEAE								
....NITZSCHIA	110	4	90	2	100	2	160#	16
.CHRYSTOPHYCEAE								
..CHRYSDOMONADALES								
...UNKNOWN 216020106005000	--	-	--	-	--	-	--	-
.XANTHOPHYCEAE								
..HETEROCOCCALES								
...CHLOROTHECIACEAE								
....UPHUCYTUM	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROMONAS	--	-	--	-	34	1	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	24	1	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	140	6	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	520#	22	--	-	1300#	24	380#	39
...CHROOCOCCALES								
...UNKNOWN 218010101021000	130	5	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	72	3	--	-	--	-	--	-
....PHACUS	*	0	--	-	--	-	--	-
....TRACHELUMONAS	24	1	45	1	--	-	--	-

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

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

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 11, 78 0835	AUG 8, 78 0830	SEP 12, 78 0830
TOTAL CELLS/ML	4200	2100	3900
DIVERSITY: DIVISION	1.2	1.6	1.0
..CLASS	1.2	1.6	1.2
...ORDER	1.9	2.1	2.1
...FAMILY	2.3	3.1	2.7
...GENUS	0.0	0.0	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOKOPHYCEAE						
...CHLOROCOCCEAE						
...COELASTRACEAE						
...COELASTRUM	270	6	180	9	--	-
...MICRACITINIACEAE						
...GULENKINIA	--	-	44	2	--	-
...UOCYSTACEAE						
...ANKISTRUDESMUS	--	-	22	1	29	1
...CHOUATELLA	22	1	44	2	29	1
...DICTYUSPHAENIUM	--	-	--	-	120	3
...FRANCEIA	--	-	--	-	59	2
...KIRCHNERIELLA	22	1	--	-	--	-
...UOCYSTIS	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-
...SCENEDESMACEAE						
...ACTINASTRUM	--	-	180	9	--	-
...SCENEDESMUS	490	12	89	4	590#	15
...TETRASPORALES						
...PALMELLACEAE						
...GLOEOCYSTIS	--	-	--	-	120	3
...VULVOCALES						
...CHLAMYDOMONADACEAE						
...CARTEKIA	--	-	44	2	29	1
...CHLAMYDOMUNAS	--	-	44	2	29	1
...ZYGNEATALES						
...UESMIDIACEAE						
...CUSMARIUM	22	1	--	-	--	-
...STAUSTRUM	--	-	--	-	--	-
CHRYSPHYTA						
..BACILLARIOPHYCEAE						
..PENNALES						
...NAVICULACEAE						
...ENTUMNEIS	--	-	--	-	88	2
..CENTRALES						
...COSCINODISCEAE						
...CYCLOTELLA	44	1	130	6	1700#	42
...MELUSIRA	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						

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

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

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 11,78 0835		AUG 8,78 0830		SEP 12,78 0830	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	88	2
....CUCULONEIS	22	1	44	2	29	1
...CYMBELLACEAE						
....AMPHOKA	--	-	44	2	59	2
....CYMBELLA	22	1	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	22	1	--	-
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	29	1
...GOMPHONEMACEAE						
....GOMPHONEMA	--	-	22	1	--	-
...NAVICULACEAE						
....DIPLONEIS	--	-	--	-	--	-
....NAVICULA	130	3	130	6	350	9
...PINNULARIA	--	-	22	1	--	-
...NITZSCHACEAE						
....NITZSCHIA	220	5	220	11	350	9
...CHRYSOPHYCEAE						
..CHRYSUMONADALES						
...UNKNOWN 216020106005000	--	-	--	-	88	2
...XANTHOPHYCEAE						
..ETEROCUCCALES						
...CHLOROTHECIACEAE						
...OPHIOCYTIUM	--	-	--	-	29	1
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
....CHRUOMONAS	--	-	--	-	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	2000# 47		730# 35		150	4
...CHROOCOCCALES						
...UNKNOWN 216010101021000	930# 22		44	2	--	-
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
...PHACUS	--	-	--	-	--	-
....TRACHELUMONAS	44	1	--	-	--	-

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

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

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, AZ-CA

LOCATION.--Lat 32°52'34", long 114°27'18", in SE&SW¼ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic 15030107, on right bank 3,200 ft (975 m) downstream from intake at east end of Imperial Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 160.00 ft (48.768 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those below 100 ft³/s (2.8 m³/s), which are fair. Gila Gravity Main Canal diverts water from Colorado River at left end of Imperial Dam for irrigation of lands in the Gila Project area in Arizona. Diversions to this canal began Aug. 17, 1943. Diversions to North Gila Valley from this canal began Dec. 16, 1954. During the 1977 calendar year, water was used for irrigation of 97,534 acres (395 km²) divided as follows: North and South Gila Valleys, 15,814 acres (64.0 km²); Mesa Unit, 17,797 acres (72.0 km²); Wellton-Mohawk Division, 60,622 acres (245 km²); Yuma Mesa Auxiliary Division, 3,301 acres (13.4 km²).

AVERAGE DISCHARGE.--19 years (water years 1960-78), 1,205 ft³/s (34.13 m³/s), 873,000 acre-ft/yr (1,080 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,240 ft³/s (63.4 m³/s) May 25, 1965; no flow at canal intake at times in several years when intake gates were closed.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	676	804	0	17	420	664	1170	1570	1790	1480	1900	1570
2	721	711	189	185	433	641	757	1630	1690	1080	1880	1360
3	1080	837	886	273	323	358	1430	1660	1430	1790	1930	1090
4	1130	871	415	179	216	234	1200	1420	1010	1750	1880	1310
5	1340	665	573	200	232	335	1260	1400	1630	1860	1830	1640
6	983	523	556	259	994	719	1230	972	1610	2020	1480	1620
7	865	858	635	310	860	811	1220	834	1720	1940	1710	1580
8	410	943	567	200	892	1000	721	1370	1710	1980	1880	1460
9	274	977	499	464	868	928	535	1640	1840	1640	1900	1140
10	1010	785	388	352	872	1170	1320	1600	1870	1640	1930	1030
11	844	593	546	50	548	799	1310	1680	1470	1870	1890	1580
12	922	727	1030	13	339	668	1510	1450	1660	1860	1550	1610
13	930	690	1020	37	798	1140	1580	1360	1930	1840	1300	1620
14	949	1000	917	59	908	1270	1620	945	1910	1870	1820	1410
15	773	944	882	45	933	1500	1160	1490	1830	1570	1840	1460
16	634	1140	668	41	859	1180	1060	1520	1680	1350	1840	1130
17	937	1260	601	89	619	1140	1410	1440	1330	1890	1850	961
18	1070	1060	510	132	399	860	1650	1290	1340	2010	1700	1350
19	1060	871	788	141	344	627	1920	1510	1690	2060	1390	1370
20	989	771	1060	177	998	1530	1700	1440	1880	2110	891	1460
21	798	1430	1200	109	1060	1630	1570	1050	1930	2010	1400	1530
22	574	1660	760	183	1300	1680	986	1570	2040	1890	1550	1440
23	414	1330	434	199	1390	1520	658	1850	1980	1640	1570	1170
24	1000	1050	60	297	1210	910	1270	1690	1910	1880	1370	711
25	1020	806	33	291	925	520	1390	1630	1390	1930	1570	1080
26	875	39	152	129	668	384	1840	1700	2070	1870	1190	1290
27	945	4.8	325	181	1180	1310	1470	1180	2170	1620	683	1320
28	717	0	314	113	1120	1440	1610	875	2030	1730	1540	1200
29	606	0	312	193	---	1540	1090	1500	2000	1430	1700	1340
30	465	0	152	414	---	1610	872	1740	1800	1180	1680	990
31	746	---	34	177	---	1400	---	1920	---	1790	1580	---
TOTAL	25757	23349.8	16506	5509	21708	31518	38519	44926	52340	54580	50224	39822
MEAN	831	778	532	178	775	1017	1284	1449	1745	1761	1620	1327
MAX	1340	1660	1200	464	1390	1680	1920	1920	2170	2110	1930	1640
MIN	274	0	0	13	216	234	535	834	1010	1080	683	711
AC-FT	51090	46310	32740	10930	43060	62520	76400	89110	103800	108300	99620	78990
CAL YR 1977	TOTAL	406283.8	MEAN	1113	MAX	2130	MIN	0	AC-FT	805900		
WTR YR 1978	TOTAL	404758.8	MEAN	1109	MAX	2170	MIN	0	AC-FT	802800		

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, AZ-CA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1956 to current year

INSTRUMENTATION.--Water temperature recorder since January 1956.

REMARKS.--Temperature probe above water surface Nov. 26 to Dec. 2. Unpublished chemical analyses (partial record) for water years 1965-67 available from district office in Tucson, Ariz. No flow Nov. 27 thru Dec. 1.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 33.0°C Aug. 29-31, 1970; minimum, 7.0°C Jan. 13-17, 1964, Jan. 4-7, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.0°C Sept. 3, 4, 5; minimum, 10.5°C Dec. 21, 22, 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 26...	1120	828	1310	8.0	22.5	370	220	92	34	140	3.2	5.3
JAN 18...	1040	82	1530	8.0	14.0	400	250	100	37	100	3.9	5.5
MAY 10...	1030	1600	1240	8.0	23.0	370	220	92	34	130	2.9	5.3
JUL 12...	1040	1830	1250	7.9	27.5	350	220	89	32	130	3.0	5.1

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NIRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	BURON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS Fe)
OCT 26...	180	0	340	130	.5	10	865	841	1.16	.06	190	10
JAN 18...	190	0	380	170	.6	13	1020	981	1.39	.28	230	10
MAY 10...	180	0	310	120	.4	9.1	823	790	1.12	.13	180	0
JUL 12...	160	0	330	130	.4	9.6	806	806	1.10	.09	170	10

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM
09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, AZ-CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	26.0	25.0	20.5	20.5	---	---	14.5	14.5	15.5	14.5	16.5	16.0
2	25.5	25.0	20.5	20.0	15.0	15.0	14.5	14.5	16.0	15.5	16.0	16.0
3	25.0	24.5	20.0	19.5	15.0	14.5	14.5	14.0	16.0	16.0	16.0	16.0
4	24.5	24.5	19.5	19.5	14.5	14.5	14.0	13.5	16.0	16.0	16.5	16.0
5	25.0	24.5	19.5	19.5	14.5	14.5	14.0	13.5	16.0	16.0	16.5	16.5
6	25.0	25.0	19.5	19.5	14.5	14.5	14.0	13.5	16.0	16.0	17.0	16.5
7	25.0	24.5	19.5	18.5	14.5	14.5	14.0	14.0	16.5	16.0	18.0	17.0
8	25.5	25.0	18.5	18.0	15.0	14.5	14.0	14.0	16.5	16.5	18.5	18.0
9	25.5	25.5	18.0	16.5	15.0	15.0	14.0	14.0	17.0	16.5	18.5	18.5
10	26.0	25.5	16.5	16.5	15.0	15.0	14.0	13.5	17.0	16.5	18.5	18.0
11	26.0	26.0	16.5	16.0	15.0	15.0	13.5	13.0	17.0	16.5	18.0	18.0
12	26.0	25.0	16.0	16.0	15.0	15.0	13.5	13.0	16.5	15.5	18.0	17.0
13	25.0	24.5	16.0	16.0	15.0	14.5	14.0	13.5	15.5	15.5	17.0	16.5
14	24.5	24.0	16.0	16.0	14.5	14.0	14.0	14.0	15.5	15.0	17.0	16.5
15	24.0	24.0	16.0	16.0	14.0	14.0	14.0	14.0	15.0	15.0	17.5	17.0
16	24.0	24.0	16.5	16.0	14.0	14.0	14.0	14.0	15.0	15.0	18.0	17.5
17	24.0	24.0	16.5	16.5	14.0	13.5	14.0	14.0	15.0	14.5	18.0	18.0
18	24.0	24.0	16.5	16.5	13.5	13.0	14.5	14.0	14.5	14.5	18.0	18.0
19	24.0	24.0	16.5	16.5	13.0	12.0	14.5	14.5	14.5	14.5	18.5	18.0
20	24.0	24.0	16.5	16.0	12.0	11.0	14.5	14.5	15.0	14.5	18.5	18.5
21	24.0	23.0	16.0	15.5	11.0	10.5	15.0	14.5	15.0	14.5	19.5	18.5
22	23.0	23.0	15.5	15.0	11.0	10.5	15.0	14.5	15.5	15.0	20.0	19.5
23	23.0	23.0	15.0	14.5	11.0	10.5	14.5	14.5	16.0	15.5	19.5	19.5
24	23.0	23.0	14.5	14.5	12.0	11.0	14.5	14.0	16.0	16.0	19.5	19.5
25	23.0	23.0	14.5	14.5	12.0	12.0	14.0	13.5	16.5	16.0	19.5	19.5
26	23.0	23.0	14.5	14.5	13.0	12.0	13.5	13.0	16.5	16.5	20.0	19.5
27	23.0	23.0	---	---	14.0	13.5	13.0	13.0	16.5	16.5	19.5	19.5
28	23.0	22.0	---	---	14.5	14.0	13.0	13.0	16.5	16.5	19.5	19.5
29	22.0	22.0	---	---	15.0	14.5	13.0	13.0	---	---	20.0	19.5
30	22.0	22.0	---	---	15.5	15.0	13.5	13.0	---	---	19.5	19.0
31	22.0	21.0	---	---	15.0	15.0	14.0	13.5	---	---	19.0	19.0
MONTH	26.0	21.0	20.5	14.5	15.5	10.5	15.0	13.0	17.0	14.5	20.0	16.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09523000 ALL-AMERICAN CANAL NEAR IMPERIAL DAM, AZ-CA

LOCATION.--Lat 32°52'17", long 114°28'47", in SE¼NW¼ sec.17, T.15 S., R.24 E., San Bernardino meridian, in California, Imperial County, Hydrologic Unit 15030107, on left bank 6,000 ft (1,829 m) downstream from intake at west end of Imperial Dam and 13.7 mi (22.0 km) upstream from turnout to Yuma Main Canal.

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1939 monthly discharge only, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft (45.720 m) National Geodetic Vertical Datum of 1929 (subject to undetermined changes caused by earthquake of May 18, 1940). Since Aug. 21, 1952, auxiliary water-stage recorder 18.5 mi (29.8 km) downstream from base gage.

REMARKS.--Records excellent. All-American Canal diverts water from Colorado River at Imperial Dam. Water is used for power development and for irrigation in Yuma, Coachella, and Imperial Valleys. Water can be released back to the river through Pilot Knob powerplant and wasteway for power, regulatory purposes, or for downstream use in Mexico. First diversion to All-American Canal began October 1938, but prior to October 1940 was used only for priming canal.

COOPERATION.--Daily discharge figures furnished by Imperial Irrigation District (discharge figures reviewed in accordance with Geological Survey standard practice).

AVERAGE DISCHARGE.--37 years (water years 1942-78), 6,902 ft³/s (195.5 m³/s), 5,000,000 acre-ft/yr (6,160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 13,500 ft³/s (382 m³/s), Apr. 16, 1958; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4710	3960	3720	1710	1670	4460	10100	8460	7320	8930	9240	6670
2	4770	3960	3880	1120	1890	3740	9660	8240	7710	8750	9490	6490
3	4730	3750	4080	1300	2220	3580	9620	7580	7270	8730	9330	6220
4	4770	3800	4160	1260	2200	3550	9790	7350	6400	8860	9360	5880
5	5020	3610	4510	1120	1970	3700	10200	6780	6510	9270	9310	5720
6	4940	3310	4670	1260	2410	3820	10200	6330	6760	9670	9310	5980
7	3930	3340	4820	1330	2830	4180	9930	5710	6990	9710	9570	6120
8	3890	3580	4690	1230	2950	4910	9690	6320	7600	9480	9760	6370
9	3660	3880	4760	1260	3840	5720	9270	6710	7410	9080	9900	6420
10	3670	4080	4560	1000	4200	6260	9720	7150	7170	9280	9740	6420
11	3880	3790	4370	796	3570	6900	10100	7110	6770	9810	9690	6750
12	3710	3300	4460	728	3850	6760	10300	6590	7100	9980	9700	6790
13	3690	3210	4660	849	4360	6840	10100	6380	7530	9910	9360	6930
14	3530	3480	4680	997	5170	7680	10100	6380	7690	9610	9120	6820
15	3580	3830	4890	1130	5530	8110	9970	6640	7710	9370	9260	6260
16	3410	3820	4860	930	5580	8600	9770	7240	7670	9210	9150	6400
17	3690	3780	4830	1110	6110	8920	10100	7420	7760	9410	9250	5890
18	4220	3440	4750	975	6540	9200	10300	7840	7440	9510	8960	5690
19	4510	3320	5030	1110	6360	9070	10800	7800	7730	9780	8690	5910
20	4340	2970	5130	1110	7140	9330	11000	7670	8160	9530	8240	6020
21	4270	3460	5170	1140	7390	9500	11100	7420	8740	9190	8310	6270
22	4520	3760	5170	1110	7440	9600	10600	7650	9200	9770	8250	6220
23	4450	3700	4390	1110	7920	9760	10100	7710	9060	9630	8380	6290
24	4150	3310	3360	1460	7620	9500	10400	7200	8720	9480	8240	5880
25	4330	3130	3330	1700	7490	8970	10600	6610	8280	9490	7950	5770
26	4520	3270	3420	2020	6900	8080	10500	6210	8160	9640	7870	6120
27	4540	3180	3080	2290	7270	7830	10200	5880	8510	9100	7730	6350
28	4110	3590	2870	2620	6290	9260	9670	5830	8920	8990	7530	6670
29	4290	3450	2530	2360	---	9780	9220	6310	8660	9250	7650	6400
30	4000	3590	1950	2680	---	9800	8840	6710	8720	8830	7660	6180
31	3940	---	1920	1990	---	10100	---	7090	---	8960	7550	---
TOTAL	129770	106650	128700	42805	138710	227510	301950	216320	233670	290210	273550	187900
MEAN	4186	3555	4152	1381	4954	7339	10070	6978	7789	9362	8824	6263
MAX	5020	4080	5170	2680	7920	10100	11100	8460	9200	9980	9900	6930
MIN	3410	2970	1920	728	1670	3550	8840	5710	6400	8730	7530	5690
AC-FT	257400	211500	255300	84900	275100	451300	598900	429100	463500	575600	542600	372700
WTR YR 1978	TOTAL	2277745	MEAN	6240	MAX	11100	MIN	728	AC-FT	4518000		

09527000 PILOT KNOB POWERPLANT AND WASTEWAY NEAR PILOT KNOB, CA

LOCATION.--Lat 32°44'15", long 114°42'56", in NW¼SW¼ sec.25, T.16 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 2 mi (3 km) east of summit of Pilot Knob, 6 mi (10 km) west of Yuma, Ariz., and 20.8 mi (33.5 km) downstream from intake of All-American Canal at Imperial Dam.

PERIOD OF RECORD.--February 1939 to current year. Prior to October 1943 monthly discharge only, published in WSP 1313. Prior to October 1956, published as Pilot Knob wasteway near Pilot Knob.

GAGE.--Totalizing flowmeter on each turbine. In addition, water-stage recorder in forebay on right bank of All-American Canal (also used as auxiliary gage for sta 09527500); tailrace gage with remote recorder logged hourly in control house; calibrated wicket gates for turbine flow and calibrated bypass gates for wasteway flow which are logged for each change. Datum of forebay staff gage is 150.00 ft (45.720 m); that of tailrace staff gage is 0.00 ft (0.000 m); elevation of sill of bypass gates is 147.88 ft (45.074 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent above 1,200 ft³/s (34.0 m³/s) and good below. Daily discharge computed from flowmeter equipment or from head and gate openings on wicket gates. Records show water released through Pilot Knob powerplant and wasteway from All-America Canal and returned to Colorado River through Rockwood gates. Pilot Knob wasteway completed in summer of 1938 and first flow occurred Feb. 5, 1939. Pilot Knob powerplant was completed in January 1957 and first flow occurred Jan. 14, 1957. See table below for monthly return flow by Pilot Knob wasteway only.

COOPERATION.--Midnight readings of flowmeter, recorder graph of forebay, and record of tailrace elevation and gate openings furnished by Imperial Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,350 ft³/s (236 m³/s) Jan. 26, 1958; no flow for long periods.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	963	0	1850	2600	1460	0	1350	2320	0
2			39	0	0	1950	2630	1100	0	1870	2380	0
3			1060	0	0	1750	2830	0	0	2050	2590	0
4			1310	0	0	1590	2840	0	0	2080	2680	0
5			1330	0	0	1750	2920	0	0	2090	2670	0
6			1420	0	0	1600	3000	0	0	2260	2660	0
7			1380	0	0	1420	2970	0	0	2310	2580	0
8			1400	0	0	1420	3120	0	1030	2190	2490	0
9			1480	0	0	1540	3110	0	1140	1940	2500	0
10			1480	0	0	1650	3240	0	1110	2010	2520	0
11			1630	0	0	1930	3280	0	1060	2230	2510	33
12			1580	0	43	1880	3010	0	1100	2280	2490	0
13			1500	0	1030	2000	3040	0	1140	2340	2500	0
14			1470	0	1390	2040	3130	0	1270	2300	2230	0
15			1560	0	1490	1960	3240	0	1240	2350	2280	0
16			1620	0	1520	1870	3240	0	1220	2280	2240	0
17			1580	0	1660	1890	3260	0	1330	2310	2160	0
18			1650	0	1760	1900	3220	0	1320	2320	2100	0
19			1680	0	1750	1940	3220	0	1410	2250	2000	0
20			1670	0	1880	2210	3180	0	1400	2310	1930	0
21			1640	0	1870	2180	3220	0	1380	2350	1930	0
22			1650	0	1860	2170	3240	0	1460	2380	1740	0
23			1600	0	1890	2370	3290	0	1480	2320	1590	0
24			1590	0	1700	2430	3260	0	1490	2350	1500	0
25			1480	0	1760	2510	3060	0	1550	2350	1450	0
26			1490	0	1810	2560	2810	0	1560	2310	1370	0
27			1500	0	1910	1830	2600	0	1700	2390	1360	0
28			1500	0	1870	2420	2290	0	1720	2420	1400	0
29			1300	0	---	2550	1940	0	1650	2390	1380	0
30			1070	0	---	2360	1660	0	1530	2350	1300	0
31		---	1150	0	---	2410	---	0	---	2040	1010	---
TOTAL	0	0	42809	963	27193	61930	88450	2560	31290	68770	63860	33
MEAN	0	0	1381	31.1	971	1998	2948	82.6	1043	2218	2060	1.10
MAX	0	0	1680	963	1910	2560	3290	1460	1720	2420	2680	33
MIN	0	0	0	0	0	1420	1660	0	0	1350	1010	0
AC-FT	0	0	84910	1910	53940	122800	175400	5080	62060	136400	126700	65

WTR YR 1978 TOTAL 387858 MEAN 1063 MAX 3290 MIN 0 AC-FT 769300

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09527500 ALL-AMERICAN CANAL BELOW PILOT KNOB WASTEWAY, CA

LOCATION.--Lat 32°44'07", long 114°43'23", in NW¼SE¼ sec.26, T.16 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, on left bank 0.4 mi (0.6 km) downstream from Pilot Knob wasteway, 6 mi (10 km) west of Yuma, Ariz., 15 mi (24 km) upstream from turnout to Coachella Canal, and 21.2 mi (34.1 km) downstream from intake at Imperial Dam.

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

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft (45.720 m) National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder on right bank 0.4 mi (0.6 km) upstream used to determine head on Pilot Knob check gates (also used as forebay gage for sta 09527000, Pilot Knob powerplant and wasteway). Datum of auxiliary gage is 150.00 ft (45.720 m) NGVD.

REMARKS.--Records excellent. Water is used for power development at three sites below station, and for irrigation in Coachella and Imperial Valleys.

COOPERATION.--Gage-height record and log of gate operation furnished by Imperial Irrigation District.

AVERAGE DISCHARGE.--17 years, 4,697 ft³/s (133.0 m³/s), 3,403,000 acre-ft/yr (4,200 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,610 ft³/s (216 m³/s) April 27, 28, 1976; no flow Jan. 4, 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4090	3250	2730	709	1400	2180	6660	6440	5770	6530	5940	5330
2	4090	3210	2730	789	1510	1420	6400	6560	5970	6130	6040	5230
3	4040	3240	2580	996	1730	1380	6330	6460	5780	5960	5860	5010
4	4090	3270	2550	1010	1810	1560	6320	6380	5300	5980	5920	4890
5	4230	3120	2760	1010	1620	1550	6590	5900	5320	6260	5940	4830
6	4240	2910	2810	1020	1860	1810	6420	5660	5480	6370	6010	4980
7	3430	3080	2970	1140	2190	2370	6120	5140	5530	6400	6170	5050
8	3420	3320	2680	1060	2120	3000	5920	5390	5390	6360	6260	5200
9	3210	3450	2710	1070	2510	3320	5600	5600	5100	6380	6390	5320
10	3190	3350	2620	986	2660	3680	5780	6050	4900	6340	6290	5450
11	3290	3100	2340	794	2230	4070	5960	6070	4620	6500	6240	5700
12	3100	2740	2470	647	2600	4140	6260	5650	4980	6560	6360	5770
13	3120	2740	2660	753	2680	4290	6120	5280	5350	6490	6280	5810
14	2960	2900	2670	897	3160	4920	6050	5300	5230	6270	6360	5660
15	2940	3130	2690	872	3330	5320	6040	5370	5310	6130	6460	5290
16	2810	3140	2700	846	3270	5900	6040	5720	5370	6170	6360	5430
17	2920	3080	2490	872	3680	6180	6440	5970	5420	6270	6240	5030
18	3250	2890	1470	875	4070	6440	6530	6440	5440	6280	6070	4940
19	3500	2740	885	980	4070	6580	6900	6560	5600	6480	6050	4980
20	3380	2600	1060	990	4580	6600	6890	6520	5830	6150	5930	5120
21	3460	2900	1250	1090	4780	6690	6980	6370	6260	5800	5950	5300
22	3720	3010	1460	1070	4770	6800	6700	6420	6460	6350	6030	5270
23	3710	3000	1310	1010	4990	6710	6300	6410	6340	6400	6270	5140
24	3490	2770	1190	1230	4980	6390	6530	5900	6100	6160	6080	4880
25	3580	2640	1570	1440	4820	5900	6700	5490	5740	6140	5810	4880
26	3690	2770	1740	1710	4340	5150	6730	5190	5620	6250	5880	5100
27	3590	2780	1330	1900	4720	5330	6730	4890	5750	5750	5840	5290
28	3330	2930	1070	2310	4080	5920	6780	4910	6040	5700	5700	5680
29	3470	2730	987	2080	---	6150	6780	5210	5990	5940	5740	5510
30	3310	2800	738	2260	---	6330	6710	5420	6130	5730	5810	5280
31	3300	---	675	1570	---	6560	---	5620	---	5980	5840	---
TOTAL	107950	89590	61895	35986	90560	144640	192310	180290	168120	192210	188120	157350
MEAN	3482	2986	1997	1161	3234	4666	6410	5816	5604	6200	6068	5245
MAX	4240	3450	2970	2310	4990	6800	6980	6560	6460	6560	6460	5810
MIN	2810	2600	675	647	1400	1380	5600	4890	4620	5700	5700	4830
AC-FT	214100	177700	122800	71380	179600	286900	381400	357600	333500	381200	373100	312100
WTR YR 1978	TOTAL	1609021	MEAN	4408	MAX	6980	MIN	647	AC-FT	3191000		

09527600 ALL-AMERICAN CANAL BELOW DROP 1, NEAR CALEXICO, CA

LOCATION.--Lat 32°42'19", long 114°58'01", in SE¼NE¼NE¼ sec.1, T.16 S., R.19 E., Imperial County, on right bank of canal, 30 mi (48 km) east of Calexico, and 1.5 mi (2.4 km) below Drop 1 and the diversion to Coachella Canal.

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1977 to current year.

COOPERATION.--Discharge records were furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT 20...	1430	2990	1250	7.6	24.0	360	91	33	160	49	3.7
NOV 08...	1500	2900	1240	8.4	18.5	410	100	38	150	44	3.2
DEC 13...	1540	2200	1200	8.1	15.0	360	82	37	150	47	3.5
JAN 25...	1310	1200	1590	7.9	13.5	410	100	38	180	49	3.9
FEB 27...	1315	4150	1100	8.0	16.0	350	86	32	120	43	2.8
MAR 22...	1245	5600	1200	7.9	19.5	360	91	32	120	42	2.8
APR 27...	0900	5500	1250	8.3	22.0	370	94	34	130	43	2.9
MAY 23...	1245	5100	1350	8.3	25.0	370	92	34	140	45	3.2
JUN 21...	0915	4700	1280	7.9	28.0	370	--	33	140	45	3.2
JUL 17...	1345	5000	1200	7.8	30.5	360	87	35	130	43	3.0
SEP 25...	1415	4100	1120	--	28.0	370	92	33	140	45	3.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 20...	5.3	150	350	150	.5	11	.31	.04	210	30	--
NOV 08...	5.5	160	360	150	.5	12	.29	.01	220	50	--
DEC 13...	5.4	160	350	140	.5	11	.57	.00	200	80	--
JAN 25...	5.7	170	400	170	.6	11	.15	.04	250	40	--
FEB 27...	4.8	140	280	110	.4	9.7	.27	.01	170	30	--
MAR 22...	5.4	140	310	110	.4	9.4	.19	.01	160	10	--
APR 27...	5.5	150	330	120	.5	9.8	.14	.02	200	50	--
MAY 23...	5.6	150	320	120	.5	9.8	.18	.02	180	40	--
JUN 21...	5.4	140	330	130	.7	12	.29	.18	200	20	--
JUL 17...	5.5	140	310	130	.4	9.5	.17	.01	200	20	--
SEP 25...	5.0	140	350	130	.4	11	.20	.01	220	60	0

SALTON SEA BASIN

09527600 ALL-AMERICAN CANAL BELOW DROP 1, NEAR CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT 20...	1430	2990	1250	7.6	24.0	.00	.00	.0	.00	.00
NOV 08...	1500	2900	1240	8.4	18.5	.00	.00	.0	.00	.00
DEC 13...	1540	2200	1200	8.1	15.0	.00	.00	.0	.00	.00
JAN 25...	1310	1200	1590	7.9	13.5	.00	.00	.0	.00	.00
FEB 27...	1315	4150	1100	8.0	16.0	.00	.00	.0	.00	.00
MAR 22...	1245	5600	1200	7.9	19.5	.00	.00	.0	.00	.00
APR 27...	0900	5500	1250	8.3	22.0	.00	.00	.0	.00	.00
MAY 23...	1245	5100	1350	8.3	25.0	.00	.00	.0	.00	.00
JUN 21...	0915	4700	1280	7.9	28.0	.00	.00	.0	.00	.00
JUL 17...	1345	5000	1200	7.8	30.5	.00	.00	.0	.00	.00
SEP 25...	1415	4100	1120	--	28.0	.00	.00	.0	.00	.00

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible][illegible]

SALTON SEA BASIN

09527600 ALL-AMERICAN CANAL BELOW DROP 1, NEAR CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
OCT 20...	.0	.0	.00	.2	.0	0	.00	.07	.00
NOV 08...	.0	.0	.00	.0	.0	0	.00	.00	.00
DEC 13...	.0	.0	.00	.3	.0	0	.00	.00	.00
JAN 25...	.0	.0	.00	.0	.0	0	.00	.08	.00
FEB 27...	--	--	.00	--	--	0	.00	.01	.00
MAR 22...	.0	.0	.00	.0	.0	0	.00	.00	.00
APR 27...	.0	.0	.00	.0	.0	0	.00	.01	.00
MAY 23...	.0	.0	.00	.0	.0	0	.00	.00	.00
JUN 21...	.0	.0	.00	.0	.0	0	.00	.03	.00
JUL 17...	.0	.0	.00	.0	.0	0	.00	.00	.00
SEP 25...	.0	.0	.00	.0	.0	0	.00	.00	.00

During the 1978 water year 10 samples were taken and analyzed for 2,4-DP, Chlorpyrifos, Ametryne, Atraton, Cyanazine, Cyprazine, Propazine, Simetone, Phorate, Azodrin, and Disyston. Samples were collected on the following dates: Oct. 20, Nov. 8, Dec. 13, Jan. 25, Mar. 22, Apr. 27, May 23, June 21, July 17, Sept. 25. Compounds were detected only in the following samples:

DATE	TIME	2,4-DP (UG/L)	PHORATE (UG/L)
JUL 17...	1345		.02
SEP 25...	1415	.03	

Return surface flows below Imperial Dam, AZ-CA

Between Imperial Dam and the international boundary return surface flows from irrigated areas enter the Colorado River through many drains and wasteways in Arizona and California. Other return flows enter the Gila River below the gaging station near Dome (09520500). In addition, return flows collected by the Main Drain and East Main Canal are delivered across the international boundary for use in Mexico.

Diversions for irrigation in the Gila Project in Arizona are made at Imperial Dam by the Gila Gravity Main Canal. (See sta 09522500.) Diversions for the Yuma Project in Arizona and California are made at Imperial Dam by the All-American Canal (see sta 09523000).

See figure 4 on p. 121 for the schematic diagram showing location of diversions and return flows.

09525000. YUMA MAIN CANAL WASTEWAY

09527000. PILOT KNOB POWERPLANT AND WASTEWAY.--See daily table elsewhere in this report.

09527900. MITTRY LAKE OUTLET CHANNEL.

LOCATION.--Water-stage recorder and sharp-crested weir, in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.7 S., R.22 W., Hydrologic Unit 15030107, 1,000 ft (300 m) upstream from outlet to Colorado River and Laguna Dam.

PERIOD OF RECORD.--Monthly discharge October 1974 to current year.

REMARKS.--Record shows return flow to Colorado River from Mittry Lake. Prior to Nov. 6, 1974, records furnished by Bureau of Reclamation.

09528600. LAGUNA CANAL WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T.7 S., R.22 W., Hydrologic Unit 15030107, 1,000 ft (300 m) downstream from Laguna Dam and 0.7 mi (1.1 km) upstream from outlet to Colorado River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River. Flow record computed from standard weir rating.

09528800. LEVEE CANAL WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.8 S., R.22 W., Hydrologic Unit 15030107, 1,000 ft (300 m) upstream from outlet to Colorado River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River.

09529000. NORTH GILA DRAIN NO. 1.

LOCATION.--Water-stage recorder, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.8 S., R.22 W., Hydrologic Unit 15030107, 0.25 mi (0.40 km) upstream from outlet to Colorado River and 5.5 mi (8.8 km) downstream from Laguna Dam. No gage prior to Oct. 16, 1974.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River. Prior to Oct. 16, 1974, flow records were computed by interpolation between discharge measurements made monthly.

09529050. NORTH GILA DRAIN NO. 3.

LOCATION.--Drain enters wasteway to Gila River in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.8 S., R.21 W., Hydrologic Unit 15070201, 1,000 ft (300 m) upstream from Gila River.

PERIOD OF RECORD.--Monthly discharge April 1962 to current year.

REMARKS.--Record shows seepage from Gila Gravity Main Canal. There is no gage; records are computed by interpolation between discharge measurements made monthly.

09529100. FORTUNA WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in NE $\frac{1}{4}$ sec.30, T.8 S., R.21 W., Hydrologic Unit 15070201, 1.3 mi (2.1 km) upstream from Gila River.

PERIOD OF RECORD.--Monthly discharge October 1960 to September 1963, October 1964 to current year.

REMARKS.--Record shows waste water spilled from Gila Gravity Main Canal; flow rarely reaches Gila River.

09529150. NORTH GILA MAIN CANAL WASTEWAY.

LOCATION.--Water-stage recorder in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.8 S., R.22 W., Hydrologic Unit 15070201, 1,000 ft (300 m) upstream from outlet to Gila River. Prior to July 1966 water-stage recorder and sharp-crested weir, 1 mi (1.6 km) upstream from outlet to Gila River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District. Prior to July 1966 record shows waste water less flow diverted for irrigation between gage and Gila River.

09529160. SOUTH GILA PUMP OUTLET CHANNEL NO. 3.

LOCATION.--Water-stage recorder in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.8 S., R.22 W., Hydrologic Unit 15070201, 0.5 mi (0.8 km) upstream from outlet to Gila River. Prior to Aug. 1, 1965, record obtained by Badger total-flow meter about 500 ft (150 m) downstream.

PERIOD OF RECORD.--Monthly discharge January 1965 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit.

Return surface flows below Imperial Dam, AZ-CA--Continued

09529200. BRUCE CHURCH DRAIN.

LOCATION.--At culvert in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.8 S., R.22 W., Hydrologic Unit 15070201, 0.2 mi (0.3 km) upstream from outlet to Gila River.

PERIOD OF RECORD.--Monthly discharge April 1962 to current year.

REMARKS.--Record shows seepage water from parts of secs. 15, 16, and 21 (Bruce Church Ranch). Flow computed by interpolation between discharge measurements; prior to Nov. 30, 1970, flow determined from pump rating.

09529240. SOUTH GILA PUMP OUTLET CHANNEL NO. 2.

LOCATION.--Water-stage recorder in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.8 S., R.22 W., Hydrologic Unit 15070201, 0.6 mi (1.0 km) upstream from outlet to Gila River; prior to Oct. 18, 1965, outlet was to Wellton-Mohawk Main Outlet Drain. Prior to Aug. 1, 1965, Sparling meter at outlet to Wellton-Mohawk Main Outlet Drain.

PERIOD OF RECORD.--Monthly discharge January 1962 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to the Gila River.

09529250. BRUCE CHURCH WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.8 S., R.22 E., Hydrologic Unit 15070201, 500 ft (150 m) upstream from outlet to Gila River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Gila River.

09529300. WELLTON-MOHAWK MAIN OUTLET DRAIN (CONVEYANCE CHANNEL).

LOCATION.--Water-stage recorder and Parshall flume in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.8 S., R.21 W., Hydrologic Unit 15070201, 7.8 mi (12.6 km) upstream from outlet to Gila River (M.O.D.E. 1), which is 0.6 mi (1.0 km) upstream from mouth of Gila River. Prior to Feb. 20, 1962, gage heights measured from reference point on measuring bridge. Prior to Oct. 1, 1974, gage located 1,000 ft (300 m) upstream without Parshall flume.

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

REMARKS.--Record shows water pumped from numerous wells in Wellton-Mohawk Irrigation and Drainage District to lower the water table. Flow can be discharged to the Gila River or Colorado River by any one of or combination of three outlets. These outlets are known as: M.O.D.E. 1 (release to Gila River about 8.0 mi (13 km) below station); M.O.D.E. 2 (see sta 09531800), release to Colorado River above Morelos Dam; and M.O.D.E. 3 (see sta 09531900), release to Colorado River below Morelos Dam. Since June 1977 discharge of drain has been released to Wellton-Mohawk Bypass Drain and measured at Arizona-Sonora boundary (see sta 09533300). For water year 1978, no water was released to Gila River through M.O.D.E. 1.

09529360. SOUTH GILA PUMP OUTLET CHANNEL NO. 1.

LOCATION.--Water-stage recorder in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.8 S., R.22 W., Hydrologic Unit 15070201, 0.2 mi (0.3 km) upstream from outlet to Gila River, which is 0.6 mi (1.0 km) upstream from mouth of Gila River. Prior to Aug. 1, 1965, Sparling flowmeter 300 feet (90 m) upstream.

PERIOD OF RECORD.--Monthly discharge August 1961 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to Gila River.

09529400. SOUTH GILA DRAIN NO. 2.

LOCATION.--Near center of sec.24, T.8 S., R.23 W., Hydrologic Unit 15030107, at outlet to Colorado River. Prior to Oct. 1, 1969, Sparling flowmeter at same site.

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

REMARKS.--Record shows ground-water drainage and occasional waste water from South Gila Valley Unit returned to Colorado River. There is no gage; flow record computed by interpolation between discharge measurements made bimonthly.

09529420. SOUTH GILA TERMINAL WASTEWAY.

LOCATION.--Water-stage recorder and Parshall flume in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.8 S., R.23 W., Hydrologic Unit 15030107, 2.0 mi (3.2 km) upstream from outlet to Colorado River. Prior to Aug. 1, 1965, total-flow meter at same site.

PERIOD OF RECORD.--Monthly discharge March 1965 to current year.

REMARKS.--Record shows waste water from South Gila Canal of South Gila Valley Unit returned to Colorado River.

09529440. SOUTH GILA PUMP OUTLET CHANNEL NO. 4.

LOCATION.--Water-stage recorder and broad-crested weir, in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.8 S., R.23 W., Hydrologic Unit 15030107, 1.5 mi (2.4 km) upstream from outlet to Colorado River.

PERIOD OF RECORD.--Monthly discharge July 1965 to current year.

REMARKS.--Records shows water pumped from wells in South Gila Valley Unit and conveyed by concrete-lined channel to Colorado River.

09529600.--RESERVATION DRAIN NO. 7.

LOCATION.--At downstream end of culvert on State Road 24 (formerly Avenue C), in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.15 S., R.23 E., Hydrologic Unit 15030107, San Bernardino meridian, 0.5 mi (0.8 km) upstream from outlet to Reservation Main Drain. Prior to Oct. 1, 1969, nonrecording gage at same site.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record shows drainage water from sec.34, T.15 S., R.23 E., and is used with sta 09529700 to determine seepage from All-American Canal. There is no gage; flow record computed by interpolation between discharge measurements made monthly. Beginning June 20, 1967, Imperial Irrigation District makes discharge measurements weekly; however, Imperial Irrigation District made no measurements during 1978 WY.

Return surface flows below Imperial Dam, AZ-CA--Continued

09529700. RESERVATION MAIN DRAIN NO. 6.

LOCATION.--Nonrecording gage on upstream right piling of Stallnacker Road Bridge (formerly 9th Street Bridge), in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.15 S., R.23 E., Hydrologic Unit 15030107, San Bernardino meridian.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record shows waste and drainage water from the Reservation Division, and is used with sta 09529600 to determine seepage from All-American Canal, which parallels drain for 4 mi (6.4 km). Flow record computed by interpolation between discharge measurements made monthly. The Imperial Irrigation District makes discharge measurements weekly.

09529800. RESERVATION DRAIN NO. 2.

LOCATION.--At upstream side of bridge on White Road (formerly 8th Street), in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.16 S., R.23 E., Hydrologic Unit 15030107, San Bernardino meridian, 0.9 mi (1.4 km) upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record used to compute seepage from All-American Canal in sec.31, T.15 S., R.22 E. There is no gage; flow record computed by interpolation between discharge measurements made monthly. The Imperial Irrigation District makes discharge measurements weekly.

09529900. RESERVATION DRAIN NO. 3.

LOCATION.--At Jackson Road Bridge (formerly 5th Street Bridge), in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.16 S., R.22 E., Hydrologic Unit 15030107, San Bernardino meridian, 1.0 mi (1.6 km) upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record used to compute seepage from All-American Canal upstream from Yuma Main Canal. There is no gage; flow record computed by interpolation between discharge measurements made monthly. Imperial Irrigation District makes discharge measurements weekly.

09530000. RESERVATION MAIN DRAIN NO. 4.

LOCATION.--Water-stage recorder in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.16 S., R.22 E., Hydrologic Unit 15030107, San Bernardino meridian, 500 ft (150 m) upstream from railroad culvert. Prior to January 1937, no gage. January 1937 to Apr. 16, 1941, nonrecording gages at culvert 500 ft (150 m) downstream at different datums. April 16, 1941, to Dec. 16, 1971, water-stage recorder at culvert 500 ft (150 m) downstream. May 29, 1974, to Feb. 2, 1976, water-stage recorder with vane meter at present site. Flow enters Yuma Main Canal wasteway channel 200 ft (60 m) downstream from spillway structure. Prior to May 1955 it entered 500 ft (150 m) upstream from outlet of Yuma Main Canal wasteway in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian.

PERIOD OF RECORD.--Monthly discharge January 1913 to April 1920, October 1921 to March 1925, January 1934 to current year (calendar year discharge only 1934-36). Prior to October 1955, published as California drainage canal.

REMARKS.--Record shows waste and drainage water from area east of Yuma Main Canal on Reservation Division. Since 1939, seepage from All-American Canal has caused large increase. Flow is not included in the record of Yuma Main Canal wasteway.

09530200. YUMA MESA OUTLET DRAIN.

LOCATION.--Venturi meter with recorder in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.16 S., R.22 E., Hydrologic Unit 15030107, San Bernardino meridian, in Arizona, Yuma County, 0.3 mi (0.5 km) from outlet to Colorado River.

PERIOD OF RECORD.--Monthly discharge July 1970 to current year.

REMARKS.--Record shows water pumped from wells on the Yuma Mesa and conveyed by underground conduit to Colorado River.

COOPERATION.--Records furnished by Bureau of Reclamation prior to July 21, 1972.

09530400. RESERVATION DRAIN NO. 11.

LOCATION.--At outlet to Drain 8-B (Araz Drain), in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.16 S., R.22 E., Hydrologic Unit 15030107, San Bernardino meridian.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record shows drainage from sec.20, T.16 S., R.22 E. Flow at this station, with that at sta 09530500, is used to determine seepage from All-American Canal. There is no gage; flow record computed by interpolation between discharge measurements made monthly. Beginning June 20, 1967, Imperial Irrigation District makes discharge measurements weekly.

09530500. DRAIN 8-B.

LOCATION.--Enters Colorado River in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.16 S., R.22 E., Hydrologic Unit 15030107, San Bernardino meridian, 4 mi (6.4 km) downstream from outlet of Yuma Main Canal wasteway.

PERIOD OF RECORD.--Monthly discharge March 1948 to current year. Prior to October 1955, published as Araz Drain.

REMARKS.--Record shows seepage from All-American Canal, and waste and drainage water west of Yuma Main Canal on the Reservation Division. Flow at this station, with that at sta 09530400, is used to determine seepage from All-American Canal. There is no gage, but due to fairly constant drainage, flow record is computed by interpolation between discharge measurements made monthly. Imperial Irrigation District makes discharge measurements weekly at site 1,000 ft (300 m) upstream.

09531800. MAIN OUTLET DRAIN EXTENSION ABOVE MORELOS DAM (M.O.D.E. 2).

LOCATION.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.16 S., R.21 E., Hydrologic Unit 15030107, San Bernardino meridian, at outlet to Colorado River, 1.7 mi (2.7 km) upstream from Morelos Dam.

PERIOD OF RECORD.--Monthly discharge November 1965 to current year.

REMARKS.--Record shows water conveyed to Colorado River 1.7 mi (2.7 km) above Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. No flow since July 24, 1973. (See also stas 09529300 and 09531900.)

Return surface flows below Imperial Dam, AZ-CA--Continued

09531850. COOPER WASTEWAY.

LOCATION.--Water-stage recorder and weir, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.8 S., R.24 W., Hydrologic Unit 15030108, 0.6 mi (1.0 km) upstream from Morelos Dam. Prior to July 14, 1971, at site 1 mi (1.6 km) downstream.

PERIOD OF RECORD.--Monthly discharge January 1934 to current year.

REMARKS.--Record shows waste water from Valley Division returned to Colorado River.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09531900. MAIN OUTLET DRAIN EXTENSION BELOW MORELOS DAM (M.O.D.E. 3).

LOCATION.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.8 S., R.24 W., Hydrologic Unit 15030108, at outlet to Colorado River just downstream from Morelos Dam.

PERIOD OF RECORD.--Monthly discharge November 1965 to current year.

REMARKS.--Record shows water conveyed to Colorado River below Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 09529300, 09531800.)

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09532500. ELEVEN MILE WASTEWAY.

LOCATION.--Water-stage recorder and regulating gate in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.9 S., R.24 W., Hydrologic Unit 15030108, 3.2 mi (5.1 km) downstream from Morelos Dam.

PERIOD OF RECORD.--Monthly discharge January 1924 to current year.

REMARKS.--Record shows waste water from Valley Division returned to Colorado River.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09533000. TWENTY-ONE MILE WASTEWAY.

LOCATION.--Water-stage recorder and weir in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.10 S., R.25 W., Hydrologic Unit 15030108, 0.6 mi (1.0 km) upstream from outlet to Colorado River, which is 2.4 mi (3.9 km) upstream from southerly international boundary and 2.6 mi (4.2 km) northwest of San Luis, Ariz. Prior to May 1, 1971, water-stage recorder and Parshall flume at site 200 ft (60 m) upstream.

PERIOD OF RECORD.--Monthly discharge March 1939 to current year.

REMARKS.--Record shows waste water from Valley Division returned to Colorado River.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09533300. WELLTON-MOHAWK BYPASS DRAIN AT ARIZONA-SONORA BOUNDARY.

LOCATION.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.10, T.11 S., R.25 W., Hydrologic Unit 15030108, on right bank 80 ft (24 m) upstream from the Arizona boundary, 550 ft (168 m) east of the thalweg of Colorado River, and 1.8 mi (2.9 km) west of San Luis, Ariz.

PERIOD OF RECORD.--Monthly discharge June 1977 to current year.

REMARKS.--Record shows water conveyed to the Santa Clara Slough, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 09529300, 09531800, 09531900.)

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09534000. MAIN DRAIN.

LOCATION.--Flowmeters in discharge pipes at pumping plant in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.11 S., R.25 W., Hydrologic Unit 15030108, 0.4 mi (0.6 km) west of San Luis, Ariz. Prior to Apr. 1, 1969, rated pumps with forebay and afterbay gages to measure head.

PERIOD OF RECORD.--Monthly discharge January 1919 to current year.

REMARKS.--Record shows flow which consists mostly of drainage water from the Valley Division which is pumped across the Arizona-Sonora boundary for use in Mexico. Flowmeters checked by discharge measurements made by International Boundary and Water Commission (U.S. Section).

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09534300. WEST MAIN CANAL WASTEWAY.

LOCATION.--Water-stage recorder and weir, in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.11 S., R.25 W., Hydrologic Unit 15030108, 0.3 mi (0.5 km) upstream from outlet to Main drain, and 0.4 mi (0.6 km) west of San Luis, Ariz. Prior to Aug. 1, 1975, at site 150 ft (46 m) upstream from outlet to Main drain.

PERIOD OF RECORD.--Monthly discharge February 1971 to current year.

REMARKS.--Record shows waste water from Valley Division which is discharged across the Arizona-Sonora boundary for use in Mexico.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

09534500. EAST MAIN CANAL WASTEWAY.

LOCATION.--Water-stage recorder and weir, in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.11 S., R.25 W., Hydrologic Unit 15030108, 0.3 mi (0.5 km) upstream from outlet to Main drain, and 0.2 mi (0.3 km) west of San Luis, Ariz.

PERIOD OF RECORD.--Monthly discharge January 1924 to June 1928, January 1932 to December 1933, April 1935 to current year. Calendar year estimates 1934 and 1935, published in WSP 1313.

REMARKS.--Record shows amount of unused water at the extreme end of the Valley Division which is discharged across the Arizona-Sonora boundary for use in Mexico.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

Return surface flows below Imperial Dam, AZ-CA--Continued

MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Month	Mittry Lake Outlet Channel 09527900	Laguna Canal wasteway 09528600	Levee Canal wasteway 09528800	North Gila Drain No. 1 09529000	North Gila Drain No. 3 09529050	Fortuna wasteway 09529100
October	550	0.8	143	429	0	23
November	549	16	127	258	0	6.0
December	586	4.4	107	145	0	53
CAL YR 1977	7,420	51	1,840	3,990	0	641
January	817	0	22	157	0	32
February	641	0	215	123	0	13
March	718	0	137	179	0	15
April	402	0	168	247	0	32
May	177	0	172	242	0	30
June	443	0	139	274	0	22
July	787	0	151	241	0	32
August	801	0	242	291	0	8.0
September	484	0	119	361	0	6.3
WTR YR 1978	6,960	21	1,740	2,950	0	271

Month	North Gila Main Canal wasteway 09529150	South Gila Pump Outlet Channel No. 3 09529160	Bruce Church Drain 09529200	South Gila Pump Outlet Channel No. 2 09529240	Bruce Church wasteway 09529250
October	88	2.2	1.4	199	4.6
November	187	5.0	6.0	510	5.9
December	72	3.5	0.2	1,510	0.3
CAL YR 1977.....	1,210	7,150	203	16,960	59
January	64	3.8	0	392	3.6
February	44	678	2.2	1,460	3.7
March	80	1,520	6.1	1,550	9.7
April	43	1,690	6.0	1,690	5.4
May	87	23	0	1,710	0.04
June	123	178	0	1,280	0.3
July	150	1,940	0	1,160	0.5
August	126	1,370	0	1,660	0
September	177	232	0	1,620	7.6
WTR YR 1978	1,240	7,660	22	14,740	41

Month	Wellton-Mohawk Main Outlet Drain 09529300	South Gila Pump Outlet Channel No. 1 09529360	South Gila Drain No. 2 09529400	South Gila Terminal wasteway 09529420	South Gila Pump Outlet Channel No. 4 09529440
October	18,300	2,360	0	62	0
November	16,710	2,210	14	68	22
December	18,110	2,680	25	79	710
CAL YR 1977	204,200	28,690	352	618	2,760
January	17,600	2,380	15	39	30
February	15,380	2,080	11	52	627
March	17,300	2,520	18	33	529
April	16,930	2,460	24	55	1,020
May	16,630	2,520	31	56	158
June	15,860	2,370	42	48	229
July	14,210	2,440	56	30	258
August	14,890	2,100	57	68	536
September	13,610	1,730	42	46	2.5
WTR YR 1978	195,500	27,850	335	637	4,120

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, AZ-CA--Continued

MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Month	Reservation Drain No. 7 09529600	Reservation Main Drain No. 6 09529700	Reservation Drain No. 2 09529800	Reservation Drain No. 3 09529900	Reservation Main Drain No. 4 09530000	Yuma Mesa Outlet Drain 09530200
October.....	59	1,010	6.1	221	2,610	2,840
November.....	40	930	6.0	195	2,570	2,900
December.....	33	843	6.1	206	2,670	2,430
CAL YR 1977	907	11,230	69	2,720	35,410	40,890
January.....	25	756	6.1	184	2,290	619
February.....	22	698	5.6	164	2,080	2,430
March.....	29	912	6.1	219	2,910	2,190
April.....	32	893	6.0	258	2,930	2,750
May.....	36	906	6.1	241	2,960	3,290
June.....	70	859	6.0	241	2,800	3,070
July.....	91	964	8.3	284	3,150	3,140
August.....	83	1,050	6.7	270	3,360	3,210
September.....	77	954	6.0	239	3,490	3,190
WTR YR 1978	597	10,780	75	2,720	33,820	32,060

Month	Reservation Drain No. 11 09530400	Drain 8-B 09530500	M.O.D.E. 2 (above Morelos Dam) 09531800	Cooper wasteway 09531850	M.O.D.E. 3 (below Morelos Dam) 09531900	Eleven Mile wasteway 09532500
October.....	6.1	102	0	18	68	15
November.....	6.0	66	0	78	23	250
December.....	9.9	53	0	14	3.0	279
CAL YR 1977	118	1,220	0	770	98,800	1,500
January.....	12	49	0	35	1.4	31
February.....	11	40	0	38	1,630	114
March.....	13	63	0	36	0	235
April.....	18	68	0	48	0	159
May.....	18	58	0	98	0	10
June.....	14	73	0	41	0	133
July.....	23	88	0	82	0.8	13
August.....	21	85	0	58	30	98
September.....	18	74	0	41	0	10
WTR YR 1978	170	819	0	587	1,760	1,350

Month	Twenty-one Mile wasteway 09533000	Wellton-Mohawk Bypass Drain 09533300	Main Drain 09534000	West Main Canal wasteway 09534300	East Main Canal wasteway 09534500
October.....	0	18,540	7,080	133	443
November.....	0	16,980	6,250	175	254
December.....	0	18,260	5,730	314	247
CAL YR 1977	0	108,000	82,850	3,910	5,000
January.....	0	17,540	5,470	232	90
February.....	0	13,640	5,280	252	231
March.....	0	17,430	6,390	290	258
April.....	0	16,710	6,360	164	295
May.....	0	16,200	6,500	170	228
June.....	6.1	15,040	6,170	150	247
July.....	0	13,990	6,570	93	286
August.....	0	14,740	6,540	237	297
September.....	0	13,430	6,380	300	354
WTR YR 1978	6	192,500	74,720	2,510	3,230

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

PANAMINT VALLEY

10250800 DARWIN CREEK NEAR DARWIN, CA

LOCATION.--Lat 36°19'14", long 117°31'23", in NW¼SE¼SW¼ sec.34, T.18 S., R.41 E., Inyo County, on left bank 510 ft (155 m) downstream from Darwin Falls, 1.6 mi (2.6 km) upstream from unnamed tributary, and 5.2 mi (8.4 km) northeast of Darwin.

DRAINAGE AREA.--173 mi² (448 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,640 ft (805 m), from topographic map. Prior to Aug. 6, 1970, at site 190 ft (58 m) downstream at same datum.

REMARKS.--Records good. No regulation above station. Town of Darwin pumps water above station for municipal supply.

AVERAGE DISCHARGE.--16 years, 0.43 ft³/s (0.012 m³/s), 312 acre-ft/yr (385,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s (125 m³/s) Jan. 25, 1969, gage height, 8.40 ft (2.560 m), at site then in use, from floodmarks, on basis of slope-conveyance study of maximum flow; minimum daily, 0.05 ft³/s (0.001 m³/s) Aug. 30 to Sept. 4, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 20.42 ft (6.224 m), present site, from floodmarks, date and discharge unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.28 m³/s) and maximum (*) extended above 1 ft³/s (0.028 m³/s) on basis of slope-conveyance study at gage height 5.49 ft (1.673 m) and slope-area measurement at gage height 7.34 ft (2.237 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 10	0700	260 7.36	5.78 1.762
Mar. 4	1730	*400 11.3	6.37 1.942

Minimum daily discharge, 0.08 ft³/s (0.002 m³/s) April 4, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.33	.48	.48	.12	.17	.17	.40	.48	.24	.17	.19
2	.30	.36	.48	.48	.12	.15	.13	.40	.44	.24	.17	.19
3	.30	.36	.48	.54	.12	.13	.10	.36	.48	.24	.19	.19
4	.33	.36	.48	.54	.13	34	.08	.36	.48	.24	.19	.19
5	.36	.40	.48	.50	.17	.92	.09	.40	.48	.27	.19	.19
6	.24	.40	.48	.49	.17	.10	.09	.40	.44	.24	.19	.19
7	.27	.40	.48	.49	.17	.40	.08	.40	.40	.24	.19	.19
8	.27	.40	.48	.49	.17	.85	.08	.40	.44	.24	.19	.19
9	.27	.40	.48	.49	10	.79	.10	.40	.44	.24	.19	.19
10	.27	.40	.48	.54	22	.36	.12	.40	.40	.24	.19	.19
11	.27	.40	.48	.50	.17	.30	.17	.40	.44	.24	.19	.19
12	.27	.40	.48	.50	.19	.24	.24	.40	.40	.24	.19	.19
13	.27	.36	.48	.50	.17	.24	.27	.33	.40	.21	.19	.19
14	.27	.36	.48	.60	.17	.24	.27	.33	.40	.21	.19	.19
15	.24	.36	.48	.56	.17	.24	.27	.33	.40	.24	.19	.19
16	.21	.36	.48	.64	.17	.24	.30	.36	.40	.21	.19	.19
17	.24	.36	.49	.88	.15	.21	.33	.33	.36	.21	.19	.19
18	.24	.36	.49	.58	.13	.19	.27	.30	.30	.19	.19	.19
19	.24	.36	.49	.33	.12	.19	.24	.30	.30	.19	.17	.19
20	.24	.40	.48	.21	.12	.17	.24	.30	.30	.21	.17	.19
21	.27	.40	.48	.21	.12	.15	.30	.33	.33	.21	.17	.19
22	.27	.44	.48	.17	.12	.13	.30	.33	.30	.19	.17	.19
23	.27	.44	.48	.17	.12	.10	.24	.33	.30	.19	.17	.19
24	.27	.44	.48	.17	.12	.10	.27	.33	.33	.21	.17	.19
25	.27	.44	.48	.15	.12	.13	.36	.36	.33	.19	.17	.19
26	.27	.48	.52	.15	.10	.12	.40	.40	.30	7.3	.19	.19
27	.27	.48	.52	.15	.10	.10	.40	.40	.30	.17	.19	.19
28	.30	.48	.52	.15	.17	.10	.36	.40	.28	.17	.19	.19
29	.30	.48	.48	.15	---	.09	.36	.44	.24	.17	.19	.19
30	.30	.48	.48	.12	---	.15	.40	.48	.24	.17	.19	.19
31	.33	---	.48	.12	---	.21	---	.48	---	.17	.19	---
TOTAL	8.55	12.09	15.03	12.05	35.70	41.51	7.03	11.58	11.13	13.72	5.71	5.70
MEAN	.28	.40	.48	.39	1.28	1.34	.23	.37	.37	.44	.18	.19
MAX	.36	.48	.52	.88	.22	.34	.40	.48	.48	7.3	.19	.19
MIN	.21	.33	.48	.12	.10	.09	.08	.30	.24	.17	.17	.19
AC-FT	17	24	30	24	71	82	14	23	22	27	11	11
CAL YR 1977	TOTAL	97.75	MEAN .27	MAX	.52	MIN .08	AC-FT 194					
WTR YR 1978	TOTAL	179.80	MEAN .49	MAX	34	MIN .08	AC-FT 357					

10251100 SALT CREEK NEAR STOVEPIPE WELLS, CA

LOCATION.--Lat 36°35'58", long 117°00'46", in NE¼ sec.6, T.16 S., R.46 E., Inyo County, Death Valley National Monument, on left bank 3.0 mi (4.8 km) southeast of intersection of State Highway 190 and Stovepipe Wells Road, and 7.4 mi (11.9 km) east of Stovepipe Wells Hotel.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--February 1974 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is -180 ft (-55 m), from topographic map.

REMARKS.--Records poor. No regulation or diversion above station. No gage-height record January 20 to April 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 363 ft³/s (10.3 m³/s) Feb. 9, 1976, gage height, 4.81 ft (1.466 m) based on slope-conveyance measurement of peak flow, minimum daily, 0.06 ft³/s (0.002 m³/s) June 16, 24, 25, 1974, Sept. 15, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5.0 ft³/s (0.14 m³/s) and maximum, estimated (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 10		Unknown	Unknown
Mar. 4	Unknown	*20 0.57	Unknown

Minimum daily discharge, 0.07 ft³/s (0.002 m³/s) July 10, 11, 15-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.21	.40	.56	.16	.20	.26	.58	.16	.08	.09	.13
2	.14	.22	.40	.55	.16	.18	.24	.47	.14	.08	.09	.13
3	.14	.23	.39	.66	.16	.16	.20	.39	.14	.08	.10	.13
4	.15	.23	.38	.71	.20	10	.16	.36	.14	.09	.10	.13
5	.14	.22	.39	.67	.22	1.0	.18	.32	.13	.09	.10	.47
6	.12	.22	.39	.66	.22	.16	.18	.32	.12	.09	.10	.61
7	.12	.23	.40	.64	.22	.30	.16	.33	.12	.08	.09	.12
8	.13	.24	.40	.63	.22	.80	.16	.34	.11	.08	.09	.11
9	.13	.24	.40	.67	4.0	.70	.18	.33	.11	.08	.09	.11
10	.14	.26	.41	.77	7.0	.50	.22	.30	.11	.07	.09	.11
11	.14	.27	.43	.75	.24	.35	.28	.29	.11	.07	.44	.11
12	.14	.27	.43	.71	.24	.32	.32	.29	.11	.08	.69	.12
13	.14	.28	.43	.71	.22	.30	.38	.28	.10	.08	.23	.13
14	.14	.30	.45	.76	.22	.28	.38	.25	.09	.08	.08	.13
15	.14	.31	.45	.83	.22	.28	.38	.20	.10	.07	.09	.14
16	.15	.32	.42	.84	.22	.28	.40	.21	.10	.07	.08	.14
17	.15	.33	.45	1.2	.20	.28	.44	.22	.11	.07	.09	.14
18	.15	.33	.45	.83	.18	.26	.40	.23	.09	.07	.09	.14
19	.16	.31	.42	.84	.18	.24	.36	.23	.10	.07	.10	.15
20	.16	.31	.43	.60	.18	.22	.40	.22	.11	.07	.10	.09
21	.16	.34	.47	.35	.16	.18	.41	.21	.10	.07	.10	.11
22	.16	.35	.48	.30	.16	.16	.41	.18	.10	.08	.10	.11
23	.17	.35	.47	.28	.16	.16	.42	.16	.10	.08	.11	.11
24	.17	.37	.47	.26	.16	.16	.45	.18	.09	.08	.11	.11
25	.17	.37	.48	.24	.16	.20	.46	.19	.08	.09	.12	.12
26	.17	.39	.52	.24	.14	.19	.44	.20	.09	.09	.12	.12
27	.16	.39	.57	.22	.14	.18	.43	.20	.08	.09	.13	.12
28	.19	.39	.89	.22	.20	.17	.42	.18	.09	.09	.13	.12
29	.20	.39	.70	.20	---	.16	.40	.18	.09	.09	.13	.12
30	.20	.40	.64	.20	---	.20	.45	.17	.09	.09	.12	.12
31	.21	---	.59	.18	---	.30	---	.15	---	.09	.13	---
TOTAL	4.77	9.07	14.60	17.28	15.94	18.87	9.97	8.16	3.21	2.49	4.23	4.50
MEAN	.15	.30	.47	.56	.57	.61	.33	.26	.11	.080	.14	.15
MAX	.21	.40	.89	1.2	7.0	10	.46	.58	.16	.09	.69	.61
MIN	.12	.21	.38	.18	.14	.16	.16	.15	.08	.07	.08	.09
AC-FT	9.5	18	29	34	32	37	20	16	6.4	4.9	8.4	8.9

CAL YR 1977	TOTAL	133.38	MEAN	.37	MAX	1.3	MIN	.10	AC-FT	265
WTR YR 1978	TOTAL	113.09	MEAN	.31	MAX	10	MIN	.07	AC-FT	224

10251300 AMARGOSA RIVER AT TECOPA, CA

LOCATION.--Lat 35°50'53", long 116°13'43", in NW¼NW¼SE¼ sec.9, T.20 N., R.7 E., Inyo County, on right bank 20 ft (6 m) upstream from county road, and 0.2 mi (0.3 km) west of Tecopa.

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

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 1,310 ft (399 m), from topographic map.

REMARKS.--Records poor. No regulation. City of Tecopa pumps water for municipal use upstream.

AVERAGE DISCHARGE.--17 years, 3.45 ft³/s (0.098 m³/s), 2,500 acre-ft/yr (3.08 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s), estimated, Feb. 26, 1969, gage height, 18.34 ft (5.590 m), from floodmark; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) revised, and maximum (*), from rating curve extended above 32 ft³/s (0.91 m³/s) on basis of slope-area measurement at gage height 13.9 ft (4.24 m);

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 28	1330	163	4.62	5.66	1.725	Mar. 4	2030	*364	10.3	7.62	2.323
Jan. 16	2300	141	3.99	5.45	1.661	Mar. 7	0545	355	10.1	7.51	2.289
Jan. 19	1000	197	5.58	5.97	1.820	Mar. 11	1915	117	3.31	5.23	1.594
Feb. 10	0930	321	9.09	7.17	2.185	Apr. 2	1200	207	5.86	6.07	1.850
Feb. 13	0545	157	4.45	5.60	1.707						

Minimum daily discharge, no flow many days during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.40	2.5	8.0	14	13	73	.09		0		
2	0	.43	2.4	5.6	14	49	140	.15		0		
3	0	.45	2.6	5.4	14	64	68	.10		0		
4	0	.45	2.7	9.0	14	130	33	.06		0		
5	0	.42	2.9	13	15	108	18	.05		0		
6	0	.43	3.0	8.0	18	100	12	.04		0		
7	0	.45	3.1	7.2	14	196	6.7	.03		0		
8	0	.37	3.2	5.5	14	47	4.1	.03		0		
9	0	.30	3.2	5.8	50	26	13	.02		0		
10	.01	.30	3.3	12	145	17	5.2	.02		0		
11	.02	.42	3.5	9.7	111	31	4.1	.02		0		
12	.02	.54	3.8	7.0	120	21	2.6	.02		0		
13	.03	.62	3.5	5.8	110	9.7	.52	.01		0		
14	.03	.70	3.6	11	66	5.8	.35	.01		0		
15	.07	.74	3.9	58	41	4.7	.30	.01		0		
16	.10	.69	2.3	50	30	3.9	15	.01		0		
17	.12	.85	2.9	65	22	2.8	3.1	.01		0		
18	.12	.98	2.6	70	16	2.2	.67	.01		0		
19	.13	.78	3.6	102	13	1.8	.52	.01		0		
20	.19	.68	4.2	58	9.3	1.7	.46	.01		0		
21	.21	.83	3.4	39	8.1	1.5	.35	.01		0		
22	.27	1.1	3.4	28	7.7	1.1	.28	.01		0		
23	.30	1.2	3.2	23	7.7	1.5	.25	.01		0		
24	.30	1.3	3.1	11	7.4	1.3	.22	.01		0		
25	.33	1.5	3.6	8.9	7.4	1.1	.18	0		0		
26	.35	1.7	4.4	7.1	7.1	1.0	.16	0		0		
27	.35	1.9	8.9	6.1	5.6	.93	.14	0		.15		
28	.33	2.3	67	5.8	6.5	.84	.12	0		0		
29	.30	2.1	33	10	---	.66	.11	0		0		
30	.30	2.5	19	14	---	.52	.10	0		0		
31	.37	---	13	14	---	39	---	0	---	0		---
TOTAL	4.25	27.43	224.8	682.9	907.8	884.05	402.53	.75	0	.15	0	0
MEAN	.14	.91	7.25	22.0	32.4	28.5	13.4	.024	0	.005	0	0
MAX	.37	2.5	67	102	145	196	140	.15	0	.15	0	0
MIN	0	.30	2.3	5.4	5.6	.52	.10	0	0	0	0	0
AC-FT	8.4	54	446	1350	1800	1750	798	1.5	0	.3	0	0
CAL YR 1977	TOTAL	2194.02	MEAN 6.01	MAX 697	MIN 0	AC-FT 4350						
WTR YR 1978	TOTAL	3134.66	MEAN 8.59	MAX 196	MIN 0	AC-FT 6220						

10252550 CARUTHERS CREEK NEAR IVANPAH, CA

LOCATION.--Lat 35°14'33", long 115°17'58", in NW¼NW¼NE¼ sec.6, T.13 N., R.16 E., San Bernardino County, on left bank 6.6 mi (10.6 km) south of Ivanpah.

DRAINAGE AREA.--1.13 mi² (2.93 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,640 ft (1,719 m), from topographic map.

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

AVERAGE DISCHARGE.--15 years, 0.090 ft³/s (0.003 m³/s), 65 acre-ft/yr (80,100 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 583 ft³/s (16.5 m³/s) Oct. 1, 1976, gage height, 4.95 ft (1.509 m), on basis of slope-conveyance measurement of 518 ft³/s (14.7 m³/s); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.283 m³/s) and maximum (*), from rating curve extended above 1.0 ft³/s (0.003 m³/s) on basis of slope-area measurement at gage height 3.34 ft (1.018 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 10	0800	51	1.44	2.35	0.716
Mar. 4	1930	*71	2.01	2.55	0.777

Minimum daily discharge, no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	.07	.17					
2			0	0	0	.25	.14					
3			0	0	0	2.0	.14					
4			0	.05	0	17	.12					
5			0	.01	0	4.0	.10					
6			0	0	0	1.2	.10					
7			0	0	0	.58	.07					
8			0	0	0	.40	.05					
9			0	0	.14	.32	.22					
10			0	.51	14	.29	.25					
11			0	.02	2.2	.29	.14					
12			0	0	1.5	.53	.10					
13			0	0	.92	.49	.07					
14			0	.08	.51	.32	.05					
15			0	.61	.02	.29	.05					
16			0	.04	0	.25	.05					
17			0	1.1	0	.22	.03					
18			0	.31	0	.19	.03					
19			0	.51	0	.17	.03					
20			0	.31	0	.17	0					
21			0	.13	0	.17	0					
22			0	.07	0	.29	0					
23			0	.02	0	.25	0					
24			0	.01	0	.19	0					
25			0	0	0	.14	0					
26			0	0	0	.12	0					
27			0	0	0	.12	0					
28			.04	0	.15	.10	0					
29			0	0	---	.10	0					
30			0	.20	---	.10	0					
31		---	0	.08	---	.22	---		---			---
TOTAL	0	0	.04	4.06	19.44	30.83	1.91	0	0	0	0	0
MEAN	0	0	.001	.13	.69	.99	.064	0	0	0	0	0
MAX	0	0	.04	1.1	14	17	.25	0	0	0	0	0
MIN	0	0	0	0	0	.07	0	0	0	0	0	0
AC-FT	0	0	.08	8.1	39	61	3.8	0	0	0	0	0
CAL YR 1977	TOTAL 28.41	MEAN .078	MAX 18	MIN 0	AC-FT 56							
WTR YR 1978	TOTAL 56.28	MEAN .15	MAX 17	MIN 0	AC-FT 112							

SALTON SEA BASIN

10254005 SALTON SEA NEAR WESTMORLAND, CA

LOCATION.--Lat 33°11'37", long 115°49'54", in NE¼SE¼SW¼ sec.21, T.11 S., R.11 E., Imperial County, on western shore at Sandy Beach, and 15.5 mi (24.9 km) northwest of Westmorland.

DRAINAGE AREA.--8,360 mi² (21,650 km²), approximately.

PERIOD OF RECORD.--November 1904 to current year. Records prior to 1932 are published in WSP 735.

GAGE.--Water-stage recorder. Datum of gage is 250.00 ft (76.200 m) below National Geodetic Vertical Datum of 1929; gage readings have been converted to elevations below NGVD. See WSP 1734 for history of changes prior to Mar. 2, 1956.

REMARKS.--Bottom of sea is 277.7 ft (84.64 m) below NGVD. See WSP 300, 735, and 918 for condensed history of Salton Sea.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 195.9 ft (59.71 m) below NGVD, in February and March 1907; minimum since 1906, 251.6 ft (76.69 m) below NGVD in November 1924.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 228.1 ft (69.52 m) below NGVD, May 16; minimum, 229.1 ft (69.83 m) below NGVD some days in August and September.

MEAN DAILY MONTHEND ELEVATIONS, IN FEET, BELOW NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Date	Elevation (feet)
Sept. 30.....	229.1	Apr. 30.....	228.2
Oct. 31.....	229.2	May 31.....	228.3
Nov. 30.....	229.3	June 30.....	228.5
Dec. 31.....	229.1	July 31.....	228.7
Jan. 31.....	228.8	Aug. 31.....	229.1
Feb. 28.....	228.6	Sept. 30.....	229.4
Mar. 31.....	228.2		

INFLOW TO SALTON SEA

Salton Sea, located near the northeast corner of Imperial County, is a closed basin consisting of approximately 8,360 mi² (21,650 km²).

The following table shows monthly and annual inflow, in acre-feet, for the water year October 1977 to September 1978 and the calendar year January to December 1977. Inflow from Imperial Valley is the sum of flows in Alamo River (station 10254730), New River (station 10255550), drains and wasteways as furnished by Imperial Irrigation District, and since October 1967 San Felipe Creek (station 10255885). Since October 1967 inflow from Coachella Valley is the sum of flows in Whitewater River (station 10259540), Salt Creek (station 10254050), Wasteway No. 1 (station 10259920), and other drains as furnished by Coachella Valley County Water District. Table also shows amount of flow in Alamo and New Rivers contributed by Mexico as furnished by Imperial Irrigation District. Ungaged drains and natural runoff also contribute inflow to the sea.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Inflow from												
Imperial Valley	82811	73753	70084	53486	66991	101531	128179	112914	84597	94870	98271	100948
Coachella Valley	12916	10099	9651	11146	10722	18250	13846	13387	11978	11926	13444	11261
Total cal yr 1977		1,308,514	ac-ft									
Total wtr yr 1978		1,217,055	ac-ft									

FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY

	97	101	114	121	108	129	131	116	100	87	98	100
Alamo River	6992	6559	9507	9495	7999	9898	10711	8452	6119	6552	7557	7018
New River												
Cal yr 1977:	Alamo River		1,419	ac-ft	Wtr yr 1978:			1,302	ac-ft			
Cal yr 1977:	New River		107,728	ac-ft	Wtr yr 1978:			96,859	ac-ft			

LOCATION.--Lat 33°26'49", long 115°50'33", in NE¼SE¼SW¼ sec.28, T.8 S., R.11 E., Riverside County, on pier of Southern Pacific Railroad bridge, 0.3 mi (0.5 km) upstream from mouth, and 16 mi (26 km) southeast of Mecca.

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

REMARKS.--Records fair. No regulation or diversion above station. Flow sustained by irrigation seepage.

AVERAGE DISCHARGE.--17 years, 6.67 ft³/s (0.189 m³/s), 4,830 acre-ft/yr (5.96 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,900 ft³/s (280 m³/s) Sept. 24, 1976, gage height, 14.3 ft (4.359 m), from rating curve extended above 20 ft³/s (0.57 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 0.40 ft³/s (0.011 m³/s) Aug. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 326 ft³/s (9.23 m³/s) Jan. 10, gage height, 7.56 ft (2.304 m), from rating curve extended as explained above; minimum daily, 0.46 ft³/s (0.013 m³/s) Sept. 6, 20, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	7.3	7.3	10	12	52	8.8	4.8	2.0	2.0	1.6	.81
2	6.5	7.0	7.3	9.3	8.8	58	7.3	5.2	2.0	2.1	1.8	.72
3	6.5	6.8	7.3	9.3	7.8	60	6.4	5.6	2.0	2.1	1.8	.72
4	6.5	6.8	7.3	10	7.3	45	14	5.6	2.0	11	1.8	.63
5	6.8	6.8	7.3	10	7.3	57	6.4	5.2	1.9	4.5	1.8	.54
6	7.3	7.3	7.3	10	10	14	5.6	4.8	1.9	2.1	1.8	.46
7	7.8	7.8	7.3	9.8	7.8	9.8	5.6	4.5	1.9	1.8	1.8	.54
8	10	31	7.3	9.3	7.8	8.8	5.6	4.5	1.9	1.6	1.8	.54
9	19	72	7.3	8.8	7.8	8.3	5.6	4.5	1.9	1.6	1.8	.63
10	41	41	7.3	83	7.3	7.8	6.4	3.9	1.8	1.6	1.8	.63
11	44	20	7.8	42	6.8	7.3	6.4	2.8	1.8	1.6	1.8	.63
12	19	9.8	7.8	9.3	6.4	7.3	6.4	2.6	1.8	1.8	1.8	.63
13	28	8.3	7.8	6.4	6.8	15	8.8	2.3	1.8	1.8	1.8	.63
14	11	7.8	7.8	6.0	8.3	39	14	2.3	1.8	1.8	1.8	.63
15	8.3	7.8	7.8	6.4	6.8	24	6.8	2.1	2.0	1.6	2.0	.63
16	7.8	7.8	7.8	5.6	6.4	8.3	5.2	2.1	2.0	1.4	1.8	.63
17	7.3	7.8	7.8	9.3	6.0	7.3	4.8	2.1	2.0	1.6	1.8	.63
18	7.3	7.8	7.8	7.3	5.6	6.8	4.8	2.0	2.0	1.4	1.6	.63
19	7.3	7.8	7.8	7.6	5.6	7.3	4.8	2.0	1.8	1.4	1.6	.54
20	7.3	7.8	7.3	9.3	5.6	7.3	4.8	2.1	1.8	1.3	1.4	.46
21	7.3	7.8	7.3	6.0	6.4	7.3	4.8	2.3	1.6	1.3	1.4	.54
22	7.3	7.8	7.8	5.6	6.0	6.8	4.8	2.3	1.6	1.4	1.3	.63
23	7.3	7.8	7.8	5.2	5.6	6.8	4.8	2.3	1.6	1.8	1.3	.63
24	7.3	7.8	7.8	4.8	5.6	7.8	4.8	2.3	1.6	1.8	1.2	.63
25	7.3	7.8	8.3	4.8	5.6	13	4.8	2.3	1.3	2.1	1.2	.54
26	7.3	7.8	16	4.8	5.6	20	4.8	2.3	1.3	2.0	1.0	.54
27	7.3	7.8	25	4.8	6.0	33	4.5	2.3	1.6	1.8	1.0	.46
28	7.3	7.3	13	5.2	15	17	4.5	2.3	1.8	1.6	.92	.46
29	7.3	7.3	12	5.2	---	7.8	4.5	2.1	2.0	1.4	.92	.54
30	7.3	7.3	21	5.2	---	6.4	4.5	2.0	2.0	1.4	.92	.54
31	7.3	---	14	38	---	7.3	---	2.0	---	1.4	.92	---
TOTAL	345.8	363.0	290.5	368.3	204.0	583.5	185.3	95.5	54.5	64.1	47.28	17.77
MEAN	11.2	12.1	9.37	11.9	7.29	18.8	6.18	3.08	1.82	2.07	1.53	.59
MAX	44	72	25	83	15	60	14	5.6	2.0	11	2.0	.81
MIN	6.5	6.8	7.3	4.8	5.6	6.4	4.5	2.0	1.3	1.3	.92	.46
AC-FT	686	720	576	731	405	1160	368	189	108	127	94	35
CAL YR 1977	TOTAL	3288.17	MEAN	9.01	MAX	129	MIN	.47	AC-FT	6520		
WTR YR 1978	TOTAL	2619.55	MEAN	7.18	MAX	83	MIN	.46	AC-FT	5200		

10254600 ALAMO RIVER AT DROP NO. 9, NEAR HOLTVILLE, CA

LOCATION.--Lat 32°49'57", long 115°26'09", in SE&SE&NE& sec.20, T.15 S., R.15 E., Imperial County, at gaging station 3.4 mi (5.5 km) northwest of Holtville.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1969 to June 1970, August 1975 to current year.

CHEMICAL ANALYSES: August 1969 to June 1970, August 1975 to current year.

COOPERATION.--Discharges were furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT											
20...	1230	200	4200	7.6	21.0	1000	230	110	570	54	7.7
NOV											
08...	1300	190	4250	7.7	18.0	1100	240	120	540	52	7.1
DEC											
13...	1330	170	4350	7.9	16.0	1000	230	110	570	54	7.7
JAN											
25...	1120	111	4150	7.7	13.0	1300	270	150	780	56	9.4
FEB											
27...	1145	213	3550	8.1	16.5	900	200	98	440	51	6.4
MAR											
22...	1115	310	3250	7.8	18.5	930	210	99	480	52	6.8
APR											
26...	1645	322	3500	7.9	23.0	860	190	93	410	50	6.1
MAY											
23...	1115	262	4100	7.1	22.5	910	200	99	480	53	6.9
JUN											
21...	1030	213	3450	7.4	29.0	890	200	95	460	52	6.7
JUL											
18...	1100	210	3260	7.9	30.0	870	200	91	430	51	6.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)
OCT										
20...	11	230	970	650	.7	13	12	.23	740	40
NOV										
08...	11	210	1000	640	.7	13	11	.22	710	60
DEC										
13...	12	220	970	660	.7	13	9.9	.27	760	50
JAN										
25...	13	220	1100	1100	.7	11	11	1.1	860	30
FEB										
27...	11	210	700	590	.6	12	9.7	.92	550	690
MAR										
22...	14	200	840	600	.6	11	7.6	1.5	540	30
APR										
26...	15	210	800	510	.6	12	7.7	.61	570	130
MAY										
23...	14	240	840	560	.7	13	6.2	.40	610	50
JUN										
21...	14	210	800	540	.7	14	5.7	.35	610	60
JUL										
18...	13	200	760	530	.6	13	5.4	.33	600	50

10254600 ALAMO RIVER AT DROP NO. 9, NEAR HOLTVILLE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT 20...	1230	200	4200	7.6	21.0	.00	.00	.0	.00	.02
NOV 08...	1300	190	4250	7.7	18.0	.00	.00	.0	.00	.03
DEC 13...	1330	170	4350	7.9	16.0	.00	--	.0	.00	.02
JAN 25...	1120	111	4150	7.7	13.0	.00	.00	.0	.00	.01
FEB 27...	1145	213	3550	8.1	16.5	.00	.00	.0	.00	.02
MAR 22...	1115	310	3250	7.8	18.5	.00	.00	.0	.00	.08
APR 26...	1645	322	3500	7.9	23.0	.00	.00	.0	.01	.03
MAY 23...	1115	262	4100	7.1	22.5	.00	.10	.0	.01	.01
JUN 21...	1030	213	3450	7.4	29.0	.00	.00	.0	.01	.03
JUL 18...	1100	210	3260	7.9	30.0	.00	.00	.0	.00	.09

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT 20...	.02	.08	.01	.17	.01	.00	.00	.00	.00
NOV 08...	.00	.15	.00	.51	.00	.00	.00	.00	.01
DEC 13...	.00	.05	.00	.09	.00	.00	.00	.00	.00
JAN 25...	.00	.22	.01	.04	.00	.00	.00	.00	.00
FEB 27...	.00	.26	.00	.04	.02	.00	.00	.00	.00
MAR 22...	.00	.75	.00	.02	.00	.00	.00	.00	.00
APR 26...	.01	.52	.00	.18	.03	.00	.00	.00	.00
MAY 23...	.00	.09	.01	.01	.01	.00	.00	.00	.00
JUN 21...	.00	.02	.00	.00	.00	.00	.00	.00	.00
JUL 18...	.03	.01	.00	.02	.02	.00	.00	.00	.00

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MALATHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PHOS- DRIN, TOTAL (UG/L)	PCB, TOTAL (UG/L)
OCT 20...	.00	.05	.00	--	.00	.17	.00	.00	.0
NOV 08...	.13	.38	.00	--	.00	.46	.00	.03	.0
DEC 13...	.15	.00	.00	--	.00	.02	.00	--	.0
JAN 25...	.00	.00	.00	--	.00	.01	.00	.03	.0
FEB 27...	.03	.12	.00	--	.00	.01	.00	.01	.0
MAR 22...	.32	.32	.00	--	.00	.01	.00	.01	.0
APR 26...	.14	.12	.00	--	.00	.00	.00	.01	.0
MAY 23...	.00	.00	.00	--	.00	.00	.00	--	.0
JUN 21...	.00	.00	.00	.00	.00	.00	.00	.00	.0
JUL 18...	.00	.00	.00	.00	.00	.01	.00	.00	.0

DATE	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
OCT 20...	.2	.0	.02	.6	.0	0	.00	.61	.00
NOV 08...	.0	.0	.00	.0	.0	0	.00	.58	.00
DEC 13...	--	--	.00	--	--	0	.00	.12	.00
JAN 25...	.0	.0	.43	.0	.0	0	.00	.05	.04
FEB 27...	.0	.0	1.3	.1	.0	0	.00	.63	.00
MAR 22...	.0	1.0	.36	.0	.0	0	.00	.25	.00
APR 26...	.0	.0	.16	.1	.0	0	.00	1.1	.00
MAY 23...	.0	.0	.00	.1	.0	0	.00	18	.01
JUN 21...	.0	.0	.02	.0	.0	0	.00	.17	.00
JUL 18...	.0	.1	.04	.0	.0	0	.00	.32	.00

During the 1978 water year 9 samples were taken and analyzed for 2,4-DP, Chlorpyrifos, Ametryne, Atraton, Cyanazine, Cyprazine, Propazine, Simetone, Phorate, Azodrin, and Disyston. Samples were collected on the following dates: Oct. 20, Nov. 8, Jan. 25, Feb. 27, Mar. 22, Apr. 26, May 23, June 21, July 18. Compounds were detected only in the following samples:

DATE	TIME	2,4-DP (UG/L)	CHLORPYRIFOS (UG/L)	PROPAZINE (UG/L)	PHORATE (UG/L)	DISYSTON (UG/L)
OCT 20...	1230			.10		
JAN 25...	1120		.01			.01
FEB 27...	1145	.01			.01	.06
MAR 22...	1115				.14	.13
APR 26...	1645					.01
JUL 18...	1100				.01	

10254730 ALAMO RIVER NEAR NILAND, CA

LOCATION.--Lat 33°12'03", long 115°36'07", in NE¼SW¼NE¼ sec.22, T.11 S., R.13 E., Imperial County, on left bank 0.6 mi (1.0 km) upstream from mouth, and 5.8 mi (9.3 km) southwest of Niland.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1943 to current year. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is -235 ft (-72 m), from topographic map.

REMARKS.--Records good. Discharge represents seepage and return flow from irrigated areas.

COOPERATION.--Records furnished by Imperial Irrigation District and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,500 ft³/s (127 m³/s) Aug. 17, 1977, estimated by Imperial Irrigation District, minimum daily, 288 ft³/s (8.16 m³/s) Jan. 2, 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	826	709	634	412	486	1260	1450	1210	869	730	911	954
2	858	762	624	401	422	911	1460	1190	890	751	901	976
3	837	730	624	379	379	645	1680	1170	922	772	922	933
4	890	762	656	390	401	550	1530	1180	933	783	901	847
5	922	837	613	347	475	550	1340	1200	911	794	805	879
6	944	837	645	337	465	571	1240	1120	847	794	783	837
7	1020	730	613	337	507	592	1220	1090	847	901	837	772
8	911	645	645	401	475	592	1190	1100	826	911	847	772
9	815	634	581	433	592	677	1200	1090	858	890	837	911
10	772	719	613	698	687	687	1210	1140	826	815	847	933
11	762	730	581	687	634	751	1140	1190	794	826	890	901
12	783	719	592	369	539	805	1140	1180	751	826	890	1080
13	783	740	560	337	603	805	1140	1180	730	805	911	1050
14	719	709	592	317	592	794	1150	1060	719	922	879	1040
15	730	730	571	390	592	847	1120	954	687	965	890	1040
16	730	666	497	337	592	933	1200	933	677	858	933	954
17	730	677	581	444	550	1040	1140	890	719	911	911	1050
18	677	687	719	347	581	1030	1150	933	751	944	869	933
19	719	805	666	337	634	1070	1160	965	772	879	879	879
20	719	687	624	358	677	1130	1260	1030	762	847	890	890
21	719	634	603	337	719	1120	1220	1060	730	879	890	976
22	730	815	624	337	740	1060	1180	1080	709	805	826	1140
23	709	826	709	379	772	1130	1140	1080	719	847	847	1180
24	740	772	645	347	858	1140	1160	1050	815	901	826	1130
25	730	634	497	307	901	1160	1190	986	783	922	890	1020
26	783	539	560	369	847	1150	1220	1030	740	869	858	986
27	794	603	528	390	858	1130	1230	1020	687	879	858	954
28	805	550	518	390	890	1010	1180	965	687	847	954	911
29	837	656	528	412	---	976	1180	933	687	815	944	1040
30	794	603	433	454	---	1050	1270	858	666	869	901	1010
31	698	---	412	507	---	1270	---	837	---	858	965	---
TOTAL	24486	21147	18288	12287	17468	28436	37090	32704	23314	26415	27292	28978
MEAN	790	705	590	396	624	917	1236	1055	777	852	880	966
MAX	1020	837	719	698	901	1270	1680	1210	933	965	965	1180
MIN	677	539	412	307	379	550	1120	837	666	730	783	772
AC-FT	48570	41950	36270	24370	34650	56400	73570	64670	46240	52390	54130	57480
CAL YR 1977	TOTAL	310092	MEAN 850	MAX 4500	MIN 412	AC-FT 615100						
WTR YR 1978	TOTAL	297905	MEAN 816	MAX 1680	MIN 307	AC-FT 590900						

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1963 to September 1964, water year 1967 (partial-record station), August 1969 to June 1971, August 1975 to current year.

COOPERATION.--Discharges were furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT 20...	1030	719	4300	7.5	21.5	1000	210	120	570	55	7.8
NOV 08...	1030	645	4450	7.5	16.0	1100	230	130	450	47	5.9
DEC 13...	1030	560	4150	7.7	14.0	910	200	100	550	56	7.9
JAN 25...	1630	307	5100	7.8	11.5	1200	230	150	690	55	8.7
FEB 27...	1615	858	3190	7.8	17.0	830	170	98	450	54	6.8
MAR 22...	1630	1060	3650	8.1	20.0	930	190	110	480	52	6.9
APR 26...	1415	1220	3900	8.0	23.0	930	190	110	460	51	6.6
MAY 23...	1000	1080	4300	8.2	23.0	930	190	110	520	54	7.4
JUN 20...	1045	762	3620	7.9	27.0	890	190	100	490	54	7.2
JUL 18...	0945	944	3900	7.6	30.0	840	180	95	440	53	6.6
SEP 27...	1345	--	3600	7.5	28.0	890	190	100	510	55	7.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 20...	12	210	960	760	.7	13	9.1	.15	780	20	--
NOV 08...	13	220	960	670	.7	13	10	.12	770	30	--
DEC 13...	12	210	980	660	.6	12	8.1	.14	740	80	--
JAN 25...	12	220	940	990	.7	11	7.2	.18	880	30	--
FEB 27...	12	180	770	600	.7	11	8.2	.21	580	30	--
MAR 22...	16	190	850	680	.6	11	7.6	.41	630	50	--
APR 26...	15	200	790	630	.6	10	6.3	.20	620	230	--
MAY 23...	15	220	860	640	.6	11	6.2	.24	630	50	--
JUN 20...	14	190	800	620	.4	10	.05	.02	640	30	--
JUL 18...	13	180	710	560	.6	12	5.5	.16	620	40	--
SEP 27...	13	190	920	630	.6	12	19	.17	720	60	10

10254730 ALAMO RIVER NEAR NILAND, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT 20...	1030	719	4300	7.5	21.5	.00	.00	.0	.01	.02
NOV 08...	1030	645	4450	7.5	16.0	.00	.00	.0	.00	.01
DEC 13...	1030	560	4150	7.7	14.0	.00	.00	.0	.00	.03
JAN 25...	1630	307	5100	7.8	11.5	.00	.00	.0	.01	.02
FEB 27...	1615	858	3190	7.8	17.0	.00	.00	.0	.02	.06
MAR 22...	1630	1060	3650	8.1	20.0	.00	.00	.0	.02	.06
APR 26...	1415	1220	3900	8.0	23.0	.00	.20	.0	.02	.04
MAY 23...	1000	1080	4300	8.2	23.0	.00	.00	.0	.01	.04
JUN 20...	1045	762	3620	7.9	27.0	.00	.70	.0	.01	.04
JUL 18...	0945	944	3900	7.6	30.0	.00	.00	.0	.03	.07
SEP 27...	1345	--	3600	7.5	28.0	.00	.00	.0	.00	.02

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT 20...	.02	.38	.01	.26	.01	.00	.00	.00	.00
NOV 08...	.00	.18	.01	.22	.00	.00	.00	.00	.00
DEC 13...	.00	.11	.01	.21	.00	.00	.00	.00	.00
JAN 25...	.01	.20	.00	.02	.00	.00	.00	.00	.00
FEB 27...	.03	.10	.00	.01	.01	.00	.00	.00	.00
MAR 22...	.02	.21	.00	.02	.01	.00	.00	.00	.00
APR 26...	.02	.21	.00	.01	.01	.00	.00	.00	.00
MAY 23...	.01	.02	.00	.02	.01	.00	.00	.00	.00
JUN 20...	.01	.01	.00	.00	.01	.00	.00	.00	.00
JUL 18...	.03	.02	.00	.01	.01	.00	.00	.00	.00
SEP 27...	.01	.52	.01	.01	.01	.00	.00	.00	.03

DATE	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PHOS- DRIN, TOTAL (UG/L)	PCB, TOTAL (UG/L)
OCT 20...	.00	.33	.00	--	.00	.55	.00	.01	.0
NOV 08...	.13	.17	.00	--	.00	.31	.00	.00	.0
DEC 13...	1.2	.00	.00	--	.00	.00	.00	.03	.0
JAN 25...	.00	.03	.00	--	.00	.00	.00	.03	.0
FEB 27...	.04	.05	.00	--	.00	.00	.00	.03	.0
MAR 22...	.00	.38	.00	--	.00	.01	.00	.03	.0
APR 26...	.00	.13	.00	--	.00	.00	.00	.01	.0
MAY 23...	.70	.00	.00	--	.00	.00	.00	.03	.0
JUN 20...	.00	.00	.00	.00	.00	.00	.00	.00	.0
JUL 18...	.01	.00	.00	.00	.00	.00	.00	.00	.0
SEP 27...	.00	.77	.00	.00	.00	1.3	.00	.03	.0

10254730 ALAMO RIVER NEAR NILAND, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
OCT 20...	.2	.0	.01	.2	.0	0	.00	2.2	.00
NOV 08...	.0	.0	.00	.0	.0	0	.00	1.2	.00
DEC 13...	.0	.0	.01	.6	.0	0	.00	.19	.01
JAN 25...	.0	.0	.15	.0	.0	0	.00	.21	.01
FEB 27...	.0	.0	1.5	.0	.0	0	.00	1.9	.00
MAR 22...	.0	1.0	.74	.0	.0	0	.00	1.4	.00
APR 26...	.0	.2	.38	.0	.0	0	.00	4.6	.01
MAY 23...	.0	.0	.14	.0	.0	0	.00	5.8	.00
JUN 20...	.0	.5	.20	.0	.0	0	.00	.32	.00
JUL 18...	.0	.4	.21	.0	.0	0	.00	.28	.00
SEP 27...	--	--	.00	--	--	0	.00	.00	.00

During the 1978 water year 10 samples were taken and analyzed for 2,4-DP, Chlorpyrifos, Ametryne, Atraton, Cyanazine, Cyprazine, Propazine, Sime-tone, Phorate, Azodrin, and Disyston. Samples were collected on the following dates: Oct. 20, Nov. 8, Dec. 13, Jan. 25, Feb. 27, Mar. 22, Apr. 26, May 23, June 20, July 18. Compounds were detected only in the following samples:

DATE	TIME	2,4-DP (UG/L)	PHORATE (UG/L)	AZODRIN (UG/L)	DISYSTON (UG/L)
JAN 25...	1630				.01
FEB 27...	1615	.01	.02		.18
MAR 22...	1630	.01	.04		.09
APR 26...	1415				.01
JUL 18...	0945			.10	

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA
(National stream-quality accounting network station)

LOCATION.--Lat 32°39'57", long 115°30'08", in NE&SW&SE& sec.14, T.17 S., R.14 E., Imperial County, at gaging station at Second Street bridge, 0.2 mi (0.3 km) downstream from international boundary, and 0.2 mi (0.3 km) west of Calexico.

PERIOD OF RECORD.--Water years 1969 to 1971, 1973 to current year.

CHEMICAL ANALYSES: Water years 1969 to 1971, 1973 to current year.

BIOLOGICAL DATA: Water years 1973 to current year.

WATER TEMPERATURES: Water years 1974 to current year.

SEDIMENT RECORDS: Water years 1975 to current year (partial-record station).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURES: October 1973 to current year.

INSTRUMENTATION.--Specific-conductance recorder since October 1973. Temperature recorder since October 1973.

REMARKS.--Records poor. Periods of missing conductivity and temperature data due to equipment malfunction or fouled probe. Discrepancy between total and dissolved concentrations due to analytical techniques. Dates without time are composite samples.

COOPERATION.--Discharge records were furnished by Imperial Irrigation District.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 11,800 micromhos July 8, 1978; minimum recorded, 2,240 micromhos Oct. 31, 1976.

WATER TEMPERATURES: Maximum recorded, 36.5°C Sept. 13, 14, 1976; minimum recorded, 11.0°C Feb. 22, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 11,800 micromhos July 8; minimum recorded, 2,760 micromhos Jan. 2.

WATER TEMPERATURES: Maximum recorded, 35.5°C July 29; minimum recorded, 12.5°C Dec. 23, 24.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
05...	1145	110	6450	7.5	26.5	--	--	--	--	1800000	--
19...	1330	84	6300	7.5	26.0	15	--	2.0	--	--	--
NOV											
02...	1100	97	6960	7.5	19.5	--	--	--	--	830000	--
07...	1330	111	6500	7.6	19.0	25	--	1.5	--	100000	160000
DEC											
07...	1115	95	6930	7.3	17.0	--	--	--	--	620000	--
12...	1500	106	7600	7.4	17.0	10	--	5.0	--	1200000	1000000
JAN											
04...	1115	128	7230	7.4	14.5	--	--	--	--	360000	--
26...	1040	130	7100	8.1	13.0	25	--	--	--	--	--
FEB											
01...	1210	220	6630	7.4	16.0	--	--	--	--	900000	--
28...	0900	153	8410	7.9	17.0	15	--	5.2	--	K250000	330000
MAR											
02...	1400	143	7780	7.1	--	--	--	--	--	1900000	--
23...	1000	140	7800	8.2	18.8	45	--	5.9	--	190000	K36000
APR											
05...	1105	146	8100	7.4	19.5	--	--	--	--	340000	--
27...	1030	172	7550	--	23.0	35	--	3.7	--	240000	K200000
MAY											
03...	1130	157	7660	7.6	23.0	--	--	--	--	1200000	--
23...	1430	123	8010	8.1	28.0	--	36	2.1	--	K290000	K500000
JUN											
07...	1125	109	7750	7.3	26.5	--	--	--	--	1600000	--
20...	1515	89	8150	7.1	30.5	--	10	6.1	--	K1800000	650000
JUL											
05...	1145	106	8530	7.6	26.5	--	--	--	--	K7900000	--
17...	1545	125	8360	7.9	34.5	--	9.0	.1	--	2600000	940000
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
02...	1130	115	8920	7.5	29.0	--	--	--	--	K6900000	--
16...	1410	126	8250	7.2	32.0	--	50	.5	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	1115	136	7260	7.2	26.5	--	--	--	--	1.50E+07	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	1130	135	6450	7.5	27.0	--	30	.0	200	--	--

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

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT										
05...	1040	810	218	121	1000	66	13	56	280	0
19...	1100	850	230	130	970	64	13	49	320	0
NOV										
02...	1150	891	246	130	1080	66	14	52	316	0
07...	1200	920	240	140	1000	64	13	51	310	0
DEC										
07...	1140	884	244	129	1080	66	14	51	312	0
12...	1300	1100	270	150	1200	66	15	59	290	0
JAN										
04...	1300	1025	288	141	1085	64	13	41	336	0
26...	1200	980	260	140	1100	64	14	77	300	0
FEB										
01...	1080	862	238	118	1010	65	13	69	266	0
28...	1300	1100	280	150	1300	66	16	99	310	0
MAR										
02...	1210	949	264	134	1230	67	15	97	318	0
23...	1500	1200	310	170	1200	63	14	70	330	0
APR										
05...	1490	1210	314	172	1250	64	14	49	342	0
27...	1600	1300	340	180	1200	61	13	54	330	--
MAY										
03...	1400	1140	294	162	1160	63	13	44	316	0
23...	1400	1200	290	160	1400	67	16	71	--	--
JUN										
07...	1330	1080	282	152	1190	65	14	54	308	0
20...	1400	1100	290	160	1400	67	16	71	--	--
JUL										
05...	1270	1020	284	137	1350	68	16	100	310	0
17...	1200	980	260	140	1400	69	17	130	--	--
26...	1300	--	280	150	1500	68	18	150	--	--
AUG										
02...	1270	1010	298	128	1450	69	18	120	316	0
16...	1200	860	270	120	1600	72	20	140	--	--
17...	1300	--	290	140	1500	69	18	150	--	--
SEP										
06...	1120	870	228	134	1170	68	15	82	304	0
26...	1000	--	230	110	1100	67	15	110	--	--
26...	960	--	220	100	1100	69	15	100	--	--

DATE	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	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, NITRATE TOTAL (MG/L AS N)
OCT										
05...	230	14	--	760	1600	.7	20	4090	3910	--
19...	260	16	--	750	1700	.7	24	4110	4010	--
NOV										
02...	259	16	--	805	1750	.5	21	4410	4240	--
07...	250	12	--	750	1700	.7	21	4160	4060	--
DEC										
07...	256	25	--	800	1750	1.0	18	4410	4230	--
12...	240	18	--	900	2000	.7	20	4880	4740	--
JAN										
04...	276	21	--	850	1825	1.1	14	4830	4410	--
26...	250	3.8	--	810	1800	.7	19	4640	4360	--
FEB										
01...	218	17	--	675	1725	.8	15	4260	3980	--
28...	250	6.2	--	840	2300	.8	21	5370	5140	--
MAR										
02...	261	40	--	840	2050	1.0	20	5070	4790	--
23...	270	3.3	--	980	2100	.7	18	5100	5010	--
APR										
05...	281	22	--	940	2125	.5	18	5430	5040	--
27...	270	--	--	980	2000	.6	19	5070	4940	--
MAY										
03...	259	13	--	940	1950	.5	16	5000	4720	--
23...	230	--	--	930	2200	.7	20	5110	5210	--
JUN										
07...	253	25	--	865	2025	.6	18	5130	4740	--
20...	240	--	--	960	2200	.3	18	5600	5240	--
JUL										
05...	254	12	--	735	2330	1.5	24	5630	5110	--
17...	250	--	--	800	2400	.8	32	5660	5310	--
26...	230	--	1.0	820	2500	.8	36	--	--	.10
AUG										
02...	259	16	--	820	2475	.8	31	5950	5480	--
16...	310	--	--	810	2500	.8	39	5780	5670	--
17...	240	--	.8	820	2700	.8	40	--	--	.14
SEP										
06...	249	31	--	795	1900	.8	25	4730	4490	--
26...	220	--	1.0	770	1900	.7	29	--	--	.01
26...	220	--	--	730	1800	.7	26	4280	--	--

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)
OCT										
05...	.14	.60	--	--	--	--	--	--	--	--
19...	--	--	--	.90	--	3.5	--	--	--	--
NOV										
02...	.11	.50	--	--	--	--	--	--	--	--
07...	--	--	--	.20	--	1.9	--	--	--	--
DEC										
07...	.05	.20	--	--	--	--	--	--	--	--
12...	--	--	--	1.2	--	3.0	--	--	--	--
JAN										
04...	.14	.60	--	--	--	--	--	--	--	--
26...	--	--	--	1.0	--	1.7	--	--	1.9	--
FEB										
01...	.32	1.4	--	--	--	--	--	--	--	--
28...	--	--	--	1.2	--	2.4	--	--	2.5	--
MAR										
02...	.05	.20	--	--	--	--	--	--	--	--
23...	--	--	--	.94	--	2.0	--	--	2.9	--
APR										
05...	.09	.40	--	--	--	--	--	--	--	--
27...	--	--	--	.54	--	1.6	--	--	3.0	--
MAY										
03...	.34	1.5	--	--	--	--	--	--	--	--
23...	--	--	--	.48	--	2.3	--	--	--	--
JUN										
07...	.09	.40	--	--	--	--	--	--	--	--
20...	--	--	--	.12	--	2.7	--	--	4.5	--
JUL										
05...	.09	.40	--	--	--	--	--	--	--	--
17...	--	--	--	.10	--	2.1	--	--	7.9	--
26...	--	--	.40	.50	4.7	2.5	--	--	4.2	--
AUG										
02...	.11	.50	--	--	--	--	--	--	--	--
16...	--	--	--	.02	--	3.0	--	--	5.2	--
17...	--	--	.47	.61	.05	1.1	--	--	4.3	--
SEP										
06...	.11	.50	--	--	--	--	--	--	--	--
26...	--	--	.10	.11	.27	3.7	--	--	3.9	--
26...	--	--	--	.06	.02	5.1	3.7	4.8	5.9	2.4

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
19...	--	--	4.4	--	--	10	.80	--	--	--
NOV										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	3.9	--	--	4.4	.80	--	--	--
DEC										
07...	--	--	--	--	--	--	--	--	--	--
12...	--	--	4.8	--	--	1.7	.63	--	--	--
JAN										
04...	--	--	--	--	--	--	--	--	--	--
26...	3.6	.90	2.7	4.6	20	.78	.56	--	--	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
28...	4.9	1.2	3.7	6.1	27	.76	.49	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
23...	4.9	3.4	1.5	5.8	26	.78	.50	--	--	--
APR										
05...	--	--	--	--	--	--	--	--	--	--
27...	4.6	.70	3.9	5.1	23	.83	.46	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
23...	--	--	3.8	--	--	1.0	.49	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
20...	7.2	3.1	4.1	7.3	32	1.4	.87	--	--	--
JUL										
05...	--	--	--	--	--	--	--	--	--	--
17...	10	4.7	5.3	10	45	2.2	2.1	--	--	--
26...	6.7	--	--	7.2	32	1.3	--	--	--	.96
AUG										
02...	--	--	--	--	--	--	--	--	--	--
16...	8.2	2.3	5.9	8.2	36	2.0	1.4	--	--	--
17...	5.4	--	--	6.0	27	1.2	--	.59	--	--
SEP										
06...	--	--	--	--	--	--	--	--	--	--
26...	7.6	--	--	7.7	34	1.5	--	--	--	.98
26...	11	4.9	6.1	11	49	2.4	1.4	--	1.1	3.4

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)
OCT 19...	1330	84	6300	7.5	26.0	--	20	6	14	600	400	200
JAN 26...	1040	130	7100	8.1	13.0	--	10	0	11	200	0	200
APR 27...	1030	172	7550	--	23.0	--	20	6	14	200	0	200
JUL 17...	1545	125	8360	7.9	34.5	--	52	0	53	300	0	300
26...	--	--	--	--	--	1	46	--	--	200	--	--
AUG 17...	--	--	--	--	--	4	72	--	--	300	--	--
SEP 26...	--	--	--	--	--	2	51	--	--	300	--	--

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)
OCT 19...	10	9	1	10	0	10	50	50	0	20	19
JAN 26...	2	0	2	10	0	20	0	0	0	6	4
APR 27...	3	1	2	20	10	10	0	0	0	21	14
JUL 17...	3	1	2	20	20	0	2	2	0	36	32
26...	20	--	--	20	--	--	0	--	--	13	--
AUG 17...	8	--	--	10	--	--	1	--	--	20	--
SEP 26...	9	--	--	10	--	--	0	--	--	22	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 19...	1	1300	--	50	100	97	3	180	20	160	.1
JAN 26...	2	750	--	50	15	8	7	120	0	120	.1
APR 27...	7	1500	--	70	18	9	9	290	50	240	.0
JUL 17...	4	1600	1500	80	42	37	5	180	60	120	.5
26...	--	--	--	510	2	--	--	--	--	160	.2
AUG 17...	--	--	--	310	120	--	--	--	--	120	.0
SEP 26...	--	--	--	140	100	--	--	--	--	100	.0

DATE	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 19...	.1	.0	1	0	1	<10	<10	0	220	170	50
JAN 26...	.1	.0	--	--	5	0	0	0	40	10	30
APR 27...	.0	.0	3	1	2	6	6	0	60	20	40
JUL 17...	.4	.1	2	0	2	2	2	0	100	60	40
26...	--	--	2	--	--	--	--	--	40	--	--
AUG 17...	--	--	2	--	--	--	--	--	50	--	--
SEP 26...	--	--	3	--	--	--	--	--	80	--	--

SALTON SEA BASIN

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT							
19...	1330	84	6300	7.5	26.0	23	--
NOV							
07...	1330	111	6500	7.6	19.0	--	--
DEC							
12...	1500	106	7600	7.4	17.0	--	--
JAN							
26...	1040	130	7100	8.1	13.0	--	9.0
FEB							
28...	0900	153	8410	7.9	17.0	14	--
MAR							
23...	1000	140	7800	8.2	18.8	14	--
APR							
17...	1900	182	6400	7.8	22.0	--	11
18...	0100	186	5900	7.8	20.0	--	12
19...	0200	189	6600	7.8	20.0	--	12
19...	0800	213	6700	7.8	20.0	--	9.4
19...	0801	213	--	--	--	--	9.5
19...	1400	214	--	8.1	24.0	--	13
27...	1030	172	7550	--	23.0	--	19
MAY							
10...	1920	159	--	--	--	--	13
23...	1430	123	8010	8.1	28.0	26	--
JUN							
20...	1515	89	8150	7.1	30.5	26	--
20...	1600	89	8150	7.1	30.5	--	--
JUL							
17...	1545	125	8360	7.9	34.5	--	20
26...	--	--	--	--	--	16	13
AUG							
16...	1410	126	8250	7.2	32.0	34	--
17...	--	--	--	--	--	20	13
SEP							
26...	--	--	--	--	--	29	16
26...	1130	135	6450	7.5	27.0	42	--

DATE	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	TANNIN AND LIGNIN (MG/L)	PCB, TOTAL (UG/L)
OCT							
19...	>5.0	--	--	--	--	--	.0
NOV							
07...	--	--	--	--	--	--	.0
DEC							
12...	3.2	--	--	--	--	--	.0
JAN							
26...	3.7	--	--	--	--	--	.0
FEB							
28...	--	--	--	--	--	--	.0
MAR							
23...	--	--	--	--	--	--	.0
APR							
17...	3.9	--	--	--	--	--	--
18...	2.8	--	--	--	--	--	--
19...	3.2	--	--	--	--	--	--
19...	3.4	--	--	--	--	--	--
19...	2.7	--	--	--	--	--	--
19...	--	--	--	--	--	--	--
27...	1.6	--	--	--	--	--	.0
MAY							
10...	>6.7	--	--	--	--	--	--
23...	--	--	--	--	--	--	.0
JUN							
20...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	.0
JUL							
17...	>5.0	--	--	--	--	--	.2
26...	--	--	--	--	--	--	.0
AUG							
16...	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	.0
SEP							
26...	--	--	--	--	--	--	--
26...	--	.00	16	3.3	21	3.0	.1

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PHOS- DRIN, TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
OCT 19...	.00	.00	.00	.1	.0	.00	1.2	.0	0	.00	.00	.00
NOV 07...	.00	.00	.00	--	--	.00	--	--	0	.00	.00	.00
DEC 12...	.00	.00	--	--	--	.00	--	--	0	.00	.00	.00
JAN 26...	.01	.00	.00	.0	.0	.00	.0	.0	0	.00	.00	.00
FEB 28...	.00	.00	.00	--	--	.00	--	--	0	.00	.03	.00
MAR 23...	.00	.00	.00	.0	.0	.00	.0	.0	0	.00	.10	.00
APR 27...	.00	.00	.00	.0	.0	.00	.0	.0	0	.00	.09	.00
MAY 23...	.00	.00	.00	.0	.0	.00	.0	.0	0	.00	.00	.00
JUN 20...	.00	.00	.00	.0	.0	.00	.0	.0	0	.00	.00	.00
JUL 17...	.00	.00	.00	.0	.0	.00	.0	.0	0	.00	.00	.00
26...	.00	--	.00	--	--	.00	--	--	0	.00	.01	.00
AUG 17...	.00	.00	.00	--	--	.00	--	--	0	.00	.00	.00
SEP 26...	.00	.00	--	--	--	.00	--	--	0	.00	.00	.00

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	OCT 19,77 0000	NOV 7,77 1400	DEC 12,77 1500	JAN 25,78 1040	FEB 28,78 0900	MAR 23,78 1000				
TOTAL CELLS/ML	93000	28000	14000	25000	16000	1900				
DIVERSITY: DIVISION	0.4	0.8	1.1	1.2	1.2	2.0				
..CLASS	0.4	0.8	1.1	1.2	1.2	2.0				
..ORDER	1.1	1.3	1.1	1.6	1.3	2.0				
...FAMILY	1.3	1.3	1.2	1.9	1.6	2.2				
....GENUS	1.5	1.5	1.8	2.2	1.7	2.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....OOCYSTACEAE										
....EUTETRAMORUS	--	--	--	--	--	--	--	--	--	--
...CHARACIACEAE										
...SCHROEDERIA	--	--	--	--	* 0	--	--	--	--	--
...COELASTRACEAE										
....COELASTRUM	810	1	--	--	280	2	--	--	--	--
...MICRACTINIACEAE										
....MICRACTINIUM	--	--	--	--	140	1	4100#	16	11000#	66
....OOCYSTACEAE										
....ANKISTRODESMUS	1200	1	670	2	240	2	--	--	250	2
....CHODATELLA	--	--	* 0	--	--	--	* 0	--	560	3
...DICTYOSPHAERIUM	--	--	900	3	--	--	530	2	--	--
...KIRCHNERIELLA	--	--	--	--	--	--	--	--	--	--
....OOCYSTIS	* 0	--	--	--	--	--	* 0	--	--	--
...SELENASTRUM	--	--	--	--	--	--	--	--	--	--
...SCENEDESMACEAE										
....CRUCIGENIA	--	--	--	--	--	--	--	--	--	--
....SCENEDESMUS	1000	1	--	--	--	--	--	--	* 0	540#
...TETRASPORALES										29
...TETRASPORACEAE										
...SCHIZOCHLAMYDS	--	--	--	--	--	--	390	2	--	--
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	--	--	--	--	--	* 0	--	--	--
...CHLAMYDOMONAS	--	--	--	--	140	1	340	1	250	2
...CHLOROGONIUM	--	--	--	--	--	--	* 0	--	--	--
...PHACOTACEAE										
...PTEROMONAS	--	--	--	--	* 0	--	--	--	--	--
...VOLVOCAEAE										
...GONIUM	--	--	--	--	--	--	--	--	--	--
CHRYCOPHYTA										
..BACILLARIOPHYCEAE										
...PENNIALES										
...NAVICULACEAE										
....ENTOMONEIS	--	--	--	--	* 0	--	* 0	--	--	--
...CENTRALES										
...CHAETOCERACEAE										
....ATTHEYA	--	--	--	--	--	--	--	--	--	--
....CHAETOCEROS	--	--	--	--	--	--	--	--	--	--
...COSCINODISCACEAE										
....CYCLOTELLA	1400	2	* 0	100	1	1500	6	560	3	--
....MELOSIRA	--	--	410	1	--	--	--	--	--	--
....SKELETONEMA	--	--	--	--	--	--	--	--	--	--
....STEPHANODISCUS	* 0	--	--	--	--	--	--	--	--	--
...RHIZOSOLENACEAE										
....RHIZOSOLENIA	--	--	--	--	--	--	--	--	* 0	--
...PENNIALES										
...ACHNANTHACEAE										
....COCCONEIS	--	--	--	--	* 0	--	--	--	--	--
...FRAGILARIACEAE										
....FRAGILARIA	--	--	--	--	--	--	--	--	--	--
....SYNEDRA	--	--	--	--	--	--	--	310	2	270
...NAVICULACEAE										14
....DIPLONEIS	--	--	--	--	--	--	--	--	--	--
....NAVICULA	--	--	--	--	* 0	340	1	--	--	270
...NITZSCHACEAE										14
....NITZSCHIA	--	--	* 0	* 0	* 0	* 0	--	--	--	--
...XANTHOPHYCEAE										
...HETEROCOCCALES										
...CHLOROTHECIACEAE										
....OPHIOCYTIUM	--	--	--	--	--	--	--	--	* 0	--
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	--	--	--	--	--	--	--	--	270

See footnotes at end of table.

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	OCT 19,77 0000		NOV 7,77 1400		DEC 12,77 1500		JAN 25,78 1040		FEB 28,78 0900		MAR 23,78 1000	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROCOCCALES												
....AGMENELLUM	11000	12	3200	12	--	-	--	-	--	-	--	-
....ANACYSTIS	4600	5	300	1	--	-	580	2	--	-	--	-
...HORMOGONALES												
....NOSTOCACEAE												
....APHANIZOMENON	68000#	73	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIA												
....LYNGBYA	3700	4	--	-	2600#	18	1100	4	--	-	--	-
....OSCILLATORIA	--	-	20000#	73	8300#	58	15000#	59	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	*	0	--	-	--	-
...RIVULARIACEAE												
....RAPHIIDIOPSIS	--	-	--	-	--	-	780	3	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
....EUGLENA	920	1	1700	6	2300#	16	440	2	3200#	19	270	14
....LEPOCINCLIS	--	-	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	*	0	*	0	270	14
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...GYMNODINIALES												
....GYMNODINIACEAE												
....GYMNODINIUM	--	-	--	-	--	-	--	-	--	-	--	-
...PERIDINIALES												
....PERIDINIACEAE												
....PERIDINIUM	--	-	--	-	--	-	--	-	310	2	--	-

See footnotes at end of table.

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	APR 27,78 1030	MAY 23,78 1430	JUN 20,78 1515	JUL 17,78 1545	AUG 16,78 1410	
TOTAL CELLS/ML	72000	180000	460000	510000	60000	
DIVERSITY: DIVISION	1.0	1.3	0.8	0.1	0.1	
..CLASS	1.0	1.3	0.8	0.1	0.1	
...ORDER	1.4	2.0	1.6	1.0	1.1	
...FAMILY	1.6	2.2	1.7	1.0	1.1	
....GENUS	2.4	2.9	1.9	1.2	1.8	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....EUTETRAMORUS	--	--	4100	2	--	--
...CHARACIACEAE					* 0	--
...SCHROEDERIA	--	--	--	--		--
...COELASTRACEAE						
...COELASTRUM	--	--	--	--	13000	3
...MICRACTINIACEAE						
...MICRACTINIUM	--	--	--	--	--	--
...OOCYSTACEAE						
....ANKISTRODESMUS	3100	4	8200	4	* 0	* 0
....CHODATELLA	--	--	1000	1	--	--
....DICTYOSPHAERIUM	650	1	--	--	* 0	--
....KIRCHNERIELLA	--	--	--	--	* 0	--
...OOCYSTIS	--	--	2600	1	--	--
...SELENASTRUM	--	--	2000	1	--	--
...SCENEDESMACEAE						
...CRUCIGENIA	650	1	--	--	--	--
...SCENEDESMUS	650	1	1000	1	13000	3
...TETRASPORALES						450
...TETRASPORACEAE						1
...SCHIZOCHLAMYS	--	--	--	--	--	--
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	810	1	--	--	--	--
....CHLAMYDOMONAS	980	1	--	--	17000	4
...CHLOROGONIUM	--	--	--	--	--	* 0
...PHACOTACEAE						
...PTEROMONAS	--	--	--	--	--	--
...VOLVOCAEAE						
...GONIUM	--	--	--	--	2500	1
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...PENNALES						
...NAVICULACEAE						
...ENTOMONEIS	--	--	--	--	--	--
..CENTRALES						
...CHAETOCERACEAE						
....ATTHEYA	--	--	7100	4	--	--
...CHAETOCEROS	1300	2	--	--	--	--
...COSCINODISCACEAE						
...CYCLOTETRA	2800	4	26000	14	11000	2
...MELOSIRA	--	--	3100	2	* 0	* 0
...SKELETONEMA	* 0	--	--	--	--	--
...STEPHANODISCUS	--	--	--	--	--	--
...RHIZOSOLENIACEAE						
...RHIZOSOLENIA	--	--	--	--	--	--
...PENNALES						
...ACHNANTHACEAE						
...COCCONEIS						
...FRAGILARIACEAE						
...FRAGILARIA	490	1	4600	3	--	--
...SYNEDRA	--	--	--	--	--	--
...NAVICULACEAE						
...DIPLONEIS	* 0	--	--	--	--	--
...NAVICULA	1100	2	--	--	--	--
...NITZSCHIAEAE						
...NITZSCHIA	* 0	--	1000	1	--	* 0
...XANTHOPHYCEAE						
...HETEROCOCCALES						
...CHLOROTHECIACEAE						
...OPHIOCYTIUM	--	--	--	--	* 0	--
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONIDALES						
...CRYPTOMONODACEAE						
...CRYPTOMONAS	--	--	* 0	--	--	* 0

See footnotes at end of table.

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	APR 27,78 1030		MAY 23,78 1430		JUN 20,78 1515		JUL 17,78 1545		AUG 16,78 1410	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCOCCALES										
...CHROCOCCACEAE										
....AGMENELLUM	1300	2	62000#	34	80000#	17	210000#	42	25000#	41
....ANACYSTIS	2100	3	14000	8	7600	2	13000	3	5800	10
...HORMOGONALES										
...NOSTOCACEAE										
....APHANIZOMENON	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
....LYNGBYA	17000#	24	5100	3	7000	2	4100	1	4500	7
....OSCILLATORIA	36000#	50	39000#	22	300000#	64	280000#	54	24000#	41
....SPIRULINA	*	0	--	-	*	0	--	-	--	-
...RIVULARIACEAE										
....RAPHIIDIOPSIS	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....EUGLENA	1600	2	--	-	*	0	--	-	--	-
....LEPOCINCLIS	*	0	--	-	--	-	--	-	--	-
....TRACHELOMONAS	*	0	1000	1	8200	2	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...GYMNODINIALES										
...GYMNODINIACEAE										
....GYMNODINIUM	--	-	--	-	2500	1	--	-	--	-
...PERIDINIALES										
...PERIDINIACEAE										
....PERIDINIUM	*	0	--	-	--	-	--	-	--	-

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

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

PERIPHYTON

DATE	TIME	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
MAR 23...	1000	22.6	.000	14.0	9.68	23
JUL 17...	1600	25.7	1.11	60.7	52.3	27

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	7780	5940	6890	7840	7070	7410	2770	2520	2650
2	---	---	---	7640	6140	6860	7630	6790	7160	3670	1630	2720
3	---	---	---	7720	5920	6920	8130	6710	7040	3870	3560	3730
4	---	---	---	7510	5700	6820	8250	6570	7260	3860	3420	3690
5	---	---	---	7710	5750	6880	7690	6600	6880	6760	2820	4300
6	---	---	---	7780	5980	7010	7920	6300	6870	6910	5830	6500
7	---	---	---	7750	6630	6990	---	---	---	6480	5960	6250
8	---	---	---	7860	6120	7170	---	---	---	6460	3820	6030
9	---	---	---	7870	6750	7130	---	---	---	6340	4200	5350
10	---	---	---	7850	6770	7190	---	---	---	5550	3800	4670
11	---	---	---	7730	6360	7120	---	---	---	6280	4650	5490
12	---	---	---	7940	6770	7050	---	---	---	7340	5870	6290
13	8110	6290	7270	7740	5870	6920	---	---	---	6650	5820	6370
14	7960	6380	6970	7750	5980	6940	---	---	---	6840	5350	6250
15	6990	6160	6540	7790	6250	7040	6360	4600	5530	6160	5740	5890
16	6900	6120	6540	7570	6620	7070	7780	4980	6020	6430	5750	6130
17	7660	6330	6800	7360	6580	6950	8140	6560	6960	6500	5690	6140
18	7050	6310	6770	7810	6300	6910	7930	5820	6770	6810	5380	6290
19	7150	6440	6830	7720	6140	6980	8770	6230	6910	7050	5230	6190
20	7250	5230	6530	7810	6300	7230	6410	5680	5980	6910	6230	6680
21	8110	6380	7090	7620	5000	6860	6450	5830	6070	7130	6180	6630
22	8610	6240	7620	6060	5390	5560	6720	6370	6520	6620	5160	5790
23	8370	6490	7380	6990	5480	5830	6910	6370	6630	6450	5720	5970
24	8180	6590	7520	8170	5960	6700	6850	6340	6550	7870	6230	6530
25	8190	6350	7270	8020	6720	7220	6740	5580	6220	7950	1680	6960
26	8430	6480	7470	7320	6730	7010	7080	6100	6640	7660	6800	7110
27	8460	5760	7310	7570	5790	6820	6400	3910	4860	7480	6740	7220
28	7800	6030	6840	7040	6510	6710	4480	3330	3950	7340	6750	7110
29	7200	5610	6720	7130	6690	6860	5620	2520	3840	7480	6560	6960
30	7760	6530	6870	8050	6920	7270	2610	2560	2580	7400	4790	5950
31	7630	6280	7120	---	---	---	2550	2470	2500	7890	5710	6960
MONTH	---	---	---	8170	5000	6900	---	---	---	7950	1630	5830

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7360	5290	6060	7840	7130	7490	9570	7550	8410	8530	6100	7500
2	5080	3040	4240	7700	7070	7430	8670	7780	8180	7790	6450	6940
3	7070	5630	6240	8070	7410	7770	9120	7900	8320	7440	5420	6700
4	7040	6390	6820	8020	6860	7550	8280	7780	8100	7720	5700	6470
5	7520	5910	6480	7280	6900	7080	9060	6370	7990	7880	5570	6560
6	7070	6180	6550	7170	6820	7070	8230	5570	7230	8750	6660	7880
7	7680	6220	7110	7200	6540	6980	8650	6090	7480	8600	7120	7640
8	8300	6870	7330	7120	6370	6660	8900	7750	8220	8180	6990	7350
9	7820	6270	6990	6970	6260	6740	8890	7460	7960	7500	6360	7040
10	8470	6740	7560	8200	6700	7270	7930	7130	7650	7870	6180	6810
11	8390	6640	7580	7990	7110	7510	8430	7220	7640	7800	6000	6830
12	7640	7330	7480	7740	7110	7390	8570	7500	7850	7730	6420	6910
13	---	---	---	8290	7120	7470	7850	7090	7650	8080	6680	7250
14	---	---	---	7380	6890	7200	8920	7490	7950	8190	7020	7380
15	---	---	---	7260	6790	7060	8970	7530	8170	7660	6870	7280
16	8170	7550	7840	7580	6920	7220	8320	7570	7920	8140	6910	7430
17	---	---	---	7710	6990	7450	8300	7070	7850	8210	6940	7400
18	7830	7280	7580	7580	6910	7320	8200	7530	7870	8610	6550	7550
19	---	---	---	8310	6800	7460	7770	7360	7570	8200	6630	7400
20	7740	6460	7030	8440	6860	7350	8950	6280	7930	8530	6560	7390
21	7050	6540	6750	8340	6990	7480	9350	7110	8320	8260	7250	7630
22	7360	6100	6760	8720	6900	7740	8750	6480	7320	8560	7180	7680
23	7730	6690	7050	8430	7450	7860	7840	5840	7120	8800	7180	7900
24	7700	6310	7070	8640	7400	7840	7630	6590	6950	8620	6500	7650
25	7400	6420	6620	8610	7350	7760	7590	6690	7210	7950	6720	7390
26	7820	6200	6690	8780	7350	8020	8470	6970	7790	8210	7140	7450
27	8180	6060	6920	8080	7620	7860	8670	5960	7730	8420	6560	7610
28	8100	6380	4560	8160	7370	7860	8450	6960	7460	8350	7210	7600
29	---	---	---	7860	7490	7650	8630	6710	7730	8170	7670	7860
30	---	---	---	8320	7560	7870	8480	6330	7810	8210	7430	7940
31	---	---	---	9010	7550	8190	---	---	---	8740	6760	7680
MONTH	8470	3040	6750	9010	6260	7470	9570	5570	7780	8800	5420	7360

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8410	7170	7780	---	---	---	10800	7620	9060	---	---	---
2	8930	7000	7970	---	---	---	10600	7370	9470	---	---	---
3	8860	7080	8010	---	---	---	---	---	---	---	---	---
4	8100	6400	7040	---	---	---	8340	7620	7920	---	---	---
5	7740	6510	7080	---	---	---	---	---	---	---	---	---
6	7150	5760	6650	---	---	---	---	---	---	---	---	---
7	6800	6400	6660	---	---	---	---	---	---	---	---	---
8	6850	6300	6620	11700	7630	9770	---	---	---	---	---	---
9	7100	6470	6760	11300	7640	9760	---	---	---	---	---	---
10	8500	6720	7160	11600	7780	10200	---	---	---	---	---	---
11	8420	7640	8080	11800	8330	9980	5510	4910	5080	---	---	---
12	8720	7540	8040	12000	8390	10100	---	---	---	---	---	---
13	7860	7290	7590	11200	8600	10200	---	---	---	---	---	---
14	7930	7240	7590	11700	8720	9870	6950	4870	5200	---	---	---
15	8050	7460	7730	11800	8250	9440	---	---	---	---	---	---
16	7950	7270	7710	11800	7130	10100	---	---	---	---	---	---
17	8550	7370	7750	---	---	---	---	---	---	---	---	---
18	7950	7050	7510	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	8610	7100	7960	---	---	---	---	---	---	---	---	---
22	8560	7300	7660	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	9290	8470	8820	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	6460	5860	6200
28	---	---	---	---	---	---	---	---	---	6820	4980	6230
29	---	---	---	---	---	---	---	---	---	6160	5260	5710
30	---	---	---	---	---	---	---	---	---	5220	4460	4780
31	---	---	---	10700	8430	9210	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
YEAR	12000	1630	7070									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	26.0	20.0	23.0	---	---	---	17.5	16.0	16.5
2	---	---	---	25.0	20.0	23.0	---	---	---	17.0	15.5	16.5
3	---	---	---	24.5	20.5	22.5	---	---	---	16.5	15.0	15.5
4	---	---	---	25.5	21.0	23.0	---	---	---	16.5	14.5	15.5
5	---	---	---	24.5	21.5	23.5	---	---	---	17.0	15.0	16.0
6	---	---	---	23.5	18.5	21.0	---	---	---	16.5	14.5	16.0
7	---	---	---	22.5	18.5	21.0	---	---	---	17.5	15.0	16.5
8	---	---	---	20.5	17.0	19.0	---	---	---	18.0	15.0	16.5
9	---	---	---	20.5	17.0	19.0	---	---	---	16.0	15.5	15.5
10	---	---	---	19.5	16.5	18.5	---	---	---	15.5	15.0	15.5
11	---	---	---	20.0	16.0	18.0	---	---	---	16.5	15.0	15.5
12	---	---	---	21.0	17.5	18.5	---	---	---	17.0	15.0	16.0
13	---	---	---	21.0	17.5	19.5	---	---	---	17.0	15.0	16.0
14	---	---	---	22.0	19.0	20.5	---	---	---	16.5	15.5	16.0
15	---	---	---	23.0	18.5	21.0	18.0	15.0	16.5	17.5	15.5	16.5
16	---	---	---	23.0	20.0	22.0	17.5	15.0	16.0	16.5	15.0	15.5
17	---	---	---	23.5	20.0	22.0	17.5	14.5	16.0	17.5	15.0	16.0
18	---	---	---	---	---	---	17.0	14.5	16.0	17.5	15.0	16.0
19	---	---	---	---	---	---	16.0	14.0	15.0	17.0	15.5	16.0
20	---	---	---	---	---	---	14.5	13.0	14.0	17.5	14.5	16.0
21	---	---	---	---	---	---	14.0	13.0	13.5	17.5	15.0	16.0
22	25.5	22.5	24.5	---	---	---	14.0	13.0	13.5	17.5	15.0	16.5
23	26.5	22.0	24.5	---	---	---	13.5	12.5	13.0	17.0	15.0	16.0
24	27.5	23.0	25.0	---	---	---	15.0	12.5	13.5	15.5	13.5	14.5
25	28.0	22.5	25.0	---	---	---	14.5	13.0	14.0	15.5	13.0	14.5
26	27.5	22.0	25.0	---	---	---	14.0	13.5	14.0	16.0	13.0	14.5
27	27.5	22.0	25.0	---	---	---	15.0	13.5	14.5	15.5	13.5	14.5
28	27.0	22.5	24.5	---	---	---	15.5	14.5	15.0	16.0	13.0	14.5
29	26.0	22.5	24.0	---	---	---	16.5	15.0	15.5	16.5	14.0	15.5
30	25.5	20.5	23.0	---	---	---	17.5	16.0	16.5	16.5	15.5	16.0
31	24.5	20.5	22.5	---	---	---	17.0	16.0	16.5	18.0	15.5	16.5
MONTH	---	---	---	---	---	---	---	---	---	18.0	13.0	16.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.5	15.5	17.0	19.5	17.5	18.5	24.5	20.5	22.0	23.0	19.0	21.0
2	19.0	16.0	17.5	19.5	17.5	18.5	24.0	20.5	22.0	25.5	20.0	22.5
3	19.5	16.0	17.5	20.5	17.5	18.5	24.0	19.5	21.5	27.0	21.0	24.0
4	18.5	16.5	17.5	19.5	18.0	19.0	23.5	20.0	22.0	27.0	22.0	24.5
5	17.5	16.5	17.0	19.5	17.5	18.5	23.5	18.5	21.0	27.0	22.5	24.5
6	19.0	15.5	17.5	21.0	16.5	18.5	24.0	19.0	21.0	26.0	21.0	23.5
7	18.5	15.5	17.0	21.0	17.0	19.0	22.5	19.0	20.5	26.5	21.5	24.0
8	19.0	15.5	17.5	21.5	17.5	19.5	21.5	17.5	19.5	27.5	22.5	24.5
9	20.0	17.5	19.0	22.5	18.5	20.0	21.0	17.0	19.0	28.0	22.5	25.0
10	19.5	16.5	18.0	21.5	17.5	19.5	23.0	17.5	20.0	27.5	23.0	25.0
11	18.0	15.0	16.5	20.5	17.5	19.0	24.5	18.5	21.5	27.5	21.5	24.5
12	17.5	14.5	16.0	20.0	17.5	18.5	25.0	20.5	23.0	29.0	24.0	26.5
13	17.0	15.5	16.5	21.0	16.5	18.5	25.5	20.5	22.5	30.0	24.0	27.0
14	17.5	14.0	16.0	21.5	17.5	19.5	24.0	19.5	21.5	29.5	24.5	27.0
15	18.0	14.5	16.0	22.0	17.0	19.5	24.5	20.0	22.0	27.5	24.0	25.5
16	17.5	14.5	16.0	22.5	17.5	19.5	23.0	19.5	21.0	26.5	21.5	24.0
17	17.5	14.0	15.5	23.0	17.5	20.0	23.5	18.5	21.0	26.5	22.0	24.0
18	17.5	14.0	15.5	21.0	19.0	20.0	24.0	19.0	21.5	27.5	22.5	25.0
19	17.5	13.5	15.5	23.0	19.0	20.5	25.0	20.0	22.0	28.5	23.0	25.5
20	18.5	14.0	16.0	22.5	19.5	21.0	23.5	19.5	21.5	29.0	24.5	27.0
21	19.0	14.5	17.0	24.0	20.0	22.0	22.5	18.0	20.0	30.0	25.0	27.5
22	20.0	15.5	17.5	23.0	20.0	21.5	23.5	19.0	21.0	30.0	26.0	27.5
23	20.5	16.0	18.0	23.5	19.0	21.0	25.0	19.5	22.0	29.0	25.0	26.5
24	20.5	17.0	18.5	24.0	20.0	21.5	25.0	20.5	23.0	26.5	21.5	24.0
25	21.0	18.0	19.5	24.5	20.0	22.0	26.5	22.5	24.0	26.5	21.5	24.0
26	20.0	18.0	19.0	25.0	20.5	22.5	24.0	20.0	22.0	27.0	22.5	24.5
27	19.5	18.0	19.0	25.5	21.5	23.0	25.5	19.5	22.0	28.0	23.5	25.5
28	19.0	18.0	18.5	25.0	20.0	22.5	26.5	21.0	23.5	28.5	24.0	26.0
29	---	---	---	25.5	21.5	23.0	25.5	22.0	23.5	29.5	24.5	26.5
30	---	---	---	24.0	21.0	22.5	24.5	20.5	22.0	30.5	25.5	28.0
31	---	---	---	24.5	21.0	22.5	---	---	---	29.5	24.0	27.0
MONTH	21.0	13.5	17.0	25.5	16.5	20.5	26.5	17.0	21.5	30.5	19.0	25.0
JUNE				JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	29.5	24.0	26.5	---	---	---	34.0	30.0	31.5	---	---	---
2	30.5	25.0	27.5	---	---	---	33.5	30.0	31.0	---	---	---
3	31.0	25.5	28.0	---	---	---	34.0	29.5	32.0	---	---	---
4	31.5	26.5	29.0	---	---	---	33.5	30.0	31.5	---	---	---
5	31.5	26.5	28.5	---	---	---	34.5	30.0	32.5	---	---	---
6	31.5	26.5	29.0	---	---	---	35.0	30.5	33.0	---	---	---
7	32.0	26.0	29.0	---	---	---	35.0	30.5	33.0	---	---	---
8	33.0	27.5	30.0	---	---	---	35.0	30.0	32.0	---	---	---
9	32.0	28.5	30.5	---	---	---	35.0	30.0	32.0	---	---	---
10	31.5	26.0	28.0	---	---	---	34.5	30.0	32.0	---	---	---
11	31.0	25.0	27.5	---	---	---	32.5	30.0	31.0	---	---	---
12	32.5	26.5	29.0	---	---	---	34.5	29.5	31.5	---	---	---
13	32.5	27.0	29.5	---	---	---	34.0	29.5	31.0	---	---	---
14	30.5	27.0	28.5	---	---	---	33.0	28.5	30.5	---	---	---
15	30.0	24.5	27.0	---	---	---	33.0	29.0	30.5	---	---	---
16	30.0	24.5	27.0	---	---	---	32.5	28.5	---	---	---	---
17	30.5	25.5	28.0	---	---	---	---	---	---	---	---	---
18	31.5	27.0	29.0	35.0	30.5	33.0	---	---	---	---	---	---
19	31.0	26.0	28.5	35.0	31.5	33.0	---	---	---	---	---	---
20	30.5	25.5	28.0	34.5	30.5	32.5	---	---	---	---	---	---
21	30.0	26.0	27.5	34.5	30.5	32.5	---	---	---	---	---	---
22	---	---	---	34.5	30.5	32.0	---	---	---	---	---	---
23	---	---	---	34.0	30.0	31.5	---	---	---	---	---	---
24	---	---	---	31.5	29.5	31.0	---	---	---	---	---	---
25	---	---	---	34.0	29.5	31.5	---	---	---	---	---	---
26	---	---	---	35.0	30.0	32.5	---	---	---	---	---	---
27	---	---	---	35.0	30.0	32.5	---	---	---	30.5	26.5	28.5
28	---	---	---	35.0	31.5	33.0	---	---	---	31.5	28.0	29.5
29	---	---	---	35.5	30.5	33.0	---	---	---	31.0	28.0	29.5
30	---	---	---	35.0	31.0	33.0	---	---	---	31.0	27.5	29.5
31	---	---	---	34.5	30.5	32.5	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
YEAR	35.5	12.5	22.0									

SALTON SEA BASIN

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
19...	1300	84	26.0	65	50
NOV					
07...	1330	111	19.0	68	18
DEC					
12...	1500	106	17.0	42	78
JAN					
26...	1040	130	13.0	40	72
FEB					
28...	0900	153	17.0	40	87
MAR					
23...	1000	140	19.0	69	94
APR					
27...	1030	172	23.0	258	41
MAY					
23...	1430	123	28.0	183	38
JUN					
20...	1515	89	30.5	80	36
JUL					
17...	1545	125	34.5	75	35
SEP					
26...	1130	135	27.0	43	48

10255550 NEW RIVER NEAR WESTMORLAND, CA

LOCATION.--Lat 33°06'17", long 115°39'49", in SW¼SW¼SW¼ sec.19, T.12 S., R.13 E., Imperial County, on right bank 3.5 mi (5.6 km) upstream from mouth, and 5.2 mi (8.4 km) northwest of Westmorland.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1943 to current year. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is -220 ft (-67 m), from topographic map.

REMARKS.--Records good. Discharge represents seepage and return flow from irrigated areas.

COOPERATION.--Records were furnished by Imperial Irrigation District and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,000 ft³/s (85 m³/s) Aug. 17-18, 1977, estimated by Imperial Irrigation District; minimum daily, 293 ft³/s (8.30 m³/s) Jan. 6, 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	513	455	417	457	451	726	691	670	601	519	545	580
2	509	448	417	406	442	697	695	704	600	543	532	545
3	492	431	422	394	468	607	691	691	598	547	532	557
4	490	448	449	386	457	515	691	732	598	542	505	582
5	513	455	449	368	427	519	697	736	572	555	515	561
6	545	461	431	370	418	487	700	714	566	551	559	545
7	536	436	409	377	404	457	710	697	553	563	542	540
8	483	444	404	377	409	451	734	641	555	521	555	521
9	488	431	408	377	429	455	718	655	551	545	528	505
10	498	429	415	364	446	487	724	640	488	584	511	490
11	515	436	411	422	453	507	766	632	468	572	519	500
12	477	464	409	404	438	509	760	630	479	566	523	619
13	472	475	402	394	424	534	740	601	479	570	553	676
14	455	464	398	377	466	553	697	611	505	561	551	553
15	457	440	398	390	468	576	672	605	464	561	576	507
16	457	436	420	366	494	615	677	596	463	532	538	545
17	459	461	418	366	461	590	704	568	479	553	526	584
18	448	475	408	352	475	555	724	603	500	582	519	566
19	427	438	422	352	492	540	752	626	481	523	547	517
20	433	440	417	352	487	563	744	628	483	511	538	496
21	411	451	431	359	509	590	752	672	477	500	549	494
22	431	440	464	355	492	609	789	640	494	468	507	563
23	466	438	466	366	513	609	766	636	470	453	538	557
24	453	455	485	392	538	668	738	598	485	426	511	582
25	442	396	494	388	545	643	748	590	488	479	528	582
26	444	415	542	380	568	664	746	580	466	530	536	594
27	453	431	570	384	574	640	728	566	481	570	543	605
28	461	435	628	400	636	641	698	566	464	584	563	574
29	461	438	647	436	---	624	706	568	477	582	540	542
30	453	417	630	431	---	655	689	584	504	553	545	586
31	449	---	538	459	---	664	---	592	---	543	576	---
TOTAL	14591	13283	14219	12001	13384	17950	21647	19572	15289	16689	16650	16668
MEAN	471	443	459	387	478	579	722	631	510	538	537	556
MAX	545	475	647	459	636	726	789	736	601	584	576	676
MIN	411	396	398	352	404	451	672	566	463	426	505	490
AC-FT	28940	26350	28200	23800	26550	35600	42940	38820	30330	33100	33030	33060
CAL YR 1977	TOTAL	208207	MEAN 570	MAX 3000	MIN 396	AC-FT 413000						
WTR YR 1978	TOTAL	191943	MEAN 526	MAX 789	MIN 352	AC-FT 380700						

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1963 to September 1964, water year 1967 (partial-record station), August 1969 to June 1971, August 1975 to current year.

COOPERATION.--Discharges were furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT 20...	0900	433	5500	7.5	21.0	1100	230	120	780	61	10
NOV 08...	0900	444	6100	7.8	16.5	1200	260	130	940	63	12
DEC 13...	0900	402	6000	7.5	14.5	840	140	120	930	70	14
JAN 25...	1520	388	6800	7.7	14.0	1100	190	150	1000	66	13
FEB 27...	1525	574	4950	7.7	17.5	910	200	100	950	69	14
MAR 22...	1520	609	5280	8.1	20.0	1100	240	120	790	59	10
APR 26...	1215	746	5000	7.9	21.5	980	210	110	640	58	8.9
MAY 23...	0845	636	5500	8.2	22.0	980	210	110	750	62	10
JUN 20...	0945	483	5850	--	27.0	1200	240	140	850	60	11
JUL 18...	0900	582	4930	7.8	29.5	900	200	97	740	63	11
SEP 27...	1215	--	4500	7.1	28.0	880	200	92	700	62	10

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 20...	20	240	850	1200	.7	17	4.2	.18	1400	40	--
NOV 08...	23	250	880	1500	.7	17	4.2	.25	1500	60	--
DEC 13...	25	240	880	1400	.6	16	3.7	.44	1500	50	--
JAN 25...	31	250	1000	1500	.7	15	2.3	.21	1600	30	--
FEB 27...	31	200	720	1400	.7	14	4.3	.19	1200	40	--
MAR 22...	64	210	810	1300	.6	14	4.9	.41	1200	30	--
APR 26...	21	220	700	1000	.6	14	3.6	.34	980	1200	--
MAY 23...	24	240	760	1100	.6	14	3.0	.48	1100	60	--
JUN 20...	28	230	870	1400	.5	10	.22	.02	1500	50	--
JUL 18...	39	210	670	1100	.7	16	2.7	.36	1200	110	--
SEP 27...	42	210	760	1000	.6	16	3.4	.31	1200	50	50

10255550 NEW RIVER NEAR WESTMORLAND, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
OCT										
20...	0900	433	5500	7.5	21.0	.00	.00	.0	.00	.00
NOV										
08...	0900	444	6100	7.8	16.5	.00	.00	.0	.00	.01
DEC										
13...	0900	402	6000	7.5	14.5	.00	.00	.0	.00	.01
JAN										
25...	1520	388	6800	7.7	14.0	.00	.00	.0	.01	.01
FEB										
27...	1525	574	4950	7.7	17.5	.00	.00	.0	.10	.10
MAR										
22...	1520	609	5280	8.1	20.0	.00	.00	.0	.01	.01
APR										
26...	1215	746	5000	7.9	21.5	.00	.10	.0	.01	.03
MAY										
23...	0845	636	5500	8.2	22.0	.00	.00	.0	.01	.01
JUN										
20...	0945	483	5850	--	27.0	.00	.00	.0	.01	.02
JUL										
18...	0900	582	4930	7.8	29.5	.00	.00	.0	.02	.02
SEP										
27...	1215	--	4500	7.1	28.0	.00	.00	.0	.01	.00

DATE	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT									
20...	.00	.09	.00	.06	.00	.00	.00	.00	.00
NOV									
08...	.00	.49	.01	.14	.00	.00	.00	.00	.00
DEC									
13...	.01	.27	.01	.14	.00	.00	.00	.00	.01
JAN									
25...	.01	.08	.00	.03	.00	.00	.00	.00	.00
FEB									
27...	.10	.14	.10	.20	.00	.00	.00	.00	.00
MAR									
22...	.00	.00	.01	.01	.00	.00	.00	.00	.01
APR									
26...	.01	.05	.00	.01	.00	.00	.00	.00	.01
MAY									
23...	.01	.00	.01	.01	.00	.00	.00	.00	.00
JUN									
20...	.01	.13	.00	.01	.00	.00	.00	.00	.01
JUL									
18...	.01	.05	.01	.01	.00	.00	.00	.00	.00
SEP									
27...	.01	.09	.01	.00	.00	.00	.00	.00	.00

10255550 NEW RIVER NEAR WESTMORLAND, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PHOS- DRIN, TOTAL (UG/L)	PCB, TOTAL (UG/L)
OCT 20...	.00	.02	.00	--	.00	.03	.00	.00	.0
NOV 08...	.21	.10	.00	--	.00	.21	.00	.00	.0
DEC 13...	.29	.00	.00	--	.00	.03	.00	.01	.0
JAN 25...	.00	.00	.00	--	.00	.00	.00	.03	.0
FEB 27...	.04	.02	.00	--	.00	.00	.00	.01	.0
MAR 22...	.00	.00	.00	--	.00	.00	.00	.01	.0
APR 26...	.00	.04	.00	--	.00	.00	.00	.00	.0
MAY 23...	.01	.00	.00	--	.00	.00	.00	.00	.0
JUN 20...	.03	.00	.00	.00	.00	.00	.00	.00	.0
JUL 18...	.00	.00	.00	.00	.00	.00	.00	.00	.0
SEP 27...	.00	.00	.00	.00	.00	.82	.00	.00	.0

DATE	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
OCT 20...	.2	.0	.00	1.2	.0	0	.00	4.1	.00
NOV 08...	--	--	.00	--	--	0	.00	.35	.00
DEC 13...	.0	.0	.01	.0	.0	0	.00	.06	.00
JAN 25...	.0	.0	.06	.0	.0	0	.00	.06	.00
FEB 27...	.0	.0	.55	.2	.0	0	.00	2.3	.00
MAR 22...	.0	.0	.91	.0	.0	0	.00	1.1	.00
APR 26...	.0	.0	.24	.0	.0	0	.00	.79	.00
MAY 23...	.0	.0	.10	.0	.0	0	.00	.19	.00
JUN 20...	.0	.0	.06	.0	.0	0	.00	.28	.00
JUL 18...	.0	.0	.05	.0	.0	0	.00	.13	.00
SEP 27...	--	--	.07	--	--	0	.00	.85	.00

During the 1978 water year 9 samples were taken and analyzed for 2,4-DP, Chlorpyrifos, Ametryne, Atraton, Cyanazine, Cyprazine, Propazine, Simetone, Phorate, Azodrin, and Disyston. Samples were collected on the following dates: Oct. 20, Dec. 13, Jan. 25, Feb. 27, Mar. 22, Apr. 26, May 23, June 20, July 18. Compounds were detected only in the following samples:

DATE	TIME	2,4-DP (UG/L)	CHLORPYRIFOS (UG/L)	PHORATE (UG/L)	AZODRIN (UG/L)	DISYSTON (UG/L)
OCT 20...	0900	.43				
DEC 13...	0900					.02
JAN 25...	1520		.01			.01
FEB 27...	1525	.01		.01		.09
MAR 22...	1520	.01				.04
APR 26...	1215				.10	
MAY 23...	0845			.02		.15
JUL 18...	0900			.06		

10255700 SAN FELIPE CREEK NEAR JULIAN, CA

LOCATION.--Lat 33°07'07", long 116°26'04", in NW¼NE¼ sec.23, T.12 S., R.5 E., San Diego County, in Anza-Borrego Desert State Park, on left bank under bridge on State Highway 78 in Sentenac Canyon, 1.0 mi (1.6 km) upstream from Grapevine Canyon, and 10 mi (16 km) northeast of Julian.

DRAINAGE AREA.--89.2 mi² (231.0 km²).

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

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 1,872.69 ft (570.796 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--20 years, 0.27 ft³/s (0.008 m³/s), 196 acre-ft/yr (242,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Aug. 22, 1967, gage height, 4.08 ft (1.244 m), from rating curve extended above 12 ft³/s (0.34 m³/s) on basis of slope-area measurement at gage height 3.50 ft (1.067 m); no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Mar. 2	1715	108	3.06	2.48	0.756
Mar. 5	1345	*126	3.57	2.55	0.777

Minimum daily discharge, no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.13	.41	9.0	4.8	.91	.08			
2			0	.13	.41	44	3.4	.74	.09			
3			0	.13	.36	31	1.2	.60	.08			
4			0	.13	.36	5.6	1.2	.60	.07			
5			0	.16	.74	77	1.2	.60	.06			
6			0	.16	1.0	28	1.0	.67	.05			
7			0	.13	.74	5.6	1.3	.60	.39			
8			0	.13	.47	3.0	1.2	.53	.10			
9			0	.36	.47	2.3	1.1	.47	0			
10			0	3.6	1.3	2.0	1.0	.43	0			
11			.02	2.0	2.5	1.8	.82	.42	0			
12			.02	.31	.91	2.8	.82	.39	0			
13			.04	.23	2.1	4.3	.74	.35	0			
14			.04	.31	7.0	2.0	.82	.29	0			
15			.05	2.1	2.0	1.6	.91	.27	0			
16			.05	.41	1.2	1.4	1.3	.28	0			
17			.07	.82	1.0	1.3	.91	.30	0			
18			.09	.36	.91	1.3	.82	.29	0			
19			.07	.36	.91	1.4	.82	.26	0			
20			.07	.31	.82	1.4	.74	.22	0			
21			.09	.27	.82	1.3	.74	.17	0			
22			.09	.27	.82	1.3	.74	.17	0			
23			.09	.27	.82	1.3	.82	.22	0			
24			.09	.27	.74	2.8	.74	.27	0			
25			.19	.27	.74	4.5	.82	.27	0			
26			1.4	.31	.74	4.5	.82	.25	0			
27			.67	.31	1.1	4.5	.74	.27	0			
28			.47	.36	3.8	4.5	.67	.18	0			
29			.47	.36	---	4.5	.67	.13	0			
30			.19	.91	---	4.5	.74	.09	0			
31		---	.13	1.2	---	4.8	---	.07	---			---
TOTAL	0	0	4.40	17.07	35.19	265.3	33.60	11.31	.92	0	0	0
MEAN	0	0	.14	.55	1.26	8.56	1.12	.36	.031	0	0	0
MAX	0	0	1.4	3.6	7.0	77	4.8	.91	.39	0	0	0
MIN	0	0	0	.13	.36	1.3	.67	.07	0	0	0	0
AC-FT	0	0	8.7	34	70	526	67	22	1.8	0	0	0
CAL YR 1977	TOTAL	54.28	MEAN	.15	MAX	1.9	MIN	0	AC-FT	108		
WTR YR 1978	TOTAL	367.79	MEAN	1.01	MAX	77	MIN	0	AC-FT	730		

10255800 COYOTE CREEK NEAR BORREGO SPRINGS, CA

LOCATION.--Lat 33°22'06", long 116°25'14", in NE¼NE¼NE¼ sec.26, T.9 S., R.5 E., San Diego County, on left bank 0.5 mi (0.8 km) downstream from Box Canyon, 1.8 mi (2.9 km) northwest of Rancho De Anza, and 8.2 mi (13.2 km) northwest of Borrego Springs.

DRAINAGE AREA.--144 mi² (373 km²).

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for October and November 1950, published in WSP 1734.

REVISED RECORDS.--WDR CA-72-1: 1969, 1971.

GAGE.--Water-stage recorder. Altitude of gage is 1,250 ft (381 m), from topographic map. Prior to Mar. 24, 1967, at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records poor. No regulation above station. Diversion about 0.5 mi (0.8 km) upstream for irrigation below station since January 1973. No gage-height record Oct. 1 to April 16.

AVERAGE DISCHARGE.--28 years, 1.84 ft³/s (0.052 m³/s), 1,330 acre-ft/yr (1.64 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,840 ft³/s (109 m³/s) Aug. 17, 1977, gage height unknown, on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 650 ft³/s (18.4 m³/s) Mar. 1, estimated, gage height unknown, no peaks above base of 50 ft³/s (1.42 m³/s) were determined this year; minimum daily, 0.10 ft³/s (0.003 m³/s) Oct. 1-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.29	.79	1.4	1.5	35	11	.33	.35	.48	1.5	.83
2	.10	.29	.81	1.4	1.5	25	6.0	.33	.35	.51	1.5	.82
3	.10	.29	.82	1.4	1.5	18	3.4	.33	.34	.48	1.5	.80
4	.10	.29	.84	1.4	1.6	1.2	1.8	.33	.35	.53	1.5	.83
5	.10	.44	.86	1.4	2.1	1.2	2.3	.33	.34	.51	1.5	.90
6	.10	.63	.87	1.4	3.0	1.2	2.8	.33	.36	.54	1.5	.80
7	.10	.59	.89	1.4	4.0	1.2	3.7	.33	.35	.48	1.5	1.3
8	.10	.47	.94	1.4	5.4	1.2	3.3	.33	.33	.53	1.5	2.6
9	.10	.48	.97	1.4	7.4	1.2	2.8	.33	.32	.62	1.5	2.3
10	.10	.50	1.0	6.4	12	1.2	2.4	.33	.34	1.0	1.5	1.5
11	.20	.51	1.0	1.4	11	2.2	2.0	.31	.31	1.0	1.5	1.1
12	.50	.52	1.0	1.4	9.8	5.0	1.6	.33	.30	1.1	1.5	1.1
13	.49	.53	1.0	1.4	8.9	11	2.2	.31	.33	1.1	1.5	1.1
14	.44	.54	1.0	1.4	8.0	9.0	3.3	.31	.33	1.1	1.5	1.1
15	.48	.55	1.0	18	7.1	7.8	5.6	.31	.33	1.2	9.0	1.1
16	.34	.57	1.1	3.3	6.5	6.6	6.0	.30	.27	1.2	2.9	1.2
17	.32	.58	1.2	17	5.8	5.8	4.0	.31	.31	1.2	2.8	1.1
18	.30	.59	1.4	13	5.2	5.1	2.9	.31	.31	1.2	2.5	1.1
19	.29	.60	1.3	9.0	4.6	4.4	2.1	.28	.31	1.2	1.9	1.1
20	.29	.62	1.2	6.6	4.2	3.8	1.8	.29	.32	1.1	1.4	1.1
21	.29	.63	1.3	3.5	3.8	3.6	1.6	.26	.31	1.3	1.3	1.1
22	.29	.64	1.4	2.0	3.4	3.4	1.5	.25	.37	1.3	1.2	1.1
23	.29	.66	1.5	1.6	3.1	3.3	1.4	.29	.38	1.3	1.2	1.1
24	.29	.67	1.5	1.6	2.6	3.1	1.2	.30	.38	1.4	1.1	1.1
25	.29	.68	1.4	1.6	7.0	2.9	1.0	.31	.40	1.5	1.1	1.1
26	.29	.70	1.4	1.5	15	2.7	.34	.29	.42	1.5	1.1	1.1
27	.29	.72	1.4	1.5	40	2.5	.34	.31	.41	1.6	1.0	1.1
28	.29	.74	1.4	1.5	67	2.4	.33	.31	.45	1.6	.98	1.1
29	.29	.75	1.4	1.5	---	2.3	.32	.29	.41	1.6	.95	1.1
30	.29	.76	1.4	1.5	---	2.2	.32	.31	.44	1.5	.91	1.1
31	.29	---	1.4	1.5	---	2.1	---	.33	---	1.6	.85	---
TOTAL	7.84	16.83	35.49	110.8	253.0	177.6	79.35	9.61	10.52	33.28	53.19	34.78
MEAN	.25	.56	1.14	3.57	9.04	5.73	2.65	.31	.35	1.07	1.72	1.16
MAX	.50	.76	1.5	18	67	35	11	.33	.45	1.6	9.0	2.6
MIN	.10	.29	.79	1.4	1.5	1.2	.32	.25	.27	.48	.85	.80
AC-FT	16	33	70	220	502	352	157	19	21	66	106	69

CAL YR 1977 TOTAL 731.25 MEAN 2.00 MAX 420 MIN .02 AC-FT 1450
WTR YR 1978 TOTAL 822.29 MEAN 2.25 MAX 67 MIN .10 AC-FT 1630

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA

LOCATION.--Lat 33°16'44", long 116°25'45", in Anza-Borrego Desert State Park, San Diego County, on left bank 3.3 mi (5.3 km) northwest of Borrego Springs.

DRAINAGE AREA.--21.8 mi² (56.5 km²).

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1960, published as "Palm Canyon Creek near Borrego Springs." Monthly discharge only for October to November 1950, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is 1,200 ft (366 m), from topographic map.

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

AVERAGE DISCHARGE.--28 years, 0.34 ft³/s (0.010 m³/s), 246 acre-ft/yr (303,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft³/s (61.2 m³/s) Aug. 15, 1977, gage height, 7.5 ft (2.29 m) from floodmarks, on basis of slope-area measurement of peak flow; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15 ft³/s (0.42 m³/s) and maximum (*), from rating extended above 20 ft³/s (0.57 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 15	0900	33 0.93	3.01 0.917	Feb. 28	0330	*87 2.46	3.90 1.189
Jan. 17	0615	17 0.48	2.54 0.774	Apr. 1	Unknown	27 0.76	2.84 0.866

Minimum daily discharge, no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	19	3.0	.90	.09			
2			0	0	0	18	10	.80	.08			
3			0	0	0	2.9	4.0	.75	.07			
4			0	0	0	0	1.0	.70	.06			
5			0	0	0	0	2.0	.65	.05			
6			0	0	.30	0	2.1	.60	.04			
7			0	0	.70	0	3.4	.55	.03			
8			0	0	1.5	0	2.6	.50	.02			
9			0	.23	3.0	0	2.2	.45	.01			
10			0	3.8	9.0	0	2.1	.40	0			
11			0	.61	8.0	0	1.6	.35	0			
12			0	0	7.0	0	1.4	.30	0			
13			0	0	6.5	8.0	1.4	.28	0			
14			0	0	6.0	7.0	1.4	.27	0			
15			0	14	5.0	6.0	2.9	.26	0			
16			0	1.3	4.5	5.2	4.0	.25	0			
17			0	11	4.0	4.6	2.2	.24	0			
18			0	.66	3.7	4.4	1.9	.23	0			
19			0	0	3.3	4.4	1.0	.22	0			
20			0	0	2.9	3.2	1.4	.21	0			
21			0	0	2.6	.62	1.4	.20	0			
22			0	0	2.2	2.4	1.4	.19	0			
23			0	0	2.0	3.4	1.4	.18	0			
24			0	0	1.9	3.0	.96	.17	0			
25			0	0	1.7	2.4	1.4	.16	0			
26			.07	0	1.6	2.0	.82	.15	0			
27			.02	0	5.6	1.5	.47	.14	0			
28			0	0	44	1.0	.65	.13	0			
29			0	0	---	.90	1.2	.12	0			
30			0	0	---	.70	1.4	.11	0			
31		---	0	0	---	.50	---	.10	---			---
TOTAL	0	0	.09	31.60	127.00	101.12	62.70	10.56	.45	0	0	0
MEAN	0	0	.003	1.02	4.54	3.26	2.09	.34	.015	0	0	0
MAX	0	0	.07	14	44	19	10	.90	.09	0	0	0
MIN	0	0	0	0	0	0	.47	.10	0	0	0	0
AC-FT	0	0	.2	63	252	201	124	21	.9	0	0	0
CAL YR 1977	TOTAL	157.30	MEAN .43	MAX 89	MIN 0	AC-FT 312						
WTR YR 1978	TOTAL	333.52	MEAN .91	MAX 44	MIN 0	AC-FT 662						

LOCATION.--Lat 32°59'10", long 116°25'10", in SW¼NE¼ sec.1, T.14 S., R.5 E., San Diego County, on right bank 0.2 mi (0.3 km) downstream from Cottonwood Wash, and 12.6 mi (20.3 km) southeast of Julian.

DRAINAGE AREA.--39.7 mi² (102.8 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,950 ft (594 m), from topographic map.

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

AVERAGE DISCHARGE.--15 years, 0.13 ft³/s (0.004 m³/s), 93 acre-ft/yr (115,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s (32.9 m³/s) Sept. 10, 1976, gage height, 6.30 ft (1.920 m), from high-water mark in well, from rating curve extended above 0.10 ft³/s (0.003 m³/s) on basis of slope-area study of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.3 ft³/s (0.065 m³/s) Mar. 1, gage height, 3.11 ft (0.948 m), no peak above base of 15 ft³/s (0.43 m³/s); minimum daily, 0.02 ft³/s (0.001 m³/s) June 22 to Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.03	.04	.05	.08	.16	.07	.04	.03	.02	.02	.02
2	.03	.03	.04	.05	.08	.10	.07	.04	.03	.02	.02	.02
3	.03	.03	.04	.05	.07	.09	.07	.04	.03	.02	.02	.02
4	.03	.03	.04	.05	.07	.09	.07	.04	.03	.02	.02	.02
5	.03	.03	.04	.05	.09	.09	.07	.04	.03	.02	.02	.02
6	.03	.03	.04	.05	.09	.09	.07	.04	.03	.02	.02	.02
7	.03	.03	.04	.05	.09	.09	.07	.04	.03	.02	.02	.02
8	.03	.04	.05	.05	.09	.09	.07	.04	.03	.02	.02	.02
9	.03	.04	.05	.05	.09	.09	.06	.04	.03	.02	.02	.02
10	.03	.04	.05	.05	.15	.09	.06	.04	.03	.02	.02	.02
11	.03	.04	.05	.05	.10	.09	.06	.04	.03	.02	.02	.02
12	.03	.04	.05	.05	.09	.08	.06	.04	.03	.02	.02	.03
13	.03	.04	.05	.05	.09	.08	.06	.04	.03	.02	.02	.03
14	.03	.04	.05	.05	.09	.07	.07	.04	.03	.02	.02	.03
15	.03	.04	.05	.07	.09	.07	.06	.04	.03	.02	.02	.03
16	.03	.04	.05	.07	.09	.08	.07	.04	.03	.02	.02	.03
17	.03	.04	.05	.07	.08	.08	.07	.04	.03	.02	.02	.03
18	.03	.04	.05	.07	.08	.08	.06	.04	.03	.02	.02	.03
19	.03	.04	.05	.06	.07	.08	.05	.04	.03	.02	.02	.03
20	.03	.04	.06	.06	.07	.08	.04	.04	.03	.02	.02	.03
21	.03	.04	.06	.07	.07	.08	.04	.04	.03	.02	.02	.03
22	.03	.04	.06	.07	.08	.08	.04	.04	.02	.02	.02	.03
23	.03	.04	.06	.07	.08	.07	.05	.04	.02	.02	.02	.03
24	.03	.04	.06	.07	.08	.07	.05	.04	.02	.02	.02	.03
25	.03	.04	.06	.08	.08	.07	.05	.04	.02	.02	.02	.03
26	.03	.04	.06	.08	.08	.07	.05	.04	.02	.02	.02	.03
27	.03	.04	.06	.08	.08	.07	.04	.04	.02	.02	.02	.03
28	.03	.04	.06	.09	.09	.07	.04	.04	.02	.02	.02	.03
29	.03	.04	.06	.09	---	.07	.04	.04	.02	.02	.02	.03
30	.03	.04	.05	.09	---	.07	.04	.04	.02	.02	.02	.03
31	.03	---	.05	.08	---	.07	---	.04	---	.02	.02	---
TOTAL	.93	1.13	1.58	1.97	2.39	2.56	1.72	1.24	.81	.62	.62	.79
MEAN	.030	.038	.051	.064	.085	.083	.057	.040	.027	.020	.020	.026
MAX	.03	.04	.06	.09	.15	.16	.07	.04	.03	.02	.02	.03
MIN	.03	.03	.04	.05	.07	.07	.04	.04	.02	.02	.02	.02
AC-FT	1.8	2.2	3.1	3.9	4.7	5.1	3.4	2.5	1.6	1.2	1.2	1.6
CAL YR 1977	TOTAL	100.63	MEAN .28	MAX	48	MIN .01	AC-FT 200					
WTR YR 1978	TOTAL	16.36	MEAN .045	MAX	.16	MIN .02	AC-FT 32					

10255885 SAN FELIPE CREEK NEAR WESTMORLAND, CA

LOCATION.--Lat 33°07'25", long 115°51'08", in NW¼SW¼ sec.17, T.12 S., R.11 E., Imperial County, on left bank 320 ft (98 m) downstream from State Highway 86 (revised), and 14.6 mi (23.5 km) northwest of Westmorland.

DRAINAGE AREA.--1,693 mi² (4,385 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is -190 ft (-58 m), from topographic map.

REMARKS.--Records poor. No regulation above station. Diversion and pumping for domestic use and irrigation in Borrego Valley 25 mi (40 km) upstream.

AVERAGE DISCHARGE.--17 years (water years 1962-78) 7.49 ft³/s (0.212 m³/s), 5,430 acre-ft/yr (6.70 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft³/s (2,830 m³/s) Sept. 10, 1976, gage height, 19.0 ft (5.79 m), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of contracted-opening measurement combined with road overflow at peak gage height; no flow for some months in each year.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Aug. 2	Unknown	344	9.74	5.78	1.762
Sept. 16	1400	*1010	28.6	6.89	2.100

Minimum daily discharge, no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.03	16					0	0
2			0	0	0	29					31	0
3			0	0	0	5.8					.03	0
4			0	0	0	1.4					0	0
5			0	0	0	1.2					0	0
6			0	0	.81	.51					0	.07
7			0	0	.36	.92					0	0
8			0	0	.02	.36					0	0
9			0	0	0	.25					0	0
10			0	3.0	0	.03					0	0
11			0	.10	0	0					0	0
12			0	.04	0	0					0	0
13			0	.02	.35	0					0	0
14			0	0	.21	0					0	0
15			0	2.5	.11	0					0	0
16			0	.90	.16	0					0	221
17			0	.30	.05	0					0	43
18			0	.15	0	0					0	7.2
19			0	.09	0	0					0	3.2
20			0	.04	0	0					0	1.9
21			0	0	0	0					0	.80
22			0	0	0	0					0	.51
23			0	0	0	0					0	.25
24			0	0	0	0					0	.13
25			0	0	0	0					0	.07
26			.30	0	0	0					0	.03
27			0	0	0	0					0	0
28			0	0	0	0					0	0
29			0	0	---	0					0	0
30			0	0	---	0					0	0
31		---	0	.03	---	0	---		---		0	---
TOTAL	0	0	.30	7.17	2.10	55.47	0	0	0	0	31.03	278.16
MEAN	0	0	.010	.23	.075	1.79	0	0	0	0	1.00	9.27
MAX	0	0	.30	3.0	.81	29	0	0	0	0	31	221
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	.6	14	4.2	110	0	0	0	0	62	552
CAL YR 1977	TOTAL	8440.30	MEAN 23.1	MAX 5000	MIN 0	AC-FT 16740						
WTR YR 1978	TOTAL	374.23	MEAN 1.03	MAX 221	MIN 0	AC-FT 742						

10256000 WHITEWATER RIVER AT WHITE WATER, CA

LOCATION.--Lat 33°56'48", long 116°38'24", in NW¼NW¼NE¼ sec.2, T.3 S., R.3 E., Riverside County, on right bank 1.5 mi (2.4 km) north of White Water, and 3.5 mi (5.6 km) upstream from San Geronio River.
DRAINAGE AREA.--57.5 mi² (148.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder on river; water-stage recorder and Cipolletti weir on diversion 500 ft (152 m) downstream. Datum of river gage is 1,610 ft (491 m) National Geodetic Vertical Datum of 1929. Feb. 24, 1950, to Sept. 30, 1952, and Apr. 13, 1960, to June 19, 1968, supplementary gages at different sites and datums within 200 ft (61 m) of base gage. Since Aug. 12, 1969, supplementary gage at site 1.5 mi (2.4 km) downstream at different datum.

REMARKS.--Records poor. Stage-discharge relationship indefinite much of year. White Water Mutual Water Company diverts 500 ft (152 m) downstream. Monthly discharge is combined with flow from infiltration line that bypasses station. No regulation above station. Water is diverted out of basin about 15 mi (24 km) upstream to powerplants in San Geronio River basin and then to an area north of Banning for irrigation. One small diversion for domestic use and one for irrigation are made 2 to 3 mi (3.2 to 4.8 km) upstream.

COOPERATION.--Records of bypass in infiltration line were furnished by White Water Mutual Water Company; records of diversion, 15 mi (24 km) upstream, were furnished by Southern California Edison Company.

AVERAGE DISCHARGE.--River only: 30 years, 16.8 ft³/s (0.476 m³/s), 12,170 acre-ft/yr (15.0 hm³/yr).

Combined river and infiltration line: 29 years (water years 1950-78), 18.3 ft³/s (0.518 m³/s), 13,260 acre-ft/yr (16.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 24,000 ft³/s (680 m³/s) Nov. 22, 1965, gage height, 13.60 ft (4.145 m), from rating curve extended above 660 ft³/s (18.7 m³/s) on basis of field estimate of maximum flow; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--River only: Maximum discharge, 42,000 ft³/s (1,190 m³/s) Mar. 2, 1938, by slope-area measurement of peak flow, at site 2.5 mi (4.0 km) upstream, drainage area, 51.4 mi² (133 km²).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1400	355 10.1	Unknown	Mar. 2	Unknown	Unknown	Unknown
Jan. 4	1900	270 7.65	7.00 2.134	Mar. 4	Unknown	*5000 141.6	Unknown
Jan. 10	0600	300 8.50	7.07 2.155	Mar. 31	0700	328 9.29	6.62 2.018
Jan. 15	Unknown	Unknown	Unknown	Apr. 15	2300	320 9.07	6.60 2.012
Feb. 10	Unknown	Unknown	Unknown				

Minimum daily discharge, 3.5 ft³/s (0.100 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.4	4.8	6.2	13	120	197	143	106	72	50	37
2	4.5	4.3	4.9	5.7	13	300	179	129	106	71	48	36
3	4.5	4.3	4.9	5.5	13	190	171	127	106	68	47	37
4	4.9	4.3	5.0	9.0	14	340	166	132	104	65	46	40
5	4.9	9.0	5.0	35	15	240	159	134	104	64	45	43
6	4.8	7.0	5.0	9.0	20	180	152	132	99	62	45	43
7	6.8	5.3	4.9	8.4	16	150	169	127	101	62	46	33
8	5.4	5.1	4.9	8.1	17	133	159	121	101	62	45	33
9	4.8	5.0	4.9	15	35	120	152	123	99	61	45	33
10	4.8	5.0	6.4	105	123	112	147	125	93	61	45	33
11	4.7	5.0	4.8	10	50	107	157	127	88	58	45	38
12	4.7	5.0	4.8	7.1	37	103	164	129	88	58	44	38
13	4.7	5.0	4.7	7.0	30	100	161	134	92	58	43	37
14	4.7	5.0	4.6	7.0	28	100	161	136	90	57	43	38
15	4.7	5.0	4.5	182	26	102	196	136	88	56	43	38
16	4.7	4.9	5.2	130	25	101	168	132	86	52	43	37
17	4.7	4.9	10	21	25	103	149	125	85	51	43	36
18	4.7	4.9	5.4	19	24	105	129	121	85	53	43	36
19	4.7	8.2	5.0	17	24	108	134	119	83	53	43	36
20	4.7	5.2	4.7	16	23	110	138	119	82	52	41	37
21	6.8	5.0	6.6	15	12	112	136	123	75	53	41	38
22	10	4.9	8.0	15	12	113	134	125	72	52	41	37
23	5.4	5.0	5.5	15	11	116	132	125	74	52	41	36
24	5.0	8.0	5.0	15	11	116	134	123	77	52	41	35
25	4.8	5.6	5.0	14	10	119	140	119	78	52	42	33
26	4.7	5.2	5.0	14	10	127	140	116	77	52	46	33
27	4.6	4.8	21	14	10	132	143	110	77	52	44	33
28	4.6	4.8	88	14	50	134	143	110	75	51	43	32
29	4.5	4.8	30	14	---	132	138	110	74	51	43	31
30	4.5	4.8	11	13	---	136	132	108	72	50	43	30
31	4.5	---	6.8	13	---	236	---	102	---	50	39	---
TOTAL	155.3	159.7	296.3	779.0	697	4397	4580	3842	2637	1763	1357	1077
MEAN	5.01	5.32	9.56	25.1	24.9	142	153	124	87.9	56.9	43.8	35.9
MAX	10	9.0	88	182	123	340	197	143	106	72	50	43
MIN	3.5	4.3	4.5	5.5	10	100	129	102	72	50	39	30
AC-FT	308	317	588	1550	1380	8720	9080	7620	5230	3500	2690	2140
a	339	359	625	1590	1420	8780	9110	7660	5270	3540	2730	2190
b	0	31	39	0	0	15	329	312	242	261	230	109
c	234	209	149	7.9	18	70	119	170	287	340	334	280

CAL YR 1977 TOTAL 2721.8 MEAN 7.46 MAX 250 MIN 3.5 AC-FT 5400 AC-FT a 5980 AC-FT b 670 AC-FT c 1060
WTR YR 1978 TOTAL 21740.3 MEAN 59.6 MAX 340 MIN 3.5 AC-FT 43120 AC-FT a 43610 AC-FT b 1570 AC-FT c 2220

a Combined discharge, in acre-feet, of river and infiltration line.

b Discharge, in acre-feet, diverted from basin 15 mi (24 km) upstream.

c Discharge, in acre-feet, diverted by White Water Mutual Water Company 500 ft (152 m) downstream.

10256000 WHITEWATER RIVER AT WHITE WATER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES: Water years 1967 to current year.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN 09...	1440	--	610	8.0	15.0	0	8.2	250	29
MAR 23...	1040	114	500	7.8	18.0	0	7.5	250	44
JUN 28...	0840	77	290	8.5	16.0	3	9.1	140	11
SEP 27...	0830	33	330	8.5	20.5	0	8.2	160	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)
JAN 09...	71	17	22	16	.6	5.0	270	0	221
MAR 23...	69	18	23	16	.6	6.0	250	0	205
JUN 28...	40	8.9	9.0	12	.3	3.0	150	0	123
SEP 27...	46	10	14	16	.5	3.0	--	--	150

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
JAN 09...	4.3	69	7.0	1.3	368	322	.14	.60
MAR 23...	6.3	78	9.1	1.0	291	328	.81	3.6
JUN 28...	.8	22	2.0	.8	155	160	.00	.00
SEP 27...	--	27	3.2	.9	206	--	.41	1.8

10256000 WHITEWATER RIVER AT WHITE WATER, CA--Continued

WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)
JAN 09...	1440	--	610	8.0	15.0	--	40
MAR 23...	1040	114	500	7.8	18.0	--	0
MAY 18...	0920	120	--	--	--	0	--
JUN 28...	0840	77	290	8.5	16.0	--	0
SEP 27...	0830	33	330	8.5	20.5	--	0

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 09...	--	--	--	--	--	--
MAR 23...	--	--	--	--	--	--
MAY 18...	0	0	0	0	.0	10
JUN 28...	--	--	--	--	--	--
SEP 27...	--	--	--	--	--	--

10256200 SAN GORGONIO RIVER NEAR BANNING, CA

LOCATION.--Lat 33°59'54", long 116°54'29", in SW¼NW¼NW¼ sec.17, T.25 S., R.1 E., Riverside County, on right bank 3.7 mi (6.0 km) upstream from Mais Canyon, and 5.3 mi (8.5 km) northwest of Banning.

DRAINAGE AREA.--14.8 mi² (38.3 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 3,720 ft (1,130 m), from topographic map.

REMARKS.--Records poor. No regulation above station. Some pumping upstream for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 432 ft³/s (12.2 m³/s) Sept. 11, 1976, gage height, 8.92 ft (2.179 m), from rating curve extended above 35 ft³/s (0.99 m³/s) on basis of estimate of maximum flow, may have been exceeded in 1978 water year; no flow long periods some years.

NOTE.--Records for current year will not be published due to indeterminate stage-discharge relation.

10256400 SAN GORGONIO RIVER NEAR WHITE WATER, CA

LOCATION.--Lat 33°55'14", long 116°41'45", in NW¼SE¼SW¼ sec.8, T.3 S., R.3 E., Riverside County, on right bank 0.2 mi (0.3 km) south of Interstate Highway 10, and 3.4 mi (5.5 km) west of town of White Water.

DRAINAGE AREA.--154 mi² (399 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,320 ft (402 m), from topographic map. Prior to Mar. 19, 1968, flood-hydrograph recorder.

REMARKS.--Records poor. No regulation or diversion above station. No gage-height record for entire year.

AVERAGE DISCHARGE.--12 years, 1.30 ft³/s (0.037 m³/s), 942 acre-ft/yr (1.16 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,250 ft³/s (205 m³/s) Jan. 25, 1969, gage height, 6.0 ft (1.83 m), from floodmarks, on basis of slope-area measurement of maximum flow; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 23, 1965, reached a stage of 6.10 ft (1.859 m), from floodmarks, discharge, 4,500 ft³/s (127 m³/s), on basis of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft³/s (48.1 m³/s) Mar. 2, gage height, 3.45 ft (1.052 m), from slope-conveyance estimate of peak flow, no other peaks above base of 50 ft³/s (1.42 m³/s) were estimated due to loss of gage-height record; no flow much of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	10	.10					
2			0	0	0	130	0					
3			0	0	0	20	0					
4			0	3.0	0	8.0	0					
5			0	30	0	30	.10					
6			0	.50	.10	1.0	.20					
7			0	0	.50	.50	1.0					
8			0	.10	2.0	.10	.20					
9			0	4.0	50	0	.10					
10			0	17	80	0	0					
11			0	3.0	50	0	0					
12			0	.10	25	0	0					
13			0	.10	40	0	0					
14			0	.50	10	0	0					
15			0	100	2.0	0	.10					
16			0	20	.10	0	.30					
17			0	30	.10	0	.10					
18			0	5.0	0	0	0					
19			0	2.0	0	0	0					
20			0	1.0	0	0	0					
21			0	.50	0	0	0					
22			0	0	0	0	0					
23			0	0	0	0	0					
24			0	0	0	0	0					
25			0	0	0	0	0					
26			0	0	0	0	0					
27			.50	0	.10	0	0					
28			20	0	3.0	0	0					
29			2.0	0	---	.10	0					
30			.10	0	---	2.0	0					
31		---	0	0	---	20	---		---			---
TOTAL	0	0	22.60	216.80	262.90	221.70	2.20	0	0	0	0	0
MEAN	0	0	.73	6.99	9.39	7.15	.073	0	0	0	0	0
MAX	0	0	20	100	80	130	1.0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	45	430	521	440	4.4	0	0	0	0	0
CAL YR 1977	TOTAL	24.20	MEAN .066	MAX 20	MIN 0	AC-FT 48						
WTR YR 1978	TOTAL	726.20	MEAN 1.99	MAX 130	MIN 0	AC-FT 1440						

10256500 SNOW CREEK NEAR WHITE WATER, CA

LOCATION.--Lat 33°52'14", long 116°40'49", in SE¼NW¼ sec.33, T.3 S., R.3 E., Riverside County, on left bank 300 ft (90 m) upstream from Southern Pacific Railroad diversion dam, 300 ft (90 m) downstream from East Fork, 2.5 mi (4.0 km) upstream from mouth, and 4.4 mi (7.1 km) southwest of White Water.

DRAINAGE AREA.--10.8 mi² (28.0 km²).

PERIOD OF RECORD.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to current year. Yearly discharge only for 1930, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 2,000 ft (610 m), from topographic map. Prior to September 1931, at various sites within 500 ft (150 m) of present site at different datums. September 1931 to Oct. 6, 1970, at site 250 ft (75 m) downstream at datum 15.9 ft (4.85 m) lower.

REMARKS.--Records poor. No regulation or diversion above station. Palm Springs Water Co. diverts 50 ft (15 m) downstream, generally taking the entire base flow. No gage-height record from Jan. 10 to Mar. 28.

AVERAGE DISCHARGE.--26 years (water years 1923-26, 1929-31, 1960-78), 8.43 ft³/s (0.239 m³/s), 6,110 acre-ft/yr (7.53 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Jan. 25, 1969, gage height, 27.4 ft (8.35 m), from floodmarks, present datum, from rating curve extended above 55 ft³/s (1.56 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 2.1 ft³/s (0.059 m³/s) June 23-27, Sept. 5-11, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Mar. 4, gage height, 19.38 ft (5.907 m), from floodmarks, from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of area-velocity measurement of peak flow; peak discharges above base of 50 ft³/s (1.42 m³/s) were not determined this year; minimum daily, 3.1 ft³/s (0.088 m³/s) Dec. 3-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	3.3	3.2	9.4	9.5	70	62	28	28	16	10	5.8
2	4.1	3.3	3.2	8.4	8.5	130	48	28	28	15	9.5	5.8
3	4.2	3.5	3.1	8.7	7.5	110	42	28	28	15	9.4	5.9
4	3.9	3.5	3.1	37	7.0	150	40	28	28	15	9.4	5.7
5	3.3	3.7	3.1	62	9.0	140	37	28	28	14	9.4	5.8
6	3.5	3.8	3.1	46	14	130	35	28	28	14	9.1	7.1
7	3.5	3.8	3.1	26	12	110	41	28	28	14	8.7	6.0
8	3.5	3.7	3.1	17	18	90	37	28	28	13	8.4	5.2
9	3.5	3.7	3.1	18	30	80	31	28	28	14	8.1	7.0
10	3.5	3.7	3.1	20	66	68	30	28	32	13	8.1	7.0
11	3.3	3.3	3.1	19	45	60	30	28	30	13	8.1	7.2
12	3.3	3.2	3.1	18	35	54	30	28	29	13	7.8	7.0
13	3.3	3.3	3.1	16	28	49	30	28	29	13	7.2	7.2
14	3.5	3.2	3.1	19	23	44	30	28	27	13	7.2	7.0
15	3.3	3.3	3.1	75	19	40	35	28	25	13	7.0	7.2
16	3.3	3.3	3.2	50	18	35	38	28	23	13	7.0	7.5
17	3.3	3.3	3.2	39	16	32	33	28	22	13	6.7	7.2
18	3.5	3.3	5.0	28	15	29	29	28	23	12	6.7	7.5
19	3.5	3.3	4.0	23	14	27	29	28	22	12	6.5	7.2
20	3.5	3.2	3.2	20	13	30	29	28	21	12	6.5	7.2
21	3.5	3.2	3.2	19	12	36	29	28	23	12	6.5	7.0
22	3.3	3.2	3.5	17	11	32	29	28	23	11	6.5	6.7
23	3.5	3.2	3.6	16	11	29	29	28	22	11	6.2	6.5
24	3.3	3.2	3.8	14	10	25	34	28	22	11	6.0	6.2
25	3.3	3.2	4.0	13	10	25	40	28	20	11	6.0	6.2
26	3.3	3.2	70	12	11	26	33	28	19	11	6.2	6.2
27	3.5	3.2	40	11	20	27	28	28	19	11	6.2	6.0
28	3.5	3.2	125	10	30	27	28	28	18	11	6.0	6.0
29	3.5	3.2	40	9.0	---	28	28	28	16	10	6.0	6.0
30	3.5	3.2	19	9.5	---	41	28	28	16	9.9	5.8	6.0
31	3.5	---	13	10	---	124	---	28	---	9.7	5.9	---
TOTAL	108.7	100.7	390.4	700.0	522.5	1898	1022	868	733	388.6	228.1	196.3
MEAN	3.51	3.36	12.6	22.6	18.7	61.2	34.1	28.0	24.4	12.5	7.36	6.54
MAX	4.2	3.8	125	75	66	150	62	28	32	16	10	7.5
MIN	3.3	3.2	3.1	8.4	7.0	25	28	28	16	9.7	5.8	5.2
AC-FT	216	200	774	1390	1040	3760	2030	1720	1450	771	452	389
CAL YR 1977	TOTAL	2165.0	MEAN	5.93	MAX	125	MIN	2.6	AC-FT	4290		
WTR YR 1978	TOTAL	7156.3	MEAN	19.6	MAX	150	MIN	3.1	AC-FT	14190		

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA

LOCATION.--Lat 34°00'40", long 116°37'38", in NE¼SW¼ sec.12, T.2 S., R.3 E., Riverside County, in Mission Creek Indian Reservation, 0.6 mi (1.0 km) downstream from West Fork, and 6.8 mi (10.9 km) northwest of Desert Hot Springs.

DRAINAGE AREA.--35.7 mi² (92.5 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 2,400 ft (732 m), from topographic map.

REMARKS.--Records poor. Slight regulation of low flow by two small dams with a combined capacity of about 3 acre-ft (3,700 m³), 2 mi (3 km) above station. No gage-height record for much of year.

AVERAGE DISCHARGE.--11 years, 2.23 ft³/s (0.063 m³/s), 1,620 acre-ft/yr (2.00 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) Jan. 25, 1969, gage height, 6.40 ft (1.951 m) on basis of slope-area measurement of maximum flow; no flow for long periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Mar. 4, gage height, 2.98 ft (0.908 m), no other peaks above base of 50 ft³/s (1.42 m³/s) were determined this year due to poor record; minimum daily, no flow for periods in October to February.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	94	28	23	18	10	5.9	4.0
2	0	0	0	0	0	184	27	23	18	10	5.8	4.0
3	0	0	0	0	0	65	26	22	17	10	5.7	4.0
4	0	0	0	.07	0	200	25	22	17	10	5.6	4.0
5	0	.16	0	0	0	100	25	22	17	9.0	5.5	3.9
6	0	0	0	0	.10	60	25	22	17	9.0	5.4	3.9
7	0	0	0	0	.09	50	25	22	16	9.0	5.3	3.9
8	0	0	0	0	.08	40	25	23	16	9.0	5.3	3.8
9	0	0	.30	0	.50	30	25	22	16	9.0	5.2	3.8
10	0	.01	0	.09	30	25	25	22	16	8.9	5.2	3.8
11	0	.03	0	0	5.0	20	25	22	15	8.7	5.1	3.8
12	0	.01	0	0	2.0	15	25	22	15	8.5	5.1	3.7
13	0	.23	0	0	.50	13	25	22	15	8.3	5.0	3.7
14	.02	.46	0	0	.40	12	24	21	15	8.2	5.0	3.6
15	.05	.10	0	15	.30	10	24	21	14	8.1	4.9	3.6
16	.04	0	0	0	.20	10	24	21	14	7.9	4.9	3.6
17	.04	0	0	0	.10	10	24	21	14	7.7	4.8	3.6
18	.03	0	.10	0	.10	12	24	21	14	7.5	4.7	3.5
19	.04	0	0	0	.10	12	24	20	13	7.3	4.7	3.5
20	.02	0	0	0	.10	14	24	20	13	7.2	4.6	3.5
21	0	0	0	0	.10	14	24	20	13	6.9	4.6	3.5
22	0	0	0	0	.10	14	24	20	13	6.7	4.5	3.5
23	0	0	0	0	.10	14	24	20	12	6.6	4.5	3.5
24	0	0	0	0	.10	16	24	19	12	6.5	4.4	3.4
25	0	0	0	0	.10	18	23	19	12	6.4	4.4	3.4
26	0	0	.02	0	.10	20	23	19	12	6.2	4.3	3.4
27	0	0	0	0	.10	22	23	19	11	6.2	4.3	3.4
28	0	0	2.1	0	15	24	23	19	11	6.2	4.2	3.4
29	0	0	0	0	---	26	23	18	11	6.1	4.2	3.4
30	0	0	0	0	---	26	23	18	11	6.0	4.1	3.4
31	0	---	0	.20	---	28	---	18	---	6.0	4.0	---
TOTAL	.24	1.00	2.52	15.36	55.27	1198	733	643	428	243.1	151.2	109.5
MEAN	.008	.033	.081	.50	1.97	38.6	24.4	20.7	14.3	7.84	4.88	3.65
MAX	.05	.46	2.1	15	30	200	28	23	18	10	5.9	4.0
MIN	0	0	0	0	0	10	23	18	11	6.0	4.0	3.4
AC-FT	.5	2.0	5.0	30	110	2380	1450	1280	849	482	300	217

CAL YR 1977 TOTAL 99.52 MEAN .27 MAX 70 MIN 0 AC-FT 197
WTR YR 1978 TOTAL 3580.19 MEAN 9.81 MAX 200 MIN 0 AC-FT 7100

10257710 CHINO CANYON CREEK NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°50'21", long 116°36'45", in SW¼SW¼NW¼ sec.7, T.4 S., R.4 E., Riverside County, on left bank 800 ft (240 m) downstream from tram building, 3.7 mi (6.0 km) west of Highway 111 on road leading to Palm Springs aerial tramway and 5.5 mi (8.8 km) west of Palm Springs.

DRAINAGE AREA.--3.88 mi² (10.05 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,500 ft (762 m), from topographic map.

REMARKS.--Records fair. Two diversions for the city of Palm Springs 0.5 mi (0.8 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 247 ft³/s (7.00 m³/s) Aug. 15, 1977, gage height, 5.93 ft (1.807 m), from floodmark, from rating curve extended above 18 ft³/s (0.510 m³/s) on basis of slope-area measurement of maximum flow; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20 ft³/s (0.57 m³/s) Mar. 4, gage height, 4.42 ft (1.347 m); no flow much of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.23	2.3	7.6	3.0	1.6	.11			
2			0	.18	2.3	6.8	3.0	1.6	.07			
3			0	.14	1.7	6.0	2.7	1.4	.06			
4			0	.23	1.6	11	2.7	1.3	.02			
5			0	.28	1.9	8.0	2.7	1.1				
6			0	.23	2.7	6.0	2.7	1.0	0			
7			0	.18	2.3	5.7	2.7	1.0	0			
8			0	.18	2.3	4.1	2.7	1.0	0			
9			0	.18	2.7	4.7	2.5	.88	0			
10			0	2.1	3.5	6.0	2.5	.76	0			
11			0	2.3	4.1	6.4	2.3	.76	0			
12			0	2.3	3.8	5.7	2.1	.66	0			
13			0	2.3	3.5	5.7	2.1	.66	0			
14			0	3.0	3.0	5.7	2.1	.57	0			
15			0	2.7	2.5	5.7	1.9	.57	0			
16			0	2.3	2.3	5.7	1.9	.57	0			
17			0	6.0	2.1	5.7	1.9	.48	0			
18			0	5.7	1.8	5.7	1.7	.48	0			
19			0	5.7	1.7	5.7	1.7	.48	0			
20			0	5.0	1.6	5.7	1.7	.41	0			
21			0	3.8	1.5	5.7	1.6	.41	0			
22			0	3.5	1.4	5.7	1.6	.41	0			
23			0	3.5	1.3	4.7	1.6	.41	0			
24			0	3.2	1.3	4.4	1.6	.41	0			
25			0	3.1	1.5	3.8	1.6	.41	0			
26			7.9	3.0	2.0	3.2	2.1	.41	0			
27			9.6	3.0	2.5	3.2	1.7	.34	0			
28			.88	3.0	3.0	3.0	1.7	.28	0			
29			.41	3.0	---	3.0	1.6	.28	0			
30			.34	2.7	---	3.0	1.6	.23	0			
31		---	.28	2.5	---	3.0	---	.23	---			---
TOTAL	0	0	19.41	75.53	64.2	166.3	63.3	21.10	.28	0	0	0
MEAN	0	0	.63	2.44	2.29	5.36	2.11	.68	.009	0	0	0
MAX	0	0	9.6	6.0	4.1	11	3.0	1.6	.11	0	0	0
MIN	0	0	0	.14	1.3	3.0	1.6	.23	0	0	0	0
AC-FT	0	0	38	150	127	330	126	.42	.6	0	0	0
CAL YR 1977	TOTAL	105.75	MEAN	.29	MAX	28	MIN	0	AC-FT	210		
WTR YR 1978	TOTAL	410.12	MEAN	1.12	MAX	11	MIN	0	AC-FT	813		

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°48'18", long 116°33'30", in NE¼SW¼SW¼ sec.22, T.4 S., R.4 E., Riverside County, on left bank 2.2 mi (3.5 km) southwest of Palm Springs, and 7 mi (11 km) upstream from mouth.

DRAINAGE AREA.--16.8 mi² (43.5 km²).

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 762.5 ft (232.41 m) National Geodetic Vertical Datum of 1929 (levels by Riverside County Flood Control District). Prior to Aug, 25, 1970, at datum 2.00 ft (0.610 m) higher.

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

AVERAGE DISCHARGE.--31 years, 4.08 ft³/s (0.116 m³/s), 2,960 acre-ft/yr (3.65 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,900 ft³/s (82.1 m³/s) Nov. 22, 1965, Jan. 25, 1969, gage height, 12.34 ft (3.761 m), from rating curve extended above 70 ft³/s (1.98 m³/s) on basis of slope-area measurements at gage heights 10.45 (3.185 m) and 12.34 ft (3.761 m); no flow for parts of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 85 ft³/s (2.41 m³/s) revised, and maximum (*), from rating curve extended above 70 ft³/s (1.98 m³/s):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 15	0600	134 3.79	6.78 2.067	Mar. 31	0930	86 2.44	6.15 1.875
Mar. 2	1815	160 4.53	6.95 2.118	May 13	2100	92 2.61	6.42 1.957
Mar. 4	1915	*215 6.09	7.39 2.252				

Minimum daily discharge, 0.07 ft³/s (0.002 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.10	.10	2.3	5.9	68	58	56	53	14	5.7	1.9
2	1.1	.09	.10	1.1	5.6	125	50	49	51	13	5.6	1.7
3	1.2	.08	.10	.81	5.3	85	47	54	49	13	5.4	1.3
4	1.2	.08	.10	3.8	5.2	139	45	66	48	13	5.2	2.0
5	1.2	.08	.10	7.6	6.3	148	42	74	47	12	4.8	3.1
6	1.2	.09	.10	8.9	10	100	43	70	46	12	3.4	4.3
7	1.0	.09	.10	7.5	9.3	78	46	61	45	12	2.2	3.7
8	.65	.08	.10	5.6	9.9	65	40	60	45	11	2.1	3.5
9	.57	.07	.10	5.2	26	56	38	63	43	11	2.1	3.3
10	.43	.08	.10	12	51	49	36	65	41	11	2.0	3.0
11	.41	.08	.11	8.9	32	45	36	66	38	11	1.7	3.0
12	.39	.09	.10	6.9	24	41	39	73	37	8.8	1.8	2.7
13	.37	.08	.10	6.0	24	38	42	78	35	6.8	1.6	2.6
14	.35	.08	.10	9.7	19	35	43	81	31	6.6	1.5	2.5
15	.33	.08	.09	68	17	33	46	81	28	6.4	1.3	2.4
16	.31	.08	.09	25	16	32	45	78	27	6.3	1.2	2.3
17	.29	.09	.10	26	14	31	39	72	25	6.0	1.2	2.2
18	.27	.10	.11	16	13	32	38	68	24	5.7	1.2	2.1
19	.25	.09	.09	17	13	32	39	67	23	5.5	1.2	2.0
20	.23	.09	.09	13	12	33	41	69	22	6.0	1.2	1.9
21	.21	.10	.10	.11	11	34	41	71	21	6.9	1.3	1.8
22	.20	.10	.14	9.4	11	38	42	70	20	6.4	1.5	1.8
23	.19	.10	.16	8.3	11	35	43	66	19	6.4	1.4	1.7
24	.18	.08	.19	7.4	10	34	47	60	18	6.4	1.3	1.7
25	.17	.08	.19	6.9	10	35	57	57	18	6.8	1.4	1.6
26	.16	.09	5.3	6.5	9.7	37	61	54	17	6.6	1.4	1.6
27	.15	.09	13	6.2	11	39	57	52	16	6.4	1.4	1.5
28	.14	.10	13	5.9	42	40	60	52	16	6.3	1.6	1.5
29	.13	.10	11	5.7	---	42	60	54	15	6.1	1.9	1.4
30	.12	.11	5.6	6.1	---	48	57	56	15	5.8	2.0	1.4
31	.11	---	3.7	6.4	---	74	---	55	---	5.7	2.1	---
TOTAL	14.61	2.65	54.36	331.11	434.2	1721	1378	1998	933	260.9	69.7	67.5
MEAN	.47	.088	1.75	10.7	15.5	55.5	45.9	64.5	31.1	8.42	2.25	2.25
MAX	1.2	.11	13	68	51	148	61	81	53	14	5.7	4.3
MIN	.11	.07	.09	.81	5.2	31	36	49	15	5.5	1.2	1.3
AC-FT	29	5.3	108	657	861	3410	2730	3960	1850	517	138	134
CAL YR 1977	TOTAL	606.89	MEAN	1.66	MAX	22	MIN	0	AC-FT	1200		
WTR YR 1978	TOTAL	7265.03	MEAN	19.9	MAX	148	MIN	.07	AC-FT	14410		

10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°44'42", long 116°32'05", in NE¼SW¼SE¼ sec.11, T.5 S., R.4 E., Riverside County, on right bank 0.8 mi (1.3 km) upstream from Murray Canyon Creek, and 6 mi (10 km) south of Palm Springs.

DRAINAGE AREA.--93.3 mi² (241.6 km²).

PERIOD OF RECORD.--January 1930 to January 1942, October 1947 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 700 ft (213 m), from topographic map. Prior to Jan. 14, 1942, at datum 0.2 ft (0.06 m) higher.

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

AVERAGE DISCHARGE.--42 years (water years 1931-41, 1948-78), 3.51 ft³/s (0.099 m³/s), 2,540 acre-ft/yr (3.13 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft³/s (115 m³/s) Sept. 10, 1976, gage height, 6.81 ft (2.076 m), from rating curve extended above 20 ft³/s (0.57 m³/s) on basis of slope-area measurement of maximum flow; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurement at gage height 6.81 ft (2.076 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	2100	*1160 32.9	5.08 1.548	Feb. 10	1500	263 7.45	3.34 1.018
Jan. 10	0930	357 10.1	3.89 1.186	Feb. 13	0200	199 5.64	3.05 0.930
Jan. 15	0300	888 25.1	4.80 1.463	Mar. 1	1500	547 15.5	4.23 1.289
				Mar. 5	1000	670 19.0	4.48 1.366

Minimum daily discharge, no flow several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	9.0	272	38	10	.87			
2			0	0	8.0	290	28	9.0	.87			
3			0	0	7.0	255	22	8.0	.87			
4			0	160	6.0	330	22	6.9	.87			
5			0	94	5.0	440	21	5.8	.87			
6			0	25	4.0	234	21	5.8	.87			
7			0	20	3.0	179	50	3.6	.76			
8			0	15	2.0	138	45	3.1	.87			
9			0	10	1.0	128	39	2.6	.77			
10			0	112	172	100	30	2.6	.79			
11			0	20	120	90	21	2.6	.75			
12			0	33	88	80	18	2.2	.66			
13			0	32	157	70	17	1.7	.62			
14			0	65	112	60	17	2.2	.30			
15			0	341	92	50	16	1.3	.30			
16			0	132	79	50	36	1.3	.30			
17			0	135	60	45	21	1.3	.30			
18			0	55	50	40	15	.98	.15			
19			0	96	40	35	15	.87	.05			
20			0	50	20	30	14	.87	.09			
21			0	45	10	30	14	.87	.03			
22			0	40	9.0	28	14	.87	0			
23			0	35	8.0	27	14	.87	0			
24			0	30	7.0	27	14	.76	.11			
25			0	25	6.0	26	14	.76	0			
26			.52	20	5.0	26	15	.76	0			
27			.08	15	4.0	25	14	.76	.02			
28			9.9	10	54	25	13	.76	.09			
29			6.6	10	---	24	12	.76	.14			
30			0	10	---	24	11	.76	.02			
31		---	0	9.0	---	44	---	.87	---			---
TOTAL	0	0	17.10	1644.0	1138.0	3222	641	81.52	12.34	0	0	0
MEAN	0	0	.55	53.0	40.6	104	21.4	2.63	.41	0	0	0
MAX	0	0	9.9	341	172	440	50	10	.87	0	0	0
MIN	0	0	0	0	1.0	24	11	.76	0	0	0	0
AC-FT	0	0	34	3260	2260	6390	1270	162	24	0	0	0
CAL YR 1977	TOTAL	56.42	MEAN	.15	MAX	17	MIN	0	AC-FT	112		
WTR YR 1978	TOTAL	6755.96	MEAN	18.5	MAX	440	MIN	0	AC-FT	13400		

LOCATION.--Lat 33°45'36", long 116°32'57", in NW¼SE¼ sec.3, T.5 S., R.4 E., Riverside County, on left bank at Bureau of Indian Affairs diversion dam, 1.1 mi (1.8 km) above mouth, and 5.1 mi (8.2 km) south of Palm Springs.

PERIOD OF RECORD.--October 1948 to current year.

REMARKS.--Records fair. No regulation above station. One small diversion for domestic use about 1 mi (2 km) above station.

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 1,960 ft³/s (55.5 m³/s) Aug. 31, 1954, gage height, 7.11 ft (2.167 m), from rating curve extended above 80 ft³/s (2.3 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum (*), from rating curve extended above 80 ft³/s (2.3 m³/s) on basis of slope-area measurement at gage height 7.11 ft (2.167 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 26	1830	70	1.98	2.66	0.811	Feb. 10	0645	53	1.50	2.50	0.762
Jan. 4	2145	31	0.88	2.13	0.649	Feb. 28	2300	34	0.96	2.21	0.674
Jan. 10	0845	30	0.85	2.07	0.631	Mar. 2	1900	115	3.26	3.00	0.914
Jan. 15	0530	*216	6.12	3.58	1.091	Mar. 4	1800	112	3.17	2.98	0.908

Minimum daily discharge, 0.52 ft³/s (0.015 m³/s) Nov. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.82	.77	3.2	4.9	40	15	8.0	4.4	2.6	2.0	1.3
2	.80	.81	.77	4.7	4.4	75	12	7.1	4.4	2.5	2.1	1.3
3	.80	.85	.79	5.4	4.1	57	11	7.0	4.4	2.4	2.1	1.4
4	.75	.99	.80	12	4.4	79	11	6.9	4.3	2.4	1.9	1.8
5	.75	1.0	.77	13	5.7	100	11	7.0	4.2	2.4	1.8	1.9
6	.74	.89	.77	9.2	6.5	68	10	6.7	4.0	2.3	1.8	1.7
7	.81	.80	.77	8.3	6.9	54	11	6.5	3.9	2.3	1.7	1.5
8	.75	.82	.77	7.7	7.5	43	10	6.4	3.7	2.2	1.7	1.5
9	.70	.80	.71	9.3	16	37	10	6.4	3.6	2.1	1.7	1.6
10	.69	.78	.74	20	37	33	9.9	6.3	3.6	2.0	1.7	1.4
11	.69	.78	.75	12	27	31	9.9	6.4	3.6	2.1	1.8	1.4
12	.68	.77	.75	9.5	23	29	9.8	6.3	3.6	2.0	1.7	1.4
13	.67	.77	.76	8.7	22	26	9.6	6.3	3.5	2.0	1.6	1.5
14	.64	.80	.74	15	8.5	23	9.4	6.8	3.4	1.9	1.6	1.6
15	.61	.78	.73	88	5.8	19	10	6.6	3.4	1.8	1.5	1.6
16	.60	.77	.72	29	5.5	17	11	6.9	3.3	1.9	1.3	1.7
17	.60	.80	.75	32	5.7	14	8.4	6.9	3.3	1.8	1.3	1.6
18	.63	.87	1.5	21	5.3	11	8.2	6.7	3.2	1.7	1.4	1.6
19	.71	.83	.93	22	4.6	10	8.4	6.3	3.2	1.6	1.4	1.6
20	.70	.80	.88	19	4.4	9.7	8.2	6.1	3.2	1.6	1.4	1.5
21	.79	.77	.89	12	4.3	12	8.3	5.9	3.1	1.7	1.3	1.4
22	.77	.75	.94	9.2	4.1	17	7.9	5.1	2.9	1.8	1.3	1.3
23	.71	.71	.88	8.4	4.1	15	8.0	5.1	3.0	1.8	1.3	1.3
24	.70	.68	.88	6.6	4.1	14	8.2	5.3	2.9	1.6	1.3	1.2
25	.70	.67	.91	5.6	5.0	14	8.0	5.1	2.8	2.2	1.3	1.3
26	.70	.59	22	5.6	5.8	13	7.8	4.8	2.9	2.2	1.4	1.2
27	.74	.52	13	5.2	7.1	13	7.5	4.5	3.0	2.1	1.4	1.2
28	.75	.67	17	4.6	26	13	7.3	4.4	3.0	1.9	1.3	1.2
29	.81	.73	7.5	4.5	---	13	7.2	4.4	2.8	1.8	1.3	1.3
30	.81	.77	3.9	5.3	---	15	7.2	4.4	2.7	1.6	1.3	1.2
31	.80	---	2.4	5.1	---	20	---	4.5	---	1.7	1.3	---
TOTAL	22.40	23.39	86.47	421.1	269.7	934.7	281.2	187.1	103.3	62.0	48.0	43.5
MEAN	.72	.78	2.79	13.6	9.63	30.2	9.37	6.04	3.44	2.00	1.55	1.45
MAX	.81	1.0	22	88	37	100	15	8.0	4.4	2.6	2.1	1.9
MIN	.60	.52	.71	3.2	4.1	9.7	7.2	4.4	2.7	1.6	1.3	1.2
AC-FT	44	46	172	835	535	1850	558	371	205	123	95	86
CAL YR 1977	TOTAL	482.22	MEAN	1.32	MAX	22	MIN	.17	AC-FT	956		
WTR YR 1978	TOTAL	2482.86	MEAN	6.80	MAX	100	MIN	.52	AC-FT	4920		

10259200 DEEP CREEK NEAR PALM DESERT, CA

LOCATION.--Lat 33°37'52", long 116°23'29", in SE¼NE¼SE¼ sec.19, T.6 S., R.6 E., Riverside County, on left bank 500 ft (150 m) downstream from unnamed tributary, and 6.3 mi (10.1 km) south of Palm Desert.

DRAINAGE AREA.--30.6 mi² (79.3 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,440 ft (439 m), from topographic map.

REMARKS.--Records poor. No gage-height record Oct. 1 to Nov. 3, Feb. 13 to Mar. 30. No regulation or diversion above station.

AVERAGE DISCHARGE.--16 years, 0.94 ft³/s (0.027 m³/s), 681 acre-ft/yr (840,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,100 ft³/s (201 m³/s) Sept. 10, 1976, gage height, 7.84 ft (2.390 m), recorded in gage well, 9.85 ft (3.002 m) from floodmarks, from rating curve extended above 3.3 ft³/s (0.093 m³/s) on basis of slope-area measurements at gage heights 2.68 ft (0.817 m), 5.15 ft (1.570 m), and 7.84 ft (2.390 m); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	1030	54 1.53	3.08 0.939	Mar. 2	Unknown	1500 42.5	+5.10 1.554
Jan. 15	0600	526 14.9	4.48 1.366	Mar. 4		*Unknown	Unknown
Jan. 17	0400	75 2.12	3.62 1.103	Mar. 10		Unknown	Unknown
Feb. 10	0730	856 24.2	4.97 1.515				

Minimum daily discharge, no flow Nov. 25 to Dec. 13.

† Estimated

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.03	0	.19	3.4	90	11	3.9	1.2	.21	.05	.02
2	.04	.03	0	.19	3.2	320	8.8	3.7	1.2	.18	.06	.02
3	.04	.03	0	.19	3.0	25	7.7	3.5	1.1	.16	.08	.02
4	.03	.03	0	2.0	2.9	40	7.1	3.5	1.1	.15	.08	.02
5	.03	.03	0	6.6	2.8	100	6.5	3.5	1.1	.13	.08	.02
6	.03	.03	0	3.4	2.7	50	6.0	3.5	1.1	.13	.08	.02
7	.03	.03	0	2.8	2.6	25	6.5	3.5	.98	.13	.08	.01
8	.03	.03	0	2.6	2.5	20	6.2	3.2	.93	.13	.08	.02
9	.03	.03	0	2.9	2.4	15	5.8	3.1	.80	.12	.08	.02
10	.03	.02	0	29	156	25	5.3	2.9	.71	.10	.08	.02
11	.03	.02	0	33	1.4	22	4.9	2.7	.68	.10	.53	.02
12	.03	.02	0	23	2.0	18	4.6	2.7	.72	.10	.12	.02
13	.03	.02	0	19	3.4	15	4.4	2.3	.69	.08	.09	.02
14	.03	.02	.01	30	2.4	13	4.4	2.1	.66	.08	.06	.02
15	.03	.02	.02	89	2.1	12	4.7	2.1	.56	.08	.06	.02
16	.03	.02	.02	1.1	1.8	10	5.8	2.0	.51	.08	.06	.02
17	.03	.02	.02	18	1.6	9.3	5.5	2.0	.48	.08	.06	.02
18	.03	.03	.02	4.6	1.5	8.7	4.9	1.9	.48	.08	.06	.02
19	.03	.02	.02	4.7	1.4	8.2	4.6	1.8	.45	.07	.06	.02
20	.03	.02	.02	14	1.3	7.6	4.3	1.6	.35	.06	.05	.02
21	.03	.02	.02	9.2	1.2	7.1	4.4	1.6	.33	.06	.05	.02
22	.03	.02	.02	7.4	1.2	6.6	4.1	1.5	.32	.06	.04	.02
23	.03	.02	.02	6.2	1.1	6.2	4.0	1.4	.30	.06	.03	.03
24	.03	.01	.02	5.4	1.1	5.8	4.0	1.4	.29	.06	.03	.03
25	.03	0	.03	5.0	1.0	5.5	4.0	1.5	.28	.06	.03	.03
26	.03	0	.26	4.6	1.0	5.2	4.1	1.4	.24	.06	.03	.03
27	.03	0	.16	4.4	1.0	4.8	4.0	1.4	.23	.06	.03	.03
28	.03	0	.19	4.2	1.0	4.4	4.0	1.3	.20	.06	.03	.03
29	.03	0	.19	3.9	---	4.0	3.9	1.3	.19	.05	.03	.03
30	.03	0	.19	3.7	---	6.9	3.7	1.1	.21	.05	.03	.03
31	.03	---	.19	3.6	---	13	---	1.1	---	.05	.02	---
TOTAL	.97	.57	1.42	343.87	209.0	903.3	159.2	70.5	18.39	2.88	2.25	.67
MEAN	.031	.019	.046	11.1	7.46	29.1	5.31	2.27	.61	.093	.073	.022
MAX	.05	.03	.26	89	156	320	11	3.9	1.2	.21	.53	.03
MIN	.03	0	0	.19	1.0	4.0	3.7	1.1	.19	.05	.02	.01
AC-FT	1.9	1.1	2.8	682	415	1790	316	140	36	5.7	4.5	1.3

CAL YR 1977 TOTAL 114.66 MEAN .31 MAX 70 MIN 0 AC-FT 227
WTR YR 1978 TOTAL 1713.02 MEAN 4.69 MAX 320 MIN 0 AC-FT 3400

SALTON SEA BASIN

10259300 WHITEWATER RIVER AT INDIO, CA

LOCATION.--Lat 33°44'06", long 116°14'39", in NW¼NE¼SW¼ sec.15, T.5 S., R.7 E., Riverside County, at center bridge pier on Interstate Highway 10, and 2 mi (3 km) northwest of Indio.

DRAINAGE AREA.--1,073 mi² (2,779 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 5 ft (2 m), from topographic map.

REMARKS.--Records poor. No regulation above station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs. At times water is released at Coachella Canal crossing, 0.8 mi (1.3 km) upstream.

AVERAGE DISCHARGE.--12 years, 3.09 ft³/s (0.087 m³/s), 2,240 acre-ft/yr (2.76 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) Jan. 25, 1969, gage height, 14.41 ft (4.392 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement at gage height 15.3 ft (4.66 m); no flow all or most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 2 or 3, 1938, reached a discharge of 29,000 ft³/s (821 m³/s), on basis of slope-area measurement at site 4.5 mi (7.2 km) upstream. Flood of November 22, 1965, reached a stage of 15.3 ft (4.66 m) from floodmarks, discharge 14,100 ft³/s (399 m³/s) on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*), on basis of slope-area measurement at gage height 12.6 ft (3.84 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 15	1415	*2140	60.7	9.24	2.816	Mar. 1	2000	1460	41.3	8.82	2.688
Feb. 10	1745	618	17.5	8.17	2.490	Mar. 5	0230	2110	59.8	9.22	2.810

Minimum daily discharge, no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	5.4	0	417					0	0
2			0	10	0	394					0	0
3			0	.04	0	284					0	0
4			0	.02	0	135					0	0
5			0	58	0	511					0	0
6			0	.55	0	1.2					0	0
7			0	0	0	.02					0	0
8			0	0	0	0					0	0
9			0	0	0	0					0	0
10			0	.26	215	0					0	0
11			0	2.0	6.9	0					0	0
12			0	0	0	0					0	0
13			0	0	0	0					0	0
14			0	0	0	0					0	0
15			0	297	0	0					0	0
16			0	1.8	0	0					0	.65
17			0	0	0	0					0	.39
18			0	0	0	0					0	29
19			0	0	0	0					0	0
20			0	0	0	0					0	0
21			0	0	0	0					0	0
22			0	0	0	0					0	0
23			0	0	0	0					0	0
24			0	0	0	0					1.3	0
25			0	0	0	0					0	0
26			0	0	0	0					0	0
27			0	0	0	0					0	0
28			3.7	0	0	0					0	0
29			0	0	---	0					0	0
30			2.0	0	---	0					0	0
31		---	9.5	0	---	0	---		---		0	---
TOTAL	0	0	15.2	375.07	221.9	1742.22	0	0	0	0	1.3	30.04
MEAN	0	0	.49	12.1	7.93	56.2	0	0	0	0	.042	1.00
MAX	0	0	9.5	297	215	511	0	0	0	0	1.3	29
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	30	744	440	3460	0	0	0	0	2.6	60
CAL YR 1977	TOTAL	109.58	MEAN	.30	MAX	79	MIN	0	AC-FT	217		
WTR YR 1978	TOTAL	2385.73	MEAN	6.54	MAX	511	MIN	0	AC-FT	4730		

10259540 WHITEWATER RIVER NEAR MECCA, CA

LOCATION.--Lat 33°31'29", long 116°04'36", in NW¼NW¼NW¼ sec.32, T.7 S., R.9 E., Riverside County, on left bank 1.6 mi (2.6 km) upstream from mouth at Salton Sea and 3.3 mi (5.3 km) south of Mecca.

DRAINAGE AREA.--1,495 mi² (3,872 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 221.00 ft (67.361 m) below National Geodetic Vertical Datum of 1929 (levels by Coachella County Water District). Oct. 1, 1960, to Mar. 22, 1967, at site 1.3 mi (2.1 km) downstream and Mar. 23, 1967, to July 22, 1970, at site 0.7 mi (1.1 km) downstream at different datums.

REMARKS.--Records fair. Most of the flow represents seepage and return flow from irrigated areas.

COOPERATION.--Forty-four discharge measurements were furnished by Coachella Valley County Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,500 ft³/s (70.8 m³/s), estimated, Jan. 25, 1969; minimum daily, 37 ft³/s (1.05 m³/s) Nov. 25-29, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,140 ft³/s (32.3 m³/s) Mar. 5; minimum daily, 78 ft³/s (2.21 m³/s) Dec. 28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	86	90	84	128	252	147	135	119	114	107	100
2	110	84	87	86	115	683	136	132	125	120	128	90
3	102	82	87	103	107	659	141	131	129	116	121	85
4	98	86	92	94	103	145	140	131	125	136	129	95
5	140	84	91	116	102	1140	129	129	111	126	130	117
6	155	81	91	119	102	297	129	128	114	104	142	119
7	145	92	85	97	103	149	129	135	111	101	132	118
8	135	129	81	95	113	147	129	133	103	98	129	118
9	121	98	86	98	113	145	135	139	113	92	121	116
10	125	89	83	182	233	122	128	136	115	88	129	118
11	135	81	86	144	257	120	138	128	113	80	126	116
12	132	85	87	102	132	122	143	135	109	85	123	116
13	130	89	88	95	116	126	140	136	109	92	120	116
14	130	92	89	99	110	128	137	133	114	95	108	119
15	128	90	92	248	109	130	138	125	109	94	124	121
16	118	85	94	206	112	130	139	121	109	109	129	172
17	110	90	94	114	115	131	153	123	114	109	133	128
18	121	92	97	117	108	133	168	120	114	102	129	164
19	112	97	94	99	110	134	148	120	114	105	134	121
20	119	95	84	111	112	146	150	132	107	105	150	113
21	117	95	90	109	118	142	155	126	102	111	140	110
22	112	93	95	116	122	148	150	126	108	107	134	108
23	110	89	90	119	124	156	150	118	108	111	119	105
24	108	87	87	110	132	162	148	115	120	108	124	103
25	102	85	87	101	130	180	140	119	113	115	133	104
26	98	89	92	111	132	192	135	118	119	116	134	104
27	95	89	83	125	138	200	132	118	116	119	139	104
28	93	86	78	129	140	190	133	116	110	121	139	107
29	90	88	79	132	---	168	138	116	108	114	130	110
30	88	90	78	135	---	160	133	123	110	118	125	114
31	87	---	89	135	---	155	---	120	---	116	104	---
TOTAL	3592	2698	2726	3731	3536	6892	4211	3917	3391	3327	3965	3431
MEAN	116	89.9	87.9	120	126	222	140	126	113	107	128	114
MAX	155	129	97	248	257	1140	168	139	129	136	150	172
MIN	87	81	78	84	102	120	128	115	102	80	104	85
AC-FT	7120	5350	5410	7400	7010	13670	8350	7770	6730	6600	7860	6810
CAL YR 1977 TOTAL	47455				690	78	AC-FT	94130				
WTR YR 1978 TOTAL	45417				1140	78	AC-FT	90080				

SALTON SEA BASIN

10259920 WASTEWAY NO. 1 NEAR MECCA, CA

LOCATION.--Lat 33°31'40", long 115°58'23", in NW¼SW¼SW¼ sec.29, T.7 S., R.10 E., Riverside County, on right bank of channel, 1,000 ft (300 m) upstream from mouth, 2,250 ft (690 m) downstream from State Highway 111, and 6.6 mi (10.6 km) southeast of Mecca.

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

GAGE.--Water-stage recorder. Altitude of gage is -220 ft (-67.1 m), from topographic map.

REMARKS.--Records poor. Discharge represents seepage and return flows from irrigated areas. At times water is wasted from Coachella Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 586 ft³/s (16.6 m³/s) Aug. 18, 1977; minimum daily, 1.1 ft³/s (0.03 m³/s) Jan. 8, Apr. 9, 10, May 21-23, 1977.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	3.4	3.8	5.1	2.4	5.9	3.5	2.9	4.8	8.1	4.8	6.7
2	5.1	3.2	3.8	5.1	2.2	8.7	2.9	3.6	4.8	7.2	5.1	5.5
3	5.5	2.9	3.5	5.5	2.0	4.1	2.9	3.5	4.8	4.8	5.5	5.5
4	6.3	2.7	3.2	5.9	2.0	4.1	2.7	4.8	4.8	6.6	5.9	5.0
5	6.7	2.4	3.2	5.1	2.0	4.1	2.4	5.1	6.3	7.7	5.5	4.0
6	6.3	2.7	2.9	5.1	2.0	3.8	2.9	6.3	6.7	3.5	5.5	3.5
7	5.5	2.4	3.2	3.8	2.2	3.8	3.5	6.7	6.7	3.5	5.5	3.5
8	5.1	2.4	4.8	3.5	2.4	3.8	3.5	7.6	7.2	3.5	6.3	3.5
9	5.1	2.9	2.9	3.5	2.7	3.8	3.5	8.6	7.6	3.5	5.9	3.5
10	5.1	2.7	3.5	2.9	3.2	3.5	3.2	9.1	14	3.2	5.5	3.5
11	6.3	2.4	3.8	2.2	3.2	3.2	3.2	9.6	8.1	3.5	5.9	3.5
12	4.8	2.4	3.5	2.4	3.5	3.2	3.2	8.1	6.7	4.1	6.7	3.5
13	4.1	2.4	3.5	2.2	4.1	2.9	3.2	9.6	5.5	5.5	5.1	3.5
14	4.4	2.4	12	2.4	4.8	2.7	12	5.5	4.1	5.1	5.1	3.5
15	4.8	2.4	2.9	2.4	5.1	2.9	1.8	4.1	4.1	1.5	3.3	3.5
16	4.4	2.7	2.7	2.4	5.5	3.8	16	3.5	4.8	2.0	2.7	3.5
17	4.1	2.7	2.4	2.2	5.9	3.2	1.3	5.9	4.8	1.8	3.8	3.5
18	4.1	2.9	2.4	2.4	5.9	3.5	1.3	7.2	4.4	2.5	3.8	3.4
19	4.4	2.9	2.7	2.4	6.3	3.5	1.3	7.2	4.4	3.5	3.5	3.4
20	4.4	3.2	2.4	2.2	6.3	3.8	1.7	6.3	4.8	3.2	2.7	3.4
21	4.8	3.2	2.4	2.2	6.7	4.1	2.4	4.8	5.1	2.9	2.4	3.4
22	4.4	2.9	2.7	2.4	5.5	3.8	2.7	5.1	5.1	2.9	2.9	3.4
23	4.2	2.9	2.9	2.4	5.5	3.8	2.7	5.1	4.8	3.2	2.9	3.4
24	4.4	2.9	3.2	2.4	5.1	3.5	2.4	5.9	4.8	4.1	2.9	3.4
25	4.4	2.9	3.5	2.4	5.9	2.9	3.0	7.2	4.1	4.8	3.5	3.4
26	4.5	2.9	5.5	2.2	5.9	3.2	2.7	5.4	3.5	5.5	3.1	3.4
27	4.6	3.5	3.8	2.2	5.5	2.9	2.7	5.1	3.8	5.5	4.8	3.4
28	4.2	3.5	3.8	2.4	5.9	2.7	2.7	7.6	3.2	5.5	4.4	3.4
29	4.0	3.2	4.4	2.4	---	2.7	2.7	9.1	3.8	5.5	4.8	3.4
30	3.8	3.5	4.8	2.6	---	2.9	2.9	11	4.8	5.5	4.8	3.4
31	3.6	---	5.1	2.4	---	3.5	---	9.2	---	4.8	4.8	---
TOTAL	148.9	85.5	115.2	94.7	119.7	192.6	102.9	200.7	162.4	237.1	139.4	112.9
MEAN	4.80	2.85	3.72	3.05	4.28	6.21	3.43	6.47	5.41	7.65	4.50	3.76
MAX	6.7	3.5	12	5.9	6.7	87	16	11	14	66	6.7	6.7
MIN	3.6	2.4	2.4	2.2	2.0	2.7	1.3	2.9	3.2	1.5	2.4	3.4
AC-FT	295	170	228	188	237	382	204	398	322	470	276	224
CAL YR 1977	TOTAL	3827.4	MEAN	10.5	MAX	586	MIN	1.1	AC-FT	7590		
WTR YR 1978	TOTAL	1712.0	MEAN	4.69	MAX	87	MIN	1.3	AC-FT	3400		

10260500 DEEP CREEK NEAR HESPERIA, CA

LOCATION.--Lat 34°20'28", long 117°13'39", in NW¼NE¼SE¼ sec.18, T.3 N., R.3 W., San Bernardino County, on right bank 0.5 mi (0.8 km) upstream from confluence of West Fork Mojave River and Mojave River Forks Reservoir, 7 mi (11 km) southeast of Hesperia and 11 mi (18 km) downstream from Lake Arrowhead.

DRAINAGE AREA.--134 mi² (347 km²).

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to current year. Monthly discharge only prior to January 1930, published in WSP 1314.

GAGE.--Water-stage recorder. Broad-crested weir since December 1938. Altitude of gage is 3,050 ft (930 m), from topographic map. See WSP 1314 for history of changes prior to Dec. 10, 1938.

REMARKS.--Records fair, except for Feb. 10 when gage was in backwater, which is poor. Slight regulation by Lake Arrowhead, capacity, 48,000 acre-ft (59.2 hm³), used principally for recreation.

AVERAGE DISCHARGE.--67 years, 68.7 ft³/s (1.946 m³/s), 49,770 acre-ft/yr (61.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,600 ft³/s (1,320 m³/s) Mar. 2, 1938, gage height unknown, based on slope-area measurement of maximum flow; maximum gage height, 23.81 ft (7.257 m) Feb. 10, 1978, (backwater from Forks Reservoir); no flow July 17, 18, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0930	2750 77.9	4.81 1.466	Mar. 1	1900	8000 227	7.08 2.158
Jan. 10	1115	533 15.1	3.02 0.920	Mar. 4	1915	*24800 702	13.45 4.100
Jan. 15	0400	8750 248	7.44 2.268	Mar. 31	0630	6610 187	6.58 2.006
Feb. 10	Unknown	Unknown	Unknown	Apr. 15	2330	5460 155	6.14 1.871

Minimum daily discharge, 0.49 ft³/s (0.014 m³/s) Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	1.6	4.0	39	51	5700 ✓	1650	260	76	24	9.3	6.7
2	9.0	1.9	4.2	28	47	6560 ✓	1100	245	72	22	8.9	7.2
3	8.3	1.9	4.2	25	44	2870	900	235	68	22	8.8	7.5
4	8.0	1.9	4.2	48	43	11000 ✓	730	225	64	21	10	6.1
5	8.3	1.9	4.0	111	43	8870 ✓	630	210	62	20	14	7.8
6	8.1	2.2	3.8	173	65	3030	550	200	61	20	13	25
7	8.4	4.0	3.3	83	82	1500	490	195	55	19	11	24
8	8.9	3.7	4.0	55	80	700	440	190	52	19	11	16
9	4.3	2.9	4.0	43	7380 ✓	500	400	180	49	17	12	13
10	.55	2.6	3.8	317	9400 ✓	410	360	161	48	16	18	11
11	.49	2.6	3.8	171	4480 ✓	350	330	158	45	16	15	11
12	.55	2.6	4.0	97	1170	310	305	151	45	16	12	11
13	.62	2.7	4.0	68	948	265	285	151	44	15	9.8	11
14	.55	2.6	3.8	286	653	235	265	147	42	15	9.4	10
15	.62	2.6	4.0	4270 ✓	520	205	250	140	40	14	9.2	11
16	.69	3.0	4.0	898	440	190	2240	140	38	14	9.0	13
17	.69	3.2	4.0	997	370	175	1700	133	36	13	8.6	13
18	.62	3.2	9.0	309	300	160	1400	124	35	13	8.5	12
19	.69	3.9	11	219	260	145	960	124	32	12	8.4	12
20	.76	3.2	9.0	158	230	135	840	117	31	12	8.3	12
21	.84	3.5	6.5	121	210	128	660	117	31	11	8.3	12
22	.84	3.5	6.9	99	195	120	580	111	29	11	8.1	12
23	1.2	3.7	7.2	85	185	114	500	106	27	11	7.9	11
24	1.1	3.8	7.2	70	175	110	450	105	27	11	7.7	10
25	1.2	3.8	7.3	61	175	106	410	100	26	12	7.5	9.7
26	1.2	3.5	85	56	172	102	380	97	26	12	7.3	9.5
27	1.2	4.2	345	52	152	98	350	94	25	11	7.1	9.4
28	1.2	4.2	1620	49	1550	94	320	89	25	11	6.9	9.3
29	1.3	4.0	341	47	---	92	295	87	25	10	6.7	9.2
30	1.4	4.0	118	47	---	90	280	84	25	9.8	6.8	9.0
31	1.6	---	62	57	---	3340	---	81	---	9.5	6.7	---
TOTAL	92.21	92.4	2702.2	9139	29420	47704	20050	4557	1261	459.3	295.2	341.4
MEAN	2.97	3.08	87.2	295	1051	1539	668	147	42.0	14.8	9.52	11.4
MAX	9.0	4.2	1620	4270	9400	11000	2240	260	76	24	18	25
MIN	.49	1.6	3.3	25	43	90	250	81	25	9.5	6.7	6.1
AC-FT	183	183	5360	18130	58350	94620	39770	9040	2500	911	586	677

CAL YR 1977 TOTAL 7236.86 MEAN 19.8 MAX 1620 MIN .24 AC-FT 14350
WTR YR 1978 TOTAL 116113.71 MEAN 318 MAX 11000 MIN .49 AC-FT 230300

10261000 WEST FORK MOJAVE RIVER NEAR HESPERIA, CA

LOCATION.--Lat 34°20'20", long 117°15'25", in NW¼NW¼ sec.24, T.3 N., R.4 W., San Bernardino County, on left bank on upstream wingwall of concrete double box culvert on Arrowhead Lake Road, 0.1 mi (0.2 km) northeast of junction with Highway 174, 4.5 mi (7.2 km) downstream from Cedar Springs Dam, and 6.5 mi (10.5 km) southeast of Hesperia.

DRAINAGE AREA.--70.3 mi² (182 km²).

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to September 1971, October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,040 ft (927 m), from topographic map. Prior to June 30, 1922, nonrecording gage or water-stage recorder 1.6 mi (2.6 km) downstream at different datum. June 30, 1922 to September 1971, water-stage recorder 1.5 mi (2.4 km) downstream at different datum. June 30, 1942 to April 14, 1966, at datum 2.00 ft (0.610 m) higher than datum then in use.

REMARKS.--Records fair. Since 1972 regulated by Cedar Springs Dam, total capacity, 78,000 acre-ft (96.2 hm³), 4.5 mi (7.24 km) upstream.

AVERAGE DISCHARGE.--60 years (water years 1905-22, 1930-71), 39.4 ft³/s (1.116 m³/s), 28,550 acre-ft/yr (35.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s (739 m³/s) Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of maximum flow; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,300 ft³/s (320 m³/s) Feb. 10, gage height unknown, on basis of slope-area measurement of maximum flow; maximum gage height, 23.2 ft (7.07 m) Feb. 10, backwater from Forks Site Reservoir; no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	31	25	1410	251	187	409			
2			0	31	23	1700	331	183	409			
3			0	30	23	1270	339	172	412			
4			0	71	24	3450	305	179	420			
5			0	163	24	3000	295	175	432			
6			0	72	33	1350	305	172	440			
7			0	33	68	990	322	120	438			
8			0	27	74	760	291	97	443			
9			0	26	2870	580	286	137	440			
10			0	151	4900	489	277	389	440			
11			0	121	2300	435	272	401	440			
12			0	66	1100	435	268	393	301			
13			0	37	720	418	263	384	48			
14			0	252	580	393	230	375	2.0			
15			0	1870	409	375	252	361	1.1			
16			0	520	404	339	175	366	.91			
17			0	1100	384	291	238	366	.80			
18			0	380	384	213	242	326	.51			
19			0	118	384	191	281	300	.14			
20			0	130	357	164	223	314	.28			
21			0	137	357	160	220	335	.14			
22			0	137	357	204	234	344	0			
23			0	118	348	175	238	335	0			
24			0	76	335	172	179	339	0			
25			0	68	322	164	127	344	0			
26			5.2	58	314	160	130	344	0			
27			149	48	295	127	167	348	0			
28			490	41	428	99	208	352	0			
29			130	37	---	104	200	339	0			
30			39	35	---	102	168	335	0			
31		---	32	30	---	719	---	364	---			---
TOTAL	0	0	845.2	6014	17842	20439	7317	9176	5077.88	0	0	0
MEAN	0	0	27.3	194	637	659	244	296	169	0	0	0
MAX	0	0	490	1870	4900	3450	339	401	443	0	0	0
MIN	0	0	0	26	23	99	127	97	0	0	0	0
AC-FT	0	0	1680	11930	35390	40540	14510	18200	10070	0	0	0
CAL YR 1977 TOTAL	1777.79			MEAN 4.87	MAX 490	MIN 0	AC-FT 3530					
WTR YR 1978 TOTAL	66711.08			MEAN 183	MAX 4900	MIN 0	AC-FT 132300					

MOJAVE RIVER BASIN

10261100 MOJAVE RIVER BELOW FORKS RESERVOIR, NEAR HESPERIA, CA

LOCATION.--Lat 34°20'38", long 117°14'15", in SW¼NE¼SW¼ sec.18, T.3 N., R.3 W., San Bernardino County, on left bank of reservoir outlet channel, 6.5 mi (10.5 km) southeast of Hesperia.

DRAINAGE AREA.--211 mi² (546 km²).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-71, 1974 to current year.

CHEMICAL ANALYSES: Water years 1967-71, 1974 to current year.

COOPERATION.--Chemical analyses were furnished by California Department of Water Resources; discharges were furnished by Corps of Engineers.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS, (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
DEC 01...	1205	E3.0	400	8.1	9.0	1	10.2	80	0
FEB 01...	1050	E59	360	7.8	11.0	0	10.3	96	18
APR 26...	1335	--	180	8.4	11.0	5	9.6	52	0
JUL 26...	0920	E80	250	8.1	26.1	2	6.6	88	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
DEC 01...	26	3.6	49	57	2.0	1.0	130	0	107
FEB 01...	27	7.0	32	42	1.4	1.0	96	0	79
APR 26...	14	4.2	16	39	1.0	2.0	68	0	56
JUL 26...	26	5.5	24	37	1.1	2.0	--	--	--

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
DEC 01...	1.7	58	11	3.1	213	212	.00	.00
FEB 01...	2.4	33	41	.6	--	190	.23	1.0
APR 26...	.4	11	13	.3	92	94	.20	.90
JUL 26...	--	20	8.4	.7	170	--	.00	.00

E Estimated

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)
DEC 01...	1205	E3.0	400	8.1	9.0	--	160
FEB 01...	1050	E59	360	7.8	11.0	--	60
APR 26...	1335	--	180	8.4	11.0	--	0
MAY 16...	1525	E810	--	--	--	0	--
JUL 26...	0920	E80	250	8.1	26.1	--	0

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 01...	--	--	--	--	--	--
FEB 01...	--	--	--	--	--	--
APR 26...	--	--	--	--	--	--
MAY 16...	0	0	20	0	.0	0
JUL 26...	--	--	--	--	--	--

E Estimated

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 34°34'23", long 117°19'11", in SW¼SW¼SE¼ sec.29, T.6 N., R.4 W., San Bernardino County, on left bank 650 ft (198 m) upstream from bridge on county road, formerly U.S. Highway 66, 0.6 mi (1.0 km) downstream from Atchison, Topeka, and Santa Fe Railway bridge, 3 mi (5 km) northwest of Victorville, 28 mi (45 km) downstream from Mojave River Forks Reservoir, and 33 mi (53 km) downstream from Silverwood Lake.

DRAINAGE AREA.--513 mi² (1,329 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1899 to September 1906, October 1930 to current year. Monthly discharge only for January to September 1906, October, November 1930, published in WSP 1314. Prior to October 1936, published as "at Victorville" and as "near Victorville" in 1937.

GAGE.--Water-stage recorder. Datum of gage is 2,643.01 ft (805.589 m) National Geodetic Vertical Datum of 1929. See WSP 1314 for history of gage changes prior to Mar. 28, 1938. Mar. 28, 1938, to Apr. 14, 1966, at site 350 ft (107 m) upstream at datum 5.00 ft (1.524 m) higher; Apr. 14, 1966, to July 17, 1969, at site 350 ft (107 m) upstream at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records poor. Regulation by Silverwood Lake, capacity, 78,000 acre-ft (96.2 hm³) used for the storage and distribution of imported water and recreation, and by Mojave Forks Reservoir since June 1970, capacity, 89,700 acre-ft (111 hm³) with ungated opening, capacity, 23,500 ft³/s (666 m³/s). Diversions and pumping for irrigation of about 5,000 acres (20.2 km²) and Mojave State Fish Hatchery (since 1970) above station.

AVERAGE DISCHARGE.--55 years (water years 1900-06, 1931-78), 74.9 ft³/s (2.121 m³/s), 54,260 acre-ft/yr (66.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,600 ft³/s (2,000 m³/s) Mar. 2, 1938, gage height, 23.7 ft (7.22 m), present datum, from rating curve extended above 10,000 ft³/s (283 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 3.4 ft³/s (0.096 m³/s) July 25, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft³/s (396 m³/s) Feb. 10, gage height, 8.48 ft (2.585 m); minimum daily, 15 ft³/s (0.42 m³/s) Aug. 16-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	31	32	32	38	3790	678	115	325	26	16	16
2	24	31	32	31	40	6850	455	110	345	26	16	16
3	24	31	36	34	40	3590	678	107	345	25	16	16
4	26	30	38	62	40	7560	432	104	345	25	16	17
5	26	31	38	39	38	6620	284	102	345	25	16	38
6	27	31	35	34	46	949	252	100	345	24	16	20
7	26	32	36	32	48	740	400	98	345	24	16	18
8	27	32	36	32	41	702	585	96	345	23	16	18
9	28	32	36	35	3130	779	268	150	345	23	16	18
10	27	32	38	42	9700	888	389	360	345	23	16	18
11	27	32	39	35	762	955	347	360	345	22	16	18
12	26	31	38	35	844	869	455	360	345	22	16	18
13	26	32	38	34	2000	1390	410	360	120	21	16	18
14	27	31	36	36	1000	990	367	360	35	21	16	18
15	27	31	39	1620	660	908	367	360	33	21	16	18
16	27	29	36	334	570	830	1250	360	31	20	15	18
17	27	28	38	1460	500	809	810	355	29	20	15	19
18	27	28	38	350	456	552	510	349	27	19	15	19
19	28	30	38	93	409	461	470	344	25	19	15	19
20	29	30	38	44	393	404	420	337	25	19	15	19
21	29	30	38	35	404	335	425	331	25	18	15	19
22	29	31	41	32	398	469	415	325	25	18	15	19
23	27	32	41	34	371	898	415	310	26	17	15	19
24	27	32	44	34	343	400	410	303	26	17	15	20
25	26	32	44	37	350	338	360	295	26	17	15	20
26	26	34	53	35	351	338	205	288	26	16	16	20
27	27	34	53	37	351	292	180	281	27	16	16	20
28	27	34	95	35	592	113	150	274	27	16	16	21
29	26	31	126	40	---	105	135	267	27	16	16	21
30	28	32	35	38	---	126	125	260	27	16	16	22
31	30	---	32	38	---	2410	---	265	---	16	16	---
TOTAL	832	937	1337	4809	23915	46460	12647	8086	4707	631	486	580
MEAN	26.8	31.2	43.1	155	854	1499	422	261	157	20.4	15.7	19.3
MAX	30	34	126	1620	9700	7560	1250	360	345	26	16	38
MIN	24	28	32	31	38	105	125	96	25	16	15	16
AC-FT	1650	1860	2650	9540	47440	92150	25090	16040	9340	1250	964	1150
CAL YR 1977 TOTAL	12516			34.3	126	14	AC-FT	24830				
WTR YR 1978 TOTAL	105427			MEAN 289	MAX 9700	MIN 15	AC-FT	209100				

2,15,000 AF

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-65, 1967 to current year.

CHEMICAL ANALYSES: Water years 1967 to current year; water years 1969-74 (partial-record station).

BIOLOGICAL DATA: Water years 1975 to current year.

WATER TEMPERATURES: Water years 1962-65, 1975 to current year.

SEDIMENT RECORDS: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1975 to current year.

WATER TEMPERATURES: March 1962 to September 1965, June 1975 to current year.

INSTRUMENTATION.--Specific-conductance recorder since June 1975. Temperature recorder from March 1962 to September 1965 and since June 1975.

REMARKS.--Periods of missing conductivity and temperature data were due to sand accumulation around probes or equipment malfunction.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 726 micromhos Jan. 23, 1976; minimum recorded, 158 micromhos Jan. 4, 1978.

WATER TEMPERATURES: Maximum recorded, 36.0°C Aug. 5, 1978; minimum recorded, 3.0°C Jan. 2, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 598 micromhos Sept. 1; minimum recorded, 158 micromhos Jan. 4.

WATER TEMPERATURES: Maximum recorded, 36.0°C Aug. 5; minimum recorded, 4.5°C Jan. 16, 17.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT 18...	1545	26	457	7.7	21.0	1	--	5.6	23	K1200	130
NOV 22...	1215	31	454	7.9	15.5	2	--	6.5	44	260	130
DEC 01...A	1325	31	490	7.9	14.0	2	--	7.1	--	--	130
29...	0945	162	367	8.1	12.5	120	--	--	<1	>4000	110
JAN 18...	0945	400	371	7.8	7.0	70	--	10.1	K140	770	92
FEB 01...A	1310	38	430	7.9	18.0	2	--	7.3	--	--	120
15...	1215	683	320	7.7	9.0	55	--	10.2	<1	K370	85
MAR 23...	1515	750	249	7.1	18.5	40	--	8.2	<1	K190	73
APR 13...	1400	411	273	8.2	22.0	20	--	7.3	K2	48	80
26...A	1505	205	250	8.3	18.0	8	--	8.1	--	--	68
MAY 09...	1415	150	300	--	27.0	--	2.1	6.3	K2	K34	92
JUN 30...	1300	27	466	7.6	30.5	--	1.3	6.1	55	28	130
JUL 26...A	1215	25	490	8.3	35.0	4	--	5.1	--	--	140
28...	1510	16	551	7.5	34.0	--	3.0	5.0	73	66	140
AUG 15...	1510	16	560	7.7	27.0	--	4.6	7.2	24	K11	140
SEP 29...	0945	22	498	7.5	18.5	--	1.0	--	K19	87	140

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

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTMBER 1978

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)	ALKA- LINITY (MG/L AS CAC03)
OCT 18...	0	40	8.2	44	41	1.7	4.1	190	0	160
NOV 22...	0	40	8.4	44	41	1.7	4.1	190	0	160
DEC 01... A	0	42	7.0	42	40	2.0	3.0	190	0	156
29...	15	31	6.7	39	43	1.7	4.6	110	0	90
JAN 18...	17	24	7.8	37	46	1.7	2.8	92	0	75
FEB 01... A	0	38	6.0	40	41	2.0	3.0	160	0	131
15...	17	22	7.4	29	41	1.4	2.9	83	0	68
MAR 23...	12	20	5.6	22	38	1.1	2.8	74	0	61
APR 13...	8	22	6.2	25	39	1.2	2.9	88	0	72
26... A	0	18	5.6	24	42	1.0	3.0	90	0	74
MAY 09...	7	25	7.1	28	39	1.3	3.7	--	--	85
JUN 30...	0	37	8.8	48	43	1.8	8.7	--	--	140
JUL 26... A	--	43	8.4	58	45	2.1	10	--	--	--
28...	0	42	8.7	60	46	2.2	10	--	--	180
AUG 15...	0	40	8.6	56	45	2.1	9.2	--	--	180
SEP 29...	0	41	9.0	50	42	1.8	6.6	--	--	160

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	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, NITRATE DIS- SOLVED (MG/L AS N03)	NITRO- GEN, N02+N03 TOTAL (MG/L AS N)
OCT 18...	6.1	39	29	.6	27	270	286	--	--	.87
NOV 22...	3.8	33	26	.5	26	262	276	--	--	.92
DEC 01... A	3.8	36	21	.5	--	254	249	1.5	6.6	--
29...	1.4	34	38	.4	18	235	226	--	--	.93
JAN 18...	2.3	31	45	.2	15	208	208	--	--	.36
FEB 01... A	3.2	34	24	.6	--	181	231	1.4	6.0	--
15...	2.6	23	35	.2	15	180	175	--	--	.79
MAR 23...	9.4	21	28	.2	16	148	152	--	--	.49
APR 13...	.9	22	26	.2	19	164	167	--	--	.54
26... A	.7	18	19	.2	.4	128	137	.86	3.8	--
MAY 09...	--	26	28	.3	21	179	190	--	--	.83
JUN 30...	--	41	35	.5	15	277	278	--	--	.54
JUL 26... A	--	43	36	.7	--	333	--	.81	3.6	--
28...	--	44	39	.7	27	343	340	--	--	.63
AUG 15...	--	41	37	.7	28	326	329	--	--	.40
SEP 29...	--	37	31	.6	25	295	296	--	--	.69

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
OCT 18...	.33	--	--	--	.67	--	--	.31	.30	--
NOV 22...	.51	--	--	--	.74	--	--	.32	.29	--
DEC 01... A	--	--	--	--	--	--	--	--	--	.19
29...	.11	--	--	--	1.4	--	--	.63	.14	--
JAN 18...	.07	1.5	1.6	1.0	.57	2.0	8.7	.31	.08	--
FEB 01... A	--	--	--	--	--	--	--	--	--	.29
15...	.06	.67	.73	.09	.64	1.5	6.7	.26	.09	--
MAR 23...	.08	.44	.52	.41	.11	1.0	4.5	.26	.07	--
APR 13...	.08	.35	.43	.08	.35	.97	4.3	.15	.09	--
26... A	--	--	--	--	--	--	--	--	--	.13
MAY 09...	.04	--	--	--	.85	--	--	.14	.10	--
JUN 30...	.18	.48	.66	.14	.52	1.2	5.3	.41	.37	--
JUL 26... A	--	--	--	--	--	--	--	--	--	.64
28...	.04	.86	.90	.19	.71	1.5	6.8	.70	.64	--
AUG 15...	.15	.79	.94	.21	.73	1.3	5.9	.57	.52	--
SEP 29...	.44	.37	.81	.00	--	1.5	6.6	.62	.52	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)
OCT 18...	1545	26	457	7.7	21.0	4	3	--	600	400	200	--
DEC 01... A	1325	31	490	7.9	14.0	--	--	--	--	--	--	110
JAN 18...	0945	400	371	7.8	7.0	2	1	1	0	0	0	--
FEB 01... A	1310	38	430	7.9	18.0	--	--	--	--	--	--	20
APR 13...	1400	411	273	8.2	22.0	1	0	1	100	100	0	--
26... A	1505	205	250	8.3	18.0	--	--	--	--	--	--	100
MAY 16... A	1650	360	--	--	20.5	--	--	0	--	--	--	--
JUL 26... A	1215	25	490	8.3	35.0	--	--	--	--	--	--	100
28...	1510	16	551	7.5	34.0	5	0	5	200	200	40	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT	18...	.0	.0	0	0	<10	10	0	40	30	10
DEC	01... A	--	--	--	--	--	--	--	--	--	--
JAN	18...	.0	.0	0	0	0	0	0	70	60	10
FEB	01... A	--	--	--	--	--	--	--	--	--	--
APR	13...	.0	.0	0	0	0	0	0	30	20	10
MAY	26... A	--	--	--	--	--	--	--	--	--	--
JUL	16... A	--	--	--	--	--	--	--	--	--	0
AUG	26... A	--	--	--	--	--	--	--	--	--	--
SEP	28...	.1	.0	0	0	0	0	0	30	30	5

MOJAVE RIVER BASIN

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT									
18...	1545	26	440	7.7	21.0	--	8.5	.5	--
DEC									
01... A	1325	31	490	7.9	14.0	--	--	--	.22
29...	0945	162	367	8.1	12.5	13	--	--	--
FEB									
01... A	1310	38	430	7.9	18.0	--	--	--	.18
15...	1215	683	320	7.7	9.0	11	--	--	--
MAR									
23...	1515	750	249	7.1	18.5	17	--	--	--
APR									
13...	1400	411	273	8.2	22.0	--	4.5	--	--
26... A	1505	205	250	8.3	18.0	--	--	--	.08
MAY									
09...	1415	150	300	--	27.0	3.2	--	--	--
JUN									
30...	1300	27	466	7.6	30.5	4.8	--	--	--
JUL									
26... A	1215	25	490	8.3	35.0	--	--	--	.14
28...	1510	16	551	7.5	34.0	--	4.6	.9	--
AUG									
15...	1510	16	560	7.7	27.0	7.5	--	--	--
SEP									
29...	0945	22	500	7.5	18.5	4.5	--	--	--

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 22,77 1215	MAR 23,78 1515	MAY 9,78 1415	JUN 30,78 1300	JUL 28,78 1510	AUG 15,78 1510				
TOTAL CELLS/ML	200	4900	1900	8800	1200	1000				
DIVERSITY: DIVISION	1.4	1.3	1.0	1.3	1.4	1.2				
..CLASS	1.4	1.3	1.0	1.4	1.4	1.2				
..ORDER	1.4	1.5	1.1	2.2	1.6	1.5				
...FAMILY	1.9	1.5	2.1	2.8	1.9	2.0				
....GENUS	1.9	1.7	2.1	2.9	1.9	2.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....HYDRODICTYACEAE										
.....PEDIASTRUM	--	-	--	-	1100#	60	--	-	--	130 13
.....MICRACTINIACEAE	--	-	290	6	--	-	--	-	--	-
.....GOLENKINIA	--	-	--	-	--	-	--	-	--	-
.....OOCYSTACEAE	--	-	--	-	--	-	72	1	--	-
.....ANKISTRODESMUS	--	-	--	-	--	-	290	3	--	-
.....CLOSTERIDIUM	--	-	--	-	--	-	290	3	--	-
.....SCENEDESMACEAE										
.....SCENEDESMUS	32#	16	--	-	170	9	1300	15	610#	52
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	860	10	28	2
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
.....CYCLOTELLA	--	-	1400#	29	--	-	1200	14	--	-
.....STEPHANODISCUS	--	-	290	6	43	2	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
.....ACHNANTHES	--	-	--	-	14	1	--	-	--	16 2
.....COCCONEIS	24	12	--	-	--	-	--	-	--	-
.....CYMBELLACEAE										
.....CYMBELLA	--	-	--	-	14	1	--	-	14	1
.....DIATOMACEAE										
.....DIATOMA	--	-	--	-	29	2	--	-	14	1
...FRAGILARIACEAE										
.....SYNEDRA	8	4	--	-	29	2	--	-	28	2
...GOMPHONEMATAACEAE										
.....GOMPHONEMA	--	-	--	-	57	3	72	1	--	-
...NAVICULACEAE										
.....NAVICULA	8	4	290	6	160	8	1900#	22	150	13
...NITZSCHACEAE										
.....NITZSCHIA	16	8	--	-	210	11	2200#	25	28	2
..CHRYSTOPHYCEAE										
...CHRYSOMONADALES										
....OCHROMONADACEAE										
.....OCHROMONAS	--	-	--	-	--	-	72	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
....CRYPTOMONODACEAE										
.....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	8 1
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCCOCCALES										
....CHROCCOCCAEAE										
.....ANACYSTIS	--	-	2600#	53	--	-	290	3	--	190# 18
...HORMOGONALES										
....NOSTOCACEAE										
.....ANABAENA	--	-	--	-	--	-	--	-	290#	25
...OSCILLATORIACEAE										
....OSCILLATORIA	110#	56	--	-	--	-	430	5	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....EUGLENA	--	-	--	-	--	-	--	-	--	8 1
....TRACHELOMONAS	--	-	--	-	29	2	72	1	--	-

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

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---				---	---	---
2	---	---	---	---	---	---				---	---	---
3	---	---	---	---	---	---				---	---	---
4	---	---	---	---	---	---				---	---	---
5	---	---	---	---	---	---				---	---	---
6	---	---	---	290	242	265				---	---	---
7	410	244	362	304	216	262				---	---	---
8	426	364	391	236	190	209				---	---	---
9	---	---	---	266	206	236				---	---	---
10	---	---	---	280	228	252				---	---	---
11	---	---	---	---	---	---				---	---	---
12	---	---	---	---	---	---				---	---	---
13	---	---	---	---	---	---				318	252	271
14	330	286	305	---	---	---				322	250	275
15	336	248	281	---	---	---				306	248	272
16	288	258	271	---	---	---				320	250	272
17	318	276	304	---	---	---				322	248	271
18	332	306	317	---	---	---				320	248	271
19	358	292	316	---	---	---				314	256	273
20	344	294	315	---	---	---				324	252	279
21	342	290	312	---	---	---				322	248	270
22	348	298	317	---	---	---				314	244	268
23	336	288	312	---	---	---				318	250	271
24	338	304	317	---	---	---				344	254	287
25	354	304	315	---	---	---				---	---	---
26	354	290	313	---	---	---				---	---	---
27	354	300	316	---	---	---				---	---	---
28	---	---	---	---	---	---				---	---	---
29	---	---	---	---	---	---				---	---	---
30	---	---	---	---	---	---				---	---	---
31	---	---	---	---	---	---				---	---	---
MONTH	---	---	---	---	---	---				---	---	---

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1				---	---	---	554	516	537	598	552	577
2				---	---	---	552	520	541	592	556	571
3				---	---	---	576	526	551	582	538	564
4				---	---	---	570	528	547	558	534	544
5				---	---	---	554	518	532	554	498	535
6				---	---	---	538	502	522	504	460	478
7				---	---	---	534	498	523	510	474	489
8				---	---	---	544	500	518	524	492	504
9				---	---	---	530	488	510	526	490	503
10				---	---	---	522	480	504	524	488	502
11				---	---	---	530	484	506	522	488	501
12				---	---	---	518	474	502	528	492	505
13				---	---	---	536	496	518	530	498	515
14				---	---	---	534	506	517	528	492	506
15				---	---	---	538	504	522	522	488	500
16				---	---	---	540	502	516	520	484	498
17				---	---	---	538	506	519	522	484	497
18				---	---	---	550	512	528	510	480	490
19				---	---	---	558	514	536	516	478	491
20				---	---	---	554	518	533	502	472	483
21				---	---	---	556	518	532	510	474	486
22				---	---	---	568	526	544	512	478	489
23				---	---	---	574	534	556	512	472	493
24				---	---	---	574	538	553	512	474	490
25				---	---	---	574	538	553	536	470	488
26				---	---	---	572	536	551	536	446	493
27				---	---	---	574	540	556	514	476	495
28				596	564	582	578	536	558	518	478	496
29				566	530	548	578	534	555	516	476	496
30				564	536	546	566	528	548	516	476	495
31				562	530	544	592	548	567	---	---	---
MONTH				---	---	---	592	474	534	598	446	506
YEAR	598	158	433									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.5	12.5	17.0	18.0	11.5	14.5	15.0	9.5	11.5	13.0	8.0	10.0
2	23.0	13.0	17.0	18.5	11.0	14.5	15.0	9.5	12.0	11.0	8.0	9.5
3	23.5	14.0	18.0	18.5	11.5	14.5	15.5	9.0	12.0	10.0	8.0	9.0
4	22.5	15.0	17.5	18.0	11.5	14.5	15.0	9.0	11.5	12.0	6.5	9.0
5	23.0	14.5	18.0	16.0	12.0	13.5	15.0	9.5	11.5	11.5	8.5	9.5
6	22.5	15.5	18.0	16.0	11.0	12.5	15.0	9.0	11.5	13.5	9.0	11.0
7	22.5	14.5	18.0	17.0	10.5	13.0	14.5	8.5	11.0	14.0	8.5	10.5
8	22.5	14.5	17.5	16.5	10.0	13.0	14.5	9.0	11.5	13.5	8.0	10.0
9	21.5	14.0	17.5	16.0	9.5	12.5	13.5	9.0	11.0	10.5	8.5	9.5
10	22.0	13.5	17.0	15.5	9.0	12.0	14.0	9.0	11.0	11.0	8.5	9.5
11	22.0	13.0	17.0	14.5	10.5	12.5	14.0	8.5	11.0	13.0	8.5	10.5
12	21.0	13.0	16.5	16.5	9.5	12.5	14.0	9.5	11.0	12.5	8.5	10.0
13	22.0	12.5	16.5	15.5	9.5	12.5	13.5	8.5	10.5	12.0	9.0	10.5
14	21.5	12.5	16.5	16.0	10.0	12.5	14.0	8.5	11.0	11.0	9.5	10.0
15	21.5	12.5	16.5	16.5	10.0	13.0	14.5	9.0	11.0	9.5	5.0	7.5
16	21.5	12.5	16.5	16.5	10.0	13.0	13.5	8.5	10.5	7.5	4.5	6.0
17	21.5	13.5	16.5	17.0	10.0	13.0	14.0	8.5	11.0	8.5	4.5	6.5
18	21.0	13.0	16.5	16.5	11.5	13.5	13.5	9.0	11.0	10.5	7.0	8.5
19	18.0	13.5	15.5	15.5	9.5	12.5	12.0	8.0	9.5	12.5	8.5	9.5
20	20.5	13.5	16.0	13.5	9.0	11.0	10.0	8.0	9.0	14.0	8.0	10.5
21	20.0	12.0	15.5	15.5	9.5	12.0	10.0	8.0	9.0	15.0	7.5	11.0
22	20.0	12.0	16.0	16.0	10.5	13.0	11.5	8.5	9.5	---	---	---
23	20.0	12.0	15.5	16.5	11.0	13.0	13.0	9.0	10.5	---	---	---
24	20.0	11.5	15.5	16.0	10.0	12.5	12.5	9.0	10.5	---	---	---
25	20.5	11.5	16.0	16.0	10.0	12.5	12.5	9.5	11.0	---	---	---
26	19.5	11.5	15.5	16.0	10.0	12.5	11.0	10.0	10.5	---	---	---
27	19.0	13.5	15.5	16.0	11.5	13.0	12.5	10.5	11.5	---	---	---
28	19.0	13.5	15.5	16.0	10.5	12.5	---	---	---	---	---	---
29	18.5	12.0	15.0	15.5	9.5	12.0	16.0	9.5	12.5	---	---	---
30	17.5	11.5	14.0	15.5	10.0	12.0	14.0	9.5	11.0	---	---	---
31	18.0	10.5	14.0	---	---	---	12.0	9.0	10.0	---	---	---
MONTH	23.5	10.5	16.5	18.5	9.0	13.0	16.0	8.0	11.0	---	---	---

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
18...	1545	26	21.0	78	42
NOV					
22...	1215	31	15.5	108	30
DEC					
29...	0945	162	12.5	2960	13
JAN					
18...	0945	400	7.0	1100	21
FEB					
15...	1215	683	9.0	991	16
MAR					
23...	1515	750	18.5	619	25
APR					
13...	1400	411	22.0	302	32
MAY					
09...	1415	150	27.0	159	12
JUN					
30...	1300	27	30.5	24	35
JUL					
28...	1510	16	34.0	11	62
AUG					
15...	1510	16	27.0	14	62
SEP					
29...	0945	22	18.5	16	56

10262000 MOJAVE RIVER NEAR HODGE, CA

LOCATION.--Lat 34°50'09", long 117°11'27", in SW¼SE¼SE¼ sec.28, T.9 N., R.3 W., San Bernardino County, at county bridge 1.5 mi (2.4 km) north of Hodge, 10.9 mi (17.5 km) southwest of Barstow, and 44.5 mi (71.6 km) downstream from Silverwood Lake.

DRAINAGE AREA.--1,091 mi² (2,826 km²).

PERIOD OF RECORD.--October 1930 to September 1932, October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,260 ft (689 m), from topographic map. Prior to Oct. 1, 1970, at different datum.

REMARKS.--Records poor. Regulation by Lake Arrowhead, capacity, 48,000 acre-ft (59.2 hm³) used principally for recreation, Silverwood Lake, capacity, 78,000 acre-ft (96.2 hm³) used for the storage and distribution of imported water and recreation, and Mojave Forks Reservoir, capacity, 89,700 acre-ft (111 hm³), with ungated opening, capacity, 23,500 ft³/s (666 m³/s). Diversion and pumping for irrigation of about 12,000 acres (48.6 km²) above station.

AVERAGE DISCHARGE.--10 years, (water years 1931-32, 1971-78), 29.62 ft³/s (0.839 m³/s), 21,450 acre-ft/yr (26.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) Feb. 10, 1978, gage height, 8.80 ft (2.682 m), no flow all or most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,700 ft³/s (360 m³/s) Feb. 10, gage height, 8.80 ft (2.682 m), no flow for most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	0	1600	270	140	250			
2				0	0	6000	300	135	260			
3				0	0	3600	320	130	270			
4				0	0	5400	330	128	270			
5				.01	0	7600	340	126	270			
6				0	0	1500	350	125	270			
7				0	0	760	360	123	265			
8				0	0	760	360	130	260			
9				0	807	780	360	167	260			
10				0	2720	840	370	230	250			
11				.03	300	960	370	345	245			
12				0	450	1000	370	340	240			
13				0	1260	1150	370	335	230			
14				0	850	1120	370	320	28			
15				201	700	900	380	290	9.0			
16				155	530	770	1100	285	2.0			
17				222	460	700	620	275	0			
18				58	420	590	520	260	0			
19				20	390	450	460	250	0			
20				7.0	380	370	420	240	0			
21				0	360	320	400	260	0			
22				0	350	290	390	260	0			
23				0	340	610	390	255	0			
24				0	340	520	370	255	0			
25				0	340	350	340	250	0			
26				0	340	320	250	245	0			
27				0	360	290	200	240	0			
28				0	450	150	175	230	0			
29				0	---	110	160	225	0			
30				0	---	90	150	210	0			
31		---		0	---	130	---	160	---			---
TOTAL	0	0	0	663.04	12147	40030	11165	6964	3379.0	0	0	0
MEAN	0	0	0	21.4	434	1291	372	225	113	0	0	0
MAX	0	0	0	222	2720	7600	1100	345	270	0	0	0
MIN	0	0	0	0	0	90	150	123	0	0	0	0
AC-FT	0	0	0	1320	24090	79400	22150	13810	6700	0	0	0
CAL YR 1977	TOTAL	5.21	MEAN	.01	MAX	1.0	MIN	0	AC-FT	10		
WTR YR 1978	TOTAL	74348.04	MEAN	204	MAX	7600	MIN	0	AC-FT	147500		

10262500 MOJAVE RIVER AT BARSTOW, CA

LOCATION.--Lat 34°54'25", long 117°01'19", in SE¼SW¼SW¼ sec.31, T.10 N., R.1 W., San Bernardino County, on left bank 75 ft (23 m) upstream from bridge on U.S. Highway 91 at Barstow.

DRAINAGE AREA.--1,291 mi² (3,344 km²).

PERIOD OF RECORD.--October 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,089.34 ft (636.831 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Regulation by Lake Arrowhead, capacity, 48,000 acre-ft (59.2 hm³) used principally for recreation, Silverwood Lake, capacity, 78,000 acre-ft (96.2 hm³) used for the storage and distribution of imported water and recreation, and Mojave Forks Reservoir, capacity, 89,700 acre-ft (111 hm³) with ungated opening, capacity, 23,500 ft³/s (666 m³/s). Diversions and pumping for irrigation of about 15,000 acres (60.7 km²) above station.

AVERAGE DISCHARGE.--48 years, 22.6 ft³/s (0.640 m³/s), 16,370 acre-ft/yr (20.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,300 ft³/s (1,820 m³/s) Mar. 3, 1938, gage height, 8.60 ft (2.621 m), on basis of slope-area measurement of maximum flow; no flow for most months each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,300 ft³/s (292 m³/s) Feb. 10, gage height, 4.75 ft (1.448 m), on basis of slope-area measurement of maximum flow; no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	0	130	12	0				
2				0	0	700	12	0				
3				0	0	3800	12	0				
4				0	0	2100	12	0				
5				0	0	4900	12	0				
6				0	0	400	12	0				
7				0	0	300	12	0				
8				0	0	300	12	0				
9				0	3.0	310	13	0				
10				0	3330	340	13	0				
11				0	405	395	15	1.7				
12				0	599	410	16	5.0				
13				0	1700	410	21	4.1				
14				0	441	380	26	3.3				
15				0	250	200	36	2.6				
16				0	200	110	10	0				
17				9.2	170	78	2.0	0				
18				0	155	52	0	.20				
19				0	140	35	367	0				
20				0	130	26	297	0				
21				0	125	20	285	0				
22				0	120	15	115	0				
23				0	118	14	60	.67				
24				0	115	13	26	0				
25				0	112	13	12	0				
26				0	115	13	6.0	0				
27				0	118	12	2.5	0				
28				0	122	12	1.1	0				
29				0	---	12	.50	0				
30				0	---	12	.23	0				
31		---		0	---	12	---	0	---			---
TOTAL	0	0	0	9.2	8468.0	15524	1420.33	17.57	0	0	0	0
MEAN	0	0	0	.30	302	501	47.3	.57	0	0	0	0
MAX	0	0	0	9.2	3330	4900	367	5.0	0	0	0	0
MIN	0	0	0	0	0	12	0	0	0	0	0	0
AC-FT	0	0	0	18	16800	30790	2820	35	0	0	0	0
CAL YR 1977	TOTAL	1.00	MEAN	.003	MAX	1.0	MIN	0	AC-FT	2		
WTR YR 1978	TOTAL	25439.10	MEAN	69.7	MAX	4900	MIN	0	AC-FT	50460		

10263000 MOJAVE RIVER AT AFTON, CA

LOCATION.--Lat 35°02'14", long 116°23'00", in SW¼NW¼SE¼ sec.18, T.11 N., R.6 E., San Bernardino County, on downstream end of right pier of Union Pacific Railroad bridge, 0.3 mi (0.5 km) west of Afton.

DRAINAGE AREA.--2,121 mi² (5,493 km²).

PERIOD OF RECORD.--October 1929 to September 1932, October 1952 to current year. Records for the water year 1930 incomplete, yearly estimate published in WSP 1314.

GAGE.--Water-stage recorder. Datum of gage is 1,400.15 ft (426.766 m) National Geodetic Vertical Datum of 1929. Dec. 21, 1929, to Sept. 30, 1932, at site 1.7 mi (2.7 km) downstream at different datum.

REMARKS.--Records poor. No gage-height record Dec. 1 to Mar. 2 and July 15 to Sept. 30. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in upstream reservoirs 100 mi (160 km) upstream (station 10261500).

AVERAGE DISCHARGE.--29 years, 7.19 ft³/s (0.204 m³/s), 5,210 acre-ft/yr (6.42 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Jan. 26, 1969, gage height, 10.40 ft (3.170 m), from rating curve extended above 3,200 ft³/s (90.6 m³/s) on basis of slope-area measurement of maximum flow; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft³/s (400 m³/s) Mar. 5, gage height, 5.30 ft (1.615 m), from rating curve extended above 300 ft³/s (8.50 m³/s) on basis of slope-area measurement at 7,000 ft³/s (198 m³/s), peaks above base of 100 ft³/s (2.83 m³/s) were not determined this year; minimum daily, 0.14 ft³/s (0.004 m³/s) Oct. 1-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.16	.20	.23	.72	300	1.1	.76	.91	.68	.53	.62
2	.14	.16	.20	.23	.72	731	1.1	.68	.98	.65	.52	.62
3	.14	.16	.20	.23	.73	2470	1.1	.67	.91	.64	.52	.63
4	.14	.16	.20	.23	.74	952	1.1	.66	.70	.63	.52	.64
5	.14	.17	.20	.23	.76	5870	1.1	.66	.74	.62	.52	.64
6	.14	.17	.20	.23	.78	1060	1.1	.67	.79	.61	.52	.66
7	.14	.17	.20	.23	.80	650	1.1	.68	.98	.60	.53	.66
8	.14	.17	.20	.24	.82	320	1.1	.70	.91	.59	.53	.67
9	.14	.17	.20	.24	.84	140	1.1	1.1	.98	.58	.53	.67
10	.14	.17	.20	.24	4950	92	1.1	1.1	.98	.58	.54	.68
11	.14	.17	.20	.24	540	62	1.1	1.2	.91	.62	.54	.69
12	.14	.17	.21	.24	950	46	1.1	1.2	.79	.70	.54	.70
13	.14	.17	.21	.24	1600	34	1.1	1.2	.72	.70	.54	.71
14	.15	.17	.21	.24	290	28	1.1	1.2	.70	.74	.55	.72
15	.15	.18	.21	.32	240	22	2.8	1.2	.70	.74	.55	.72
16	.15	.18	.21	.54	215	16	2.2	1.3	.70	.74	.56	.73
17	.15	.18	.22	3.0	119	12	1.8	1.3	.79	.74	.56	.74
18	.15	.18	.22	1.1	175	10	1.5	1.3	.74	.74	.56	.76
19	.15	.18	.22	.79	165	7.6	1.3	1.2	.70	.74	.56	.77
20	.15	.18	.22	.70	155	5.8	1.3	1.3	.79	.74	.57	.77
21	.15	.18	.22	.69	150	4.5	1.3	1.2	.74	.74	.57	.77
22	.15	.18	.22	.69	145	3.4	1.3	.98	.70	.72	.58	.77
23	.15	.19	.22	.69	140	3.0	1.2	1.1	.79	.70	.58	.77
24	.15	.19	.22	.69	135	2.7	1.2	1.4	.78	.68	.58	.77
25	.15	.19	.22	.69	130	2.4	1.2	.98	.77	.66	.59	.77
26	.16	.19	.22	.69	135	2.2	1.1	1.3	.76	.64	.59	.78
27	.16	.19	.22	.69	140	1.9	1.1	1.4	.75	.62	.60	.78
28	.16	.19	.22	.69	145	1.7	1.0	.98	.74	.60	.60	.78
29	.16	.19	.23	.69	---	1.5	.96	.74	.72	.58	.61	.78
30	.16	.19	.23	.70	---	1.3	.88	.66	.70	.57	.61	.78
31	.16	---	.23	.70	---	1.1	---	.70	---	.55	.62	---
TOTAL	4.58	5.30	6.58	17.35	10525.91	12854.1	37.54	31.52	23.87	20.44	17.32	21.55
MEAN	.15	.18	.21	.56	376	415	1.25	1.02	.80	.66	.56	.72
MAX	.16	.19	.23	3.0	4950	5870	2.8	1.4	.98	.74	.62	.78
MIN	.14	.16	.20	.23	.72	1.1	.88	.66	.70	.55	.52	.62
AC-FT	9.1	11	13	34	20880	25500	74	63	47	41	34	43
CAL YR 1977 TOTAL	419.24		MEAN 1.15	MAX 156	MIN 0	AC-FT 832						
WTR YR 1978 TOTAL	23566.06		MEAN 64.6	MAX 5870	MIN .14	AC-FT 46740						

28044

LOCATION.--Lat 34°25'15", long 117°50'19", in NW¼SE¼NE¼ sec.20, T.4 N., R.9 W., Los Angeles County, on left bank 0.1 mi (0.2 km) upstream from Punchbowl Canyon, and 1.9 mi (3.1 km) southeast of Valyermo.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Altitude of gage is 4,050 ft (1,234 m), from topographic map. Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mi (0.3 km) downstream (below Punchbowl Canyon) at different datum.

REMARKS.--Records fair. No regulation or diversion above station. Some infiltration into the streambed in the immediate vicinity of station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,300 ft³/s (235 m³/s) Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.70 ft³/s (0.020 m³/s) Nov. 5, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*), from rating curves extended above 80 ft³/s (2.27 m³/s) on basis of slope-area measurements of January and February peak flows and extended above 300 ft³/s (8.50 m³/s) on basis of slope-area measurements at gage heights 4.48 ft (1.366 m) and 8.14 ft (2.481 m), respectively:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 28	0330	450	12.7	4.35	1.326	Mar. 4	1415	*4070	115	6.73	2.051
Jan. 16	Unknown	512	14.5	4.48	1.366	Mar. 31	0430	1280	36.2	3.37	1.027
Feb. 10	0245	2160	61.2	8.14	2.481	Apr. 15	1945	479	13.6	2.46	0.750
Feb. 28	2000	2330	66.0	4.52	1.378	May 30	2215	151	4.28	1.92	0.585

Minimum daily discharge, 2.7 ft³/s (0.076 m³/s) Dec. 10-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.2	2.9	52	5.7	1490	405	92	142	55	17	19
2	4.5	4.2	2.9	47	5.7	1390	255	85	137	51	17	20
3	4.5	4.2	2.9	43	5.2	1040	204	92	133	51	17	16
4	4.5	4.2	2.9	41	4.7	2050	187	107	133	47	17	20
5	4.5	4.2	2.9	39	8.0	1450	161	111	133	45	18	23
6	4.4	4.2	2.9	39	11	1080	161	107	133	43	19	23
7	4.4	4.2	2.9	39	13	790	175	96	137	40	20	22
8	4.4	4.2	2.9	38	16	590	142	96	133	36	19	22
9	4.4	4.2	2.9	38	796	420	128	100	120	35	18	21
10	4.4	4.2	2.7	38	1410	300	120	103	111	35	20	21
11	4.3	4.2	2.7	38	380	235	115	107	103	35	24	21
12	4.3	4.2	2.7	38	150	171	115	120	96	35	24	20
13	4.3	4.2	2.7	37	140	146	115	137	92	38	24	20
14	4.3	4.2	2.7	37	122	107	107	142	89	33	26	20
15	4.3	4.2	2.9	100	112	76	187	142	82	33	26	20
16	4.2	4.2	2.9	510	105	57	210	137	74	31	25	20
17	4.2	4.2	3.1	200	97	54	161	115	71	31	24	18
18	4.2	4.2	4.2	72	93	52	142	111	71	22	24	19
19	4.2	4.2	3.7	57	91	51	133	107	71	20	24	18
20	4.2	4.2	3.5	40	90	50	124	111	64	20	23	18
21	4.2	4.2	3.8	30	90	50	111	115	57	21	24	18
22	4.2	4.2	3.7	22	89	80	96	111	62	20	24	16
23	4.2	4.2	3.1	18	88	104	92	103	68	20	23	16
24	4.2	3.9	3.3	15	85	120	85	100	66	20	23	16
25	4.2	3.7	3.5	12	76	107	100	96	64	20	23	16
26	4.2	3.7	19	11	76	100	96	89	61	20	23	16
27	4.2	3.3	24	9.9	82	92	92	85	61	20	22	16
28	4.2	2.9	125	9.2	601	89	92	82	61	20	20	15
29	4.2	2.9	92	7.4	---	82	100	85	61	20	17	14
30	4.2	2.9	73	6.8	---	124	96	111	57	20	18	14
31	4.2	---	61	6.2	---	830	---	133	---	18	19	---
TOTAL	133.2	119.9	471.3	1690.5	4842.3	13377	4307	3328	2743	955	662	558
MEAN	4.30	4.00	15.2	54.5	173	432	144	107	91.4	30.8	21.4	18.6
MAX	4.5	4.2	125	510	1410	2050	405	142	142	55	26	23
MIN	4.2	2.9	2.7	6.2	4.7	50	85	82	57	18	17	14
AC-FT	264	238	935	3350	9600	26530	8540	6600	5440	1890	1310	1110
CAL YR 1977	TOTAL		3166.3	MEAN	8.67	MAX	125	MIN	2.7	AC-FT	6280	
WTR YR 1978	TOTAL		33187.2	MEAN	90.9	MAX	2050	MIN	2.7	AC-FT	65830	

10263500 BIG ROCK CREEK NEAR VALYERMO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1962 to current year.

INSTRUMENTATION.--Temperature recorder since January 1962.

REMARKS.--Records good. Periods of missing temperature record were due to flood damage and recorder malfunction.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug. 19, 26, 1970, July 15, 31, 1972; minimum recorded, 0.5°C Jan. 4, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 20.5°C Aug. 9; minimum recorded, 8.5°C Nov. 20, Dec. 19-21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

10264000 LITTLE ROCK CREEK NEAR LITTLE ROCK, CA

LOCATION.--Lat 34°27'47", long 118°01'04", in SW¼SW¼NE¼ sec.3, T.4 N., R.11 W., Los Angeles County, on right bank 0.3 mi (0.5 km) upstream from Santiago Creek, 1.6 mi (2.6 km) upstream from Little Rock Palmdale Irrigation District's dam, and 5 mi (8 km) south of Little Rock.

DRAINAGE AREA.--49.0 mi² (126.9 km²).

PERIOD OF RECORD.--October 1930 to February 1938, May to September 1938, April 1939 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,290 ft (1,003 m), from topographic map. Prior to May 1943, at site 500 ft (150 m) downstream at different datums.

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

COOPERATION.--Records furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--45 years (1930-37, 1939-77), 15.9 ft³/s (0.450 m³/s), 11,520 acre-ft/yr (14.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge.--17,000 ft³/s (481 m³/s), estimated, Mar. 2, 1938; no flow at times in most years.

NOTE.--Record for current year will not be published due to lack of data.

10264600 OAK CREEK NEAR MOJAVE, CA

LOCATION.--Lat 35°03'00", long 118°21'25", in NW¼ sec.15, T.11 N., R.14 W., Kern County, on upstream right wingwall of culvert, 100 ft (30 m) downstream from unnamed tributary, 0.1 mi (0.2 km) west of junction of Oak Creek and Willow Springs Roads, and 10.5 mi (16.9 km) west of Mojave.

DRAINAGE AREA.--15.8 mi² (40.9 km²).

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,100 ft (1,250 m), from topographic map.

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

AVERAGE DISCHARGE.--21 years, 0.92 ft³/s (0.026 m³/s), 667 acre-ft/yr (822,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) May 14, 1973, by slope-area measurement, caused by failure of small earthen dam 4 mi (6 km) upstream during intense local thunderstorm; maximum gage height, 10.53 ft (3.210 m) May 14, 1973, ponding at culvert 0.1 mi (0.2 km) downstream; no flow for some months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.28 m³/s) and maximum (*), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 10	0030	490 13.8	6.14 1.871	Mar. 31	Unknown	120 3.40	Unknown
Feb. 13	Unknown	100 2.83	Unknown	Apr. 15	Unknown	84 2.38	3.19 0.972
Mar. 4	2145	*750 21.2	7.48 2.280	Apr. 25	Unknown	30 0.85	Unknown
Mar. 21	Unknown	50 1.42	Unknown				

Minimum daily discharge, no flow some days October to December.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	0	.04	.01	16	20	9.6	5.6	2.9	1.8	.95
2	.02	.01	0	.02	.01	17	12	9.5	5.5	2.8	1.7	.95
3	.02	.01	0	.02	.01	16	12	9.5	5.4	2.7	1.7	.95
4	.02	.01	0	.02	.01	413	12	9.4	5.2	2.5	1.7	.95
5	.02	.01	0	.04	.01	293	12	9.5	5.1	2.6	1.7	.95
6	.02	.01	0	.02	.01	133	12	9.5	4.9	2.7	1.6	1.0
7	.02	.01	0	.02	.03	84	12	9.2	4.7	2.6	1.4	1.0
8	.02	.01	0	.02	1.6	47	11	9.1	4.5	2.6	1.4	1.0
9	.02	.01	0	.02	20	20	11	9.0	4.4	2.5	1.3	1.0
10	.03	.01	0	.06	60	15	11	8.9	4.3	2.3	1.4	1.0
11	.03	.01	0	.02	10	15	10	8.6	4.2	2.2	1.2	1.0
12	.03	0	0	.02	9.0	15	10	8.4	4.1	2.2	1.1	1.0
13	.02	0	0	.02	20	11	10	8.2	4.0	2.2	.94	1.0
14	.03	0	0	.03	5.0	11	10	8.0	3.9	2.1	.85	1.0
15	.02	0	0	.20	2.5	11	40	8.2	3.8	2.1	.85	1.0
16	.02	0	.02	.20	1.7	10	20	8.2	3.7	2.1	.85	1.0
17	.01	0	.05	.19	1.6	10	11	7.9	3.6	2.0	.85	1.1
18	.01	0	.03	.13	1.5	10	11	7.7	3.5	1.9	.85	1.1
19	.01	0	.02	.23	1.5	10	11	7.5	3.4	1.8	.85	1.1
20	.01	0	.01	.10	1.5	10	11	7.2	3.3	1.8	.85	1.1
21	.01	0	.01	.03	1.5	21	10	7.1	3.2	1.7	.90	1.1
22	.01	0	.01	.03	1.5	11	10	7.1	3.1	1.6	.90	1.1
23	.01	0	.01	.03	1.5	11	10	7.2	3.0	1.6	.90	1.1
24	.01	0	.01	.02	1.4	11	10	7.2	3.0	1.6	.90	1.1
25	.01	0	.02	.02	1.4	10	12	7.1	2.9	1.6	.90	1.1
26	.01	0	.02	.02	1.3	10	10	6.8	2.9	1.6	.90	1.1
27	.01	0	.02	.02	1.3	10	10	6.4	2.8	1.7	.90	1.1
28	.01	0	.16	.02	3.1	10	9.9	6.2	2.8	1.8	.95	1.2
29	.01	0	.20	.02	---	10	9.7	6.0	2.7	1.8	.95	1.2
30	0	0	.13	.01	---	10	9.6	5.8	2.7	1.9	.95	1.2
31	.01	---	.10	.01	---	48	---	5.8	---	1.9	.95	---
TOTAL	.50	.11	.82	1.65	148.99	1329	370.2	245.8	116.2	65.4	34.99	31.45
MEAN	.016	.004	.027	.053	5.32	42.9	12.3	7.93	3.87	2.11	1.13	1.05
MAX	.03	.01	.20	.23	60	413	40	9.6	5.6	2.9	1.8	1.2
MIN	0	0	0	.01	.01	10	9.6	5.8	2.7	1.6	.85	.95
AC-FT	1.0	.2	1.6	3.3	296	2640	734	488	230	130	69	62
CAL YR 1977	TOTAL	15.06	MEAN .041	MAX	.20	MIN 0	AC-FT	30				
WTR YR 1978	TOTAL	2345.11	MEAN 6.43	MAX	413	MIN 0	AC-FT	4650				

10264750 PINE TREE CREEK NEAR MOJAVE, CA

LOCATION.--Lat 35°13'50", long 118°05'07", in SW¼NW¼SE¼ sec.14, T.31 S., R.36 E., Kern County, on downstream side of city of Los Angeles aqueduct-siphon pier near right bank, 0.5 mi (0.8 km) downstream from unnamed tributary, and 13 mi (21 km) northeast of Mojave.

DRAINAGE AREA.--33.5 mi² (86.8 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,700 ft (823 m), from topographic map. Prior to Oct. 1, 1961, at datum 3.0 ft (0.9 m) higher.

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

AVERAGE DISCHARGE.--20 years (water years 1959-78), 0.27 ft³/s (0.008 m³/s), 196 acre-ft/yr (242,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Aug. 23, 1961, on basis of field estimate of maximum flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,700 ft³/s (218 m³/s) Feb. 10, gage height, 7.42 ft (2.262 m), on basis of field estimate of peak flow; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	9.2	0			0		
2			0	0	0	.01	0			0		
3			0	0	0	0	0			0		
4			0	0	0	9.1	0			0		
5			0	0	0	0	0			0		
6			0	0	0	0	0			0		
7			0	0	0	0	0			0		
8			0	0	0	0	0			0		
9			0	0	250	0	0			0		
10			0	.05	260	0	0			0		
11			0	0	.50	0	0			0		
12			0	0	0	0	0			0		
13			0	0	0	0	0			0		
14			0	0	0	0	0			0		
15			0	.99	0	0	0			0		
16			0	1.9	0	0	0			0		
17			0	.01	0	0	0			0		
18			0	0	0	0	0			0		
19			0	0	0	0	0			0		
20			0	0	0	0	0			0		
21			0	0	0	0	0			0		
22			0	0	0	0	0			0		
23			0	0	0	0	0			0		
24			0	0	0	0	0			0		
25			0	0	0	0	0			.01		
26			0	0	0	0	0			0		
27			0	0	0	0	0			0		
28			.17	0	13	0	.50			0		
29			0	0	---	0	0			0		
30			0	0	---	0	0			0		
31		---	0	0	---	13	---		---	0		---
TOTAL	0	0	.17	2.95	523.50	31.31	.50	0	0	.01	0	0
MEAN	0	0	.006	.095	18.7	1.01	.017	0	0	.0003	0	0
MAX	0	0	.17	1.9	260	13	.50	0	0	.01	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	.3	5.9	1040	62	1.0	0	0	.02	0	0
CAL YR 1977	TOTAL	128.83	MEAN .35	MAX 62	MIN 0	AC-FT 256						
WTR YR 1978	TOTAL	558.44	MEAN 1.53	MAX 260	MIN 0	AC-FT 1110						

10265200 CONVICT CREEK NEAR MAMMOTH LAKES, CA

LOCATION.--Lat 37°36'26", long 118°50'52", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.4 S., R.28 E., Mono County, on right bank 1.1 mi (1.8 km) downstream from Convict Lake, 2.0 mi (3.2 km) upstream from U.S. Highway 395, and 7.0 mi (11.3 km) southeast of Mammoth Lakes Ranger Station.

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

REVISED RECORDS.--WDR CA-77-1: 1976.

GAGE.--Water-stage recorder and wood control. Altitude of gage is 7,450 ft (2,271 m), from topographic map. Prior to Nov. 15, 1926, nonrecording gage at same site and datum.

REMARKS.--Records poor. Some regulation by Convict Lake above station. No diversion above station.

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--53 years, 24.4 ft³/s (0.691 m³/s), 17,680 acre-ft/yr (21.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290 ft³/s (8.21 m³/s) June 29, 1932, gage height, 4.43 ft (1.350 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Sept. 20-22, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 150 ft³/s (4.25 m³/s) July 16, 17, 28; minimum daily, 3.0 ft³/s (0.085 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.7	3.7	9.0	6.2	7.2	7.1	13	57	98	114	39
2	3.4	3.7	3.9	8.6	6.2	8.9	6.8	13	61	105	116	37
3	3.4	3.7	3.9	8.6	6.2	8.9	8.2	13	62	105	121	37
4	3.4	3.7	3.9	9.0	6.0	12	9.7	13	63	102	114	41
5	3.0	3.7	3.9	11	6.2	13	9.4	14	62	96	108	67
6	3.4	3.7	4.2	11	6.8	13	9.7	15	69	98	103	121
7	3.9	3.4	3.7	9.8	6.6	11	10	16	81	105	94	137
8	3.9	3.4	3.4	9.4	7.6	11	9.7	16	96	114	90	125
9	3.9	3.4	3.4	9.8	9.6	11	9.7	17	113	121	87	104
10	3.9	3.4	3.7	11	11	11	9.4	19	127	127	85	90
11	3.9	3.4	5.1	9.8	10	9.8	9.4	19	129	132	85	80
12	3.9	3.4	4.2	9.4	9.8	9.4	9.7	21	125	134	87	76
13	3.9	3.7	3.9	9.0	10	8.9	9.7	24	139	130	87	71
14	3.9	3.4	6.0	9.4	9.8	8.5	9.7	30	148	132	80	66
15	3.9	3.4	6.6	11	9.6	8.1	11	39	139	141	76	61
16	3.9	3.4	3.9	13	9.2	7.7	13	39	147	150	71	58
17	4.1	3.4	6.6	16	8.8	7.2	12	39	121	150	68	54
18	4.1	6.0	10	13	8.6	7.2	11	38	114	143	67	50
19	4.1	5.1	8.4	13	8.4	7.2	12	38	120	132	64	47
20	4.1	3.4	7.2	13	8.0	7.2	11	38	121	132	61	47
21	3.9	4.6	7.2	13	7.8	7.2	11	39	120	118	59	46
22	3.9	4.2	10	13	7.6	7.2	11	41	121	112	55	44
23	3.9	3.7	12	12	7.4	7.2	11	44	120	110	53	42
24	3.9	3.4	12	13	7.2	6.8	9.7	44	118	114	50	41
25	3.9	3.4	10	11	7.0	6.8	11	42	116	121	48	40
26	3.9	3.4	10	11	6.8	7.2	11	40	114	129	45	39
27	3.9	3.4	13	9.8	6.6	7.2	11	39	113	147	44	39
28	3.9	3.4	13	9.4	6.6	7.2	12	38	106	150	43	37
29	3.9	3.4	12	9.0	---	7.7	12	39	97	141	43	37
30	3.7	3.7	12	9.0	---	8.5	13	45	96	127	41	36
31	3.7	---	9.4	8.6	---	9.8	---	51	---	116	40	---
TOTAL	117.9	111.0	220.2	332.6	221.6	271.0	310.9	936	3215	3832	2299	1809
MEAN	3.80	3.70	7.10	10.7	7.91	8.74	10.4	30.2	107	124	74.2	60.3
MAX	4.1	6.0	13	16	11	13	13	51	148	150	121	137
MIN	3.0	3.4	3.4	8.6	6.0	6.8	6.8	13	57	96	40	36
AC-FT	234	220	437	660	440	538	617	1860	6380	7600	4560	3590
CAL YR 1977 TOTAL	3008.2			8.24	35			5970				
WTR YR 1978 TOTAL	13676.2			37.5	150			27130				

OWENS LAKE BASIN

10265700 ROCK CREEK AT LITTLE ROUND VALLEY, NEAR BISHOP, CA

LOCATION.--Lat 37°33'15", long 118°41'03", in SE&SE& sec.32, T.4 S., R.30 E., Mono County, on right bank just upstream from diversion to Little Round Valley, 0.6 mi.(1.0 km) south of Tom's Place, and 20 mi (32 km) north-west of Bishop.

DRAINAGE AREA.--35.8 mi² (92.7 km²).

PERIOD OF RECORD.--January to December 1918, January 1920 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder. Parshall flume since May 1953. Altitude of gage is 7,280 ft (2,220 m), from topographic map. See WSP 1734 for history of changes prior to May 28, 1953.

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

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--58 years (water years 1921-78), 29.4 ft³/s (0.833 m³/s), 21,300 acre-ft/yr (26.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1926).--Maximum discharge, 312 ft³/s (8.84 m³/s) May 30, 1969, gage height, 5.00 ft (1.524 m); minimum daily, 2.2 ft³/s (0.062 m³/s) Nov. 30, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 191 ft³/s (5.41 m³/s) June 9; minimum daily, 5.6 ft³/s (0.16 m³/s) Dec. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	6.7	6.7	14	8.2	8.7	11	17	123	117	106	29
2	7.0	6.7	6.7	9.0	8.2	9.0	10	18	126	118	113	29
3	6.7	6.7	6.7	8.5	7.9	9.3	10	21	130	110	116	29
4	6.7	6.5	7.0	8.5	7.9	9.8	10	24	136	99	111	31
5	6.7	7.0	7.0	8.5	8.2	9.3	10	24	141	93	106	52
6	7.7	7.0	6.7	9.0	8.5	10	10	23	147	94	100	111
7	7.0	7.7	6.7	11	7.9	9.8	10	23	158	107	93	115
8	6.7	6.7	6.7	9.0	11	10	10	26	176	120	91	88
9	6.7	6.7	6.7	9.3	9.3	9.8	10	29	191	124	95	66
10	6.7	6.7	6.7	9.5	10	9.8	11	33	188	130	91	51
11	6.7	7.0	6.7	10	13	9.5	12	37	169	135	89	43
12	6.7	6.7	7.0	12	14	9.5	13	42	156	130	98	38
13	6.7	6.7	6.7	9.3	12	9.3	13	51	168	122	90	34
14	6.7	6.7	7.0	9.3	15	9.3	13	60	167	125	79	33
15	6.7	6.7	7.7	9.3	11	9.0	12	68	154	141	67	32
16	6.7	6.7	10	8.7	12	9.3	13	66	137	153	60	29
17	6.7	6.7	5.6	10	9.8	9.3	16	62	127	149	54	27
18	6.7	6.7	6.5	12	9.5	9.3	12	60	124	134	51	25
19	7.0	7.2	12	12	9.5	9.5	13	63	125	121	48	24
20	7.0	7.4	17	12	9.3	9.8	12	68	128	110	46	23
21	6.7	7.2	15	13	9.0	10	12	75	136	102	43	23
22	7.0	7.0	19	10	9.0	10	12	81	141	98	40	22
23	7.0	6.5	15	13	8.7	9.8	13	79	137	102	38	21
24	7.0	6.7	13	18	8.5	9.5	14	69	128	112	36	20
25	7.0	6.7	8.7	13	8.5	10	16	62	119	121	33	20
26	7.0	6.7	9.0	9.5	8.5	10	14	58	119	136	32	19
27	7.0	7.0	10	8.7	8.5	10	16	59	120	171	30	19
28	7.0	6.7	10	8.5	8.5	10	16	66	114	170	29	18
29	6.7	6.7	9.8	8.2	---	11	17	78	108	147	29	18
30	6.7	6.7	9.3	8.5	---	12	18	96	110	119	28	18
31	6.7	---	11	8.2	---	13	---	112	---	105	28	---
TOTAL	212.3	204.8	283.6	319.5	271.4	304.6	379	1650	4203	3815	2070	1107
MEAN	6.85	6.83	9.15	10.3	9.69	9.83	12.6	53.2	140	123	66.8	36.9
MAX	7.7	7.7	19	18	15	13	18	112	191	171	116	115
MIN	6.7	6.5	5.6	8.2	7.9	8.7	10	17	108	93	28	18
AC-FT	421	406	563	634	538	604	752	3270	8340	7570	4110	2200
CAL YR 1977	TOTAL	4561.8	MEAN 12.5	MAX 54	MIN 5.6	AC-FT 9050						
WTR YR 1978	TOTAL	14820.2	MEAN 40.6	MAX 191	MIN 5.6	AC-FT 29400						

10267000 PINE CREEK AT DIVISION BOX, NEAR BISHOP, CA

LOCATION.--Lat 37°24'59", long 118°37'15", in SE¼NW¼ sec.19, T.6 S., R.31 E., Inyo County, on right bank 0.2 mi (0.3 km) upstream from division box (at Rovana), 1.9 mi (3.1 km) west of Round Valley Schoolhouse, and 13 mi (21 km) northwest of Bishop.

DRAINAGE AREA.--36.4 mi² (94.3 km²).

PERIOD OF RECORD.--October 1921 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder. Parshall flume since November 1938. Altitude of gage is 5,280 ft (1,609 m), from topographic map.

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

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--57 years, 45.3 ft³/s (1.283 m³/s), 32,820 acre-ft/yr (40.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 509 ft³/s (14.4 m³/s) July 2, 1967, gage height, 6.05 ft (1.844 m); minimum daily, 10 ft³/s (0.28 m³/s) Jan. 8, 1930, Jan. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 264 ft³/s (7.48 m³/s) June 9; minimum daily, 18 ft³/s (0.51 m³/s) Oct. 4-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	20	20	22	21	24	30	33	160	209	198	65
2	19	20	19	23	21	23	29	33	158	179	202	64
3	19	20	19	21	21	23	29	34	168	150	187	65
4	18	20	20	21	21	26	28	38	183	132	181	72
5	18	20	19	21	23	25	27	42	198	135	179	259
6	18	20	19	21	23	24	27	42	211	138	161	241
7	18	20	19	20	23	23	27	43	230	141	163	151
8	18	20	19	21	21	23	27	44	251	145	174	105
9	18	20	19	21	23	24	28	50	264	150	160	80
10	18	20	19	20	25	24	27	55	237	153	151	73
11	18	20	21	21	24	24	28	61	185	160	200	65
12	18	20	20	21	23	24	29	68	211	163	159	60
13	18	20	19	21	23	24	30	83	241	191	136	57
14	18	20	19	23	22	23	30	95	221	238	118	54
15	18	20	19	24	22	23	31	98	200	261	108	53
16	18	20	19	24	22	23	32	89	173	253	98	57
17	18	20	21	24	21	24	30	80	166	217	96	53
18	18	20	21	23	21	24	30	80	192	202	91	51
19	18	20	21	23	23	26	29	86	203	187	86	50
20	18	20	19	23	22	26	29	96	208	175	83	49
21	18	20	20	23	22	26	29	110	222	171	80	47
22	18	20	20	23	21	26	29	116	213	182	77	46
23	18	20	21	23	21	26	30	111	181	199	74	45
24	18	21	21	22	21	26	31	93	177	215	70	45
25	18	22	22	21	22	26	32	80	163	211	67	46
26	18	21	23	20	23	26	32	74	177	253	66	46
27	19	20	23	20	23	26	31	80	167	180	65	45
28	19	20	22	21	23	26	32	104	164	189	65	45
29	19	20	21	22	---	27	33	135	179	195	65	45
30	19	20	21	21	---	28	34	163	208	177	66	44
31	19	---	21	21	---	31	---	163	---	188	66	---
TOTAL	567	604	626	675	621	774	890	2479	5911	5739	3692	2178
MEAN	18.3	20.1	20.2	21.8	22.2	25.0	29.7	80.0	197	185	119	72.6
MAX	20	22	23	24	25	31	34	163	264	261	202	259
MIN	18	20	19	20	21	23	27	33	158	132	65	44
AC-FT	1120	1200	1240	1340	1230	1540	1770	4920	11720	11380	7320	4320
CAL YR 1977 TOTAL	9646			MEAN 26.4	MAX 101	MIN 18	AC-FT 19130					
WTR YR 1978 TOTAL	24756			MEAN 67.8	MAX 264	MIN 18	AC-FT 49100					

OWENS LAKE BASIN

10268700 SILVER CANYON CREEK NEAR LAWS, CA

LOCATION.--Lat 37°24'28", long 118°16'43", in Inyo National Forest, Inyo County, on right bank 1.7 mi (2.7 km) upstream from mouth of canyon, and 3.7 mi (6.0 km) east of Laws.

DRAINAGE AREA.--19.7 mi² (51.0 km²).

PERIOD OF RECORD.--March 1930 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 5,120 ft (1,560 m), from topographic map. Feb. 24, 1943, to Sept. 30, 1972, at site 1.7 mi (2.7 km) downstream at different datum. Prior to Feb. 24, 1943, nonrecording gage and Cipolletti weir at site 3.2 mi (5.1 km) downstream at different datum.

REMARKS.--Records poor. No regulation; occasional diversion above station.

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--48 years, 1.63 ft³/s (0.046 m³/s), 1,180 acre-ft/yr (1.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9.6 ft³/s (0.27 m³/s) June 16, 1969, gage height, 1.65 ft (0.503 m), site and datum then in use; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2.5 ft³/s (0.07 m³/s) June 22-30, July 3-6; minimum daily, 0.71 ft³/s (0.020 m³/s) Oct. 1-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	1.1	1.1	1.1	1.1	1.1	1.2	1.5	2.0	2.4	2.3	2.4
2	.71	1.1	1.1	1.1	1.1	1.1	1.2	1.5	2.0	2.4	2.3	2.4
3	.71	1.1	1.1	1.2	1.1	1.1	1.2	1.5	2.0	2.5	2.3	2.3
4	.71	1.1	1.1	1.2	1.1	1.1	1.2	1.6	2.0	2.5	2.3	2.4
5	.71	1.1	1.1	1.2	1.1	1.1	1.2	1.6	2.0	2.5	2.3	2.4
6	.71	1.2	1.1	1.2	1.1	1.1	1.2	1.6	2.0	2.5	2.3	2.3
7	.99	1.2	1.1	1.2	1.1	1.1	1.3	1.7	2.1	2.4	2.3	2.3
8	1.1	1.1	1.1	1.2	1.1	1.1	1.3	1.7	1.8	2.4	2.3	2.3
9	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.6	1.8	2.4	2.3	2.3
10	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.7	1.8	2.4	2.3	2.3
11	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.7	1.8	2.4	2.3	2.4
12	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.7	1.9	2.4	2.3	2.4
13	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.7	1.9	2.4	2.3	2.4
14	1.1	1.2	1.2	1.2	1.2	1.1	1.3	1.7	1.9	2.4	2.3	2.4
15	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.7	2.4	2.4	2.3	2.4
16	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.8	2.4	2.4	2.3	2.4
17	1.1	1.2	1.3	1.2	1.2	1.1	1.4	1.8	2.4	2.4	2.3	2.3
18	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.8	2.4	2.3	2.3	2.4
19	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.7	2.4	2.3	2.3	2.4
20	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.7	2.4	2.3	2.3	2.4
21	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.7	2.4	2.3	2.3	2.4
22	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.7	2.5	2.3	2.3	2.3
23	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.8	2.5	2.3	2.3	2.3
24	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.8	2.5	2.3	2.3	2.3
25	1.1	1.2	1.2	1.2	1.2	1.1	1.5	1.8	2.5	2.3	2.3	2.3
26	1.1	1.1	1.2	1.2	1.2	1.1	1.5	1.8	2.5	2.3	2.3	2.3
27	1.1	1.1	1.2	1.2	1.2	1.1	1.5	1.7	2.5	2.3	2.3	2.3
28	1.1	1.1	1.2	1.2	1.1	1.1	1.5	1.7	2.5	2.3	2.3	2.3
29	1.1	1.1	1.2	1.2	---	1.1	1.5	1.7	2.5	2.3	2.3	2.3
30	1.1	1.1	1.2	1.2	---	1.2	1.5	1.9	2.5	2.3	2.3	2.3
31	1.1	---	1.2	1.2	---	1.3	---	1.9	---	2.3	2.3	---
TOTAL	31.65	34.4	36.5	37.0	32.7	34.4	40.6	52.8	66.3	73.4	71.3	70.4
MEAN	1.02	1.15	1.18	1.19	1.17	1.11	1.35	1.70	2.21	2.37	2.30	2.35
MAX	1.1	1.2	1.3	1.2	1.2	1.3	1.5	1.9	2.5	2.5	2.3	2.4
MIN	.71	1.1	1.1	1.1	1.1	1.1	1.2	1.5	1.8	2.3	2.3	2.3
ACFT	63	68	72	73	65	68	81	105	132	146	141	140

CAL YR 1977	TOTAL	392.19	MEAN	1.07	MAX	1.3	MIN	.50	AC-FT	778
WTR YR 1978	TOTAL	501.45	MEAN	1.59	MAX	2.5	MIN	.71	AC-FT	1150

10271210 BISHOP CREEK BELOW POWERPLANT NO. 6, NEAR BISHOP, CA

LOCATION.--Lat 37°20'59", long 118°27'41", in SE&SE¼ sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, below powerplant No. 6 tailrace, and 3.6 mi (5.8 km) west of Bishop.

DRAINAGE AREA.--104 mi² or 269 km² (natural flow).

PERIOD OF RECORD.--October 1936 to current year. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.--None.

REMARKS.--Flow regulated for power development by South Lake, Lake Sabrina, and Intake No. 2 Reservoir, combined capacity, 20,660 acre-ft (25.5 hm³) and many powerhouses. Records for "actual flow" include Bishop Creek above powerplant No. 6 tailrace and Bishop Creek powerplant No. 6 conduit. Records for "natural flow" include "actual flow" of Bishop Creek below powerplant No. 6, Abelour ditch near Bishop, minus Birch-McGee diversion to Bishop Creek powerplant near Bishop, and the change in contents and evaporation for South Lake, Lake Sabrina, and Intake No. 2 Reservoir.

COOPERATION.--Records furnished by Southern California Edison Co. and reviewed by the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (Actual flow).--43 years, 98.3 ft³/s (2.784 m³/s), 71,220 acre-ft/yr (87.8 hm³/yr).
(Natural flow).--43 years, 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES (ACTUAL FLOW) FOR PERIOD OF RECORD (SINCE 1970).--Maximum daily discharge, 809 ft³/s (22.9 m³/s) Sept. 6, 1978; minimum daily, 32 ft³/s (0.91 m³/s) Dec. 19, 1977.

EXTREMES (ACTUAL FLOW) FOR CURRENT YEAR.--Maximum daily discharge, 809 ft³/s (22.9 m³/s) Sept. 6; minimum daily, 32 ft³/s (0.91 m³/s) Dec. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	46	41	33	37	111	108	87	241	220	284	135
2	55	40	37	35	35	113	94	81	251	207	294	134
3	56	43	37	35	35	112	92	82	276	193	298	133
4	58	42	36	35	39	116	83	83	287	189	320	135
5	58	42	41	35	38	113	81	87	295	186	366	389
6	68	43	38	35	38	113	83	81	303	203	353	809
7	59	42	36	36	39	109	80	78	313	217	341	513
8	56	43	37	33	39	116	80	83	314	220	370	366
9	60	43	37	39	40	117	76	85	354	223	379	269
10	54	43	36	35	52	118	81	117	348	225	351	212
11	56	42	38	35	78	119	82	121	332	221	329	180
12	56	44	35	37	73	120	89	128	330	215	318	161
13	54	43	38	37	86	117	89	146	354	207	299	149
14	53	43	38	37	99	121	87	154	354	297	277	144
15	54	43	35	39	101	117	85	166	444	348	248	142
16	54	42	34	39	107	116	85	169	432	237	215	141
17	51	43	38	36	116	121	86	158	320	216	203	142
18	52	39	39	40	113	119	86	161	328	206	187	145
19	53	43	32	39	113	120	83	176	328	208	168	133
20	53	42	37	40	113	123	81	191	329	192	156	138
21	53	45	37	37	116	120	80	203	338	187	162	139
22	51	44	37	37	120	119	80	205	343	231	152	138
23	51	44	37	37	116	118	84	202	326	252	151	135
24	51	41	36	33	115	120	88	155	314	287	141	135
25	49	42	36	39	114	125	90	182	312	314	143	134
26	49	41	36	36	112	118	85	179	289	328	136	134
27	53	41	36	38	111	116	82	149	208	352	137	134
28	54	42	36	37	112	116	88	189	200	349	135	134
29	56	41	35	36	---	125	88	195	199	319	137	134
30	55	40	35	35	---	129	84	224	212	290	132	133
31	52	---	33	35	---	128	---	229	---	277	133	---
TOTAL	1692	1272	1134	1130	2307	3665	2560	4546	9274	7616	7315	5920
MEAN	54.6	42.4	36.6	36.5	82.4	118	85.3	147	309	246	236	197
MAX	68	46	41	40	120	129	108	229	444	352	379	809
MIN	49	39	32	33	35	109	76	78	199	186	132	133
AC-FT	3360	2520	2250	2240	4580	7270	5080	9020	18390	15110	14510	11740
(†)	1730	1570	1960	2360	2420	2610	3110	9510	23280	26040	13880	9770
CAL YR 1977	TOTAL	18737	MEAN	51.3	MAX	105	MIN	32	AC-FT	37160	†	34690
WTR YR 1978	TOTAL	48431	MEAN	133	MAX	809	MIN	32	AC-FT	96060	†	98180

† Computed natural flow, in acre-feet.

10276000 BIG PINE CREEK NEAR BIG PINE, CA

LOCATION.--Lat 37°08'42", long 118°18'52", in SW¼SW¼SE¼ sec.24, T.9 S., R.33 E., Inyo County, on left bank 0.3 mi (0.5 km) downstream from Little Pine Creek, 0.5 mi (0.8 km) downstream from powerhouse No. 3, and 2.2 mi (3.5 km) southwest of Big Pine.

DRAINAGE AREA.--39.0 mi² (101.0 km²).

PERIOD OF RECORD.--November 1907 to February 1911, January 1920 to current year; combined records of creek and diversions, June 1930 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Parshall flume since April 1949 on creek; water-stage recorder and Parshall flume on each diversion. Altitude of creek gage is 4,500 ft (1,372 m), from topographic map. Prior to January 1923, nonrecording gage at same site and datum. Diversion gages at different datum.

REMARKS.--Records poor. No regulation above station. Diversions above station for power and irrigation. At times since 1962 discharge from Little Pine Creek has been spread in nearby meadows and does not reach gage as surface flow. For records of combined discharge of Big Pine Creek and Giroux ditches which divert above station, see following page.

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--Combined creek and diversions: 48 years (water years 1931-78), 40.8 ft³/s (1.155 m³/s), 29,560 acre-ft/yr (36.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 458 ft³/s (13.0 m³/s) July 3, 1932, gage height, 6.55 ft (1.996 m); minimum daily, no flow Dec. 3-12, 1935.
Combined creek and diversions: Maximum discharge, 458 ft³/s (13.0 m³/s) July 3, 1932; minimum daily, 6.4 ft³/s (0.18 m³/s) Dec. 11, 12, 1935.

EXTREMES FOR CURRENT YEAR.--Creek only: Maximum daily discharge, 348 ft³/s (9.86 m³/s) Sept. 5; minimum daily, 7.2 ft³/s (0.20 m³/s) Nov. 19-20.
Combined creek and diversions: Maximum daily discharge 353 ft³/s (10.0 m³/s) Sept. 5; minimum daily, 9.6 ft³/s (0.27 m³/s) Dec. 3, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	8.5	8.2	8.7	8.7	11	15	18	66	158	195	53
2	11	8.2	8.2	9.3	8.7	11	14	19	67	151	215	49
3	11	8.2	7.7	9.8	9.0	11	14	18	71	132	197	47
4	11	8.5	7.7	9.0	9.0	15	13	20	78	115	187	58
5	10	9.3	7.7	9.0	10	15	13	21	85	118	191	348
6	13	9.8	7.9	10	11	13	12	20	96	136	169	254
7	11	9.8	7.9	9.3	11	12	12	20	125	159	171	112
8	11	9.8	7.9	9.0	10	11	12	21	147	167	197	53
9	11	9.3	7.7	9.0	13	11	13	24	175	163	187	28
10	11	9.3	7.4	9.5	10	11	13	27	160	188	176	19
11	10	9.3	7.7	9.0	11	11	14	29	130	179	155	14
12	10	9.3	7.9	8.7	10	11	16	31	128	153	171	12
13	9.8	9.0	7.9	9.0	12	11	16	37	145	151	144	17
14	9.3	9.0	7.9	11	11	10	15	44	144	194	122	21
15	9.3	8.7	7.9	10	11	10	16	44	133	233	99	30
16	9.3	8.7	7.9	11	10	10	15	40	120	238	93	28
17	9.3	8.7	11	10	10	11	14	36	112	208	86	26
18	9.3	8.2	9.3	11	10	11	14	37	120	185	80	23
19	9.3	7.2	7.4	11	10	12	15	39	132	165	74	21
20	9.3	7.2	8.7	10	10	12	14	42	133	156	69	20
21	9.3	8.2	8.7	9.3	9.8	13	14	46	140	151	66	19
22	9.3	8.5	9.8	9.3	9.8	13	15	49	141	161	59	17
23	9.3	7.9	10	9.0	9.8	12	15	49	129	177	52	18
24	9.3	7.9	9.0	9.5	10	12	16	41	118	196	47	17
25	9.0	7.9	9.3	9.0	10	13	18	37	114	191	45	17
26	8.7	7.9	9.5	9.0	10	13	16	35	118	238	44	21
27	8.5	7.9	11	9.3	9.8	13	16	36	118	270	45	26
28	8.7	7.9	10	9.0	11	13	18	42	110	230	47	24
29	8.7	8.2	9.5	9.0	---	14	18	52	115	187	50	25
30	8.7	8.2	9.3	9.0	---	15	19	60	137	171	57	25
31	8.7	---	9.3	9.0	---	20	---	66	---	183	57	---
TOTAL	300.8	256.5	267.3	293.7	285.6	381	445	1100	3607	5504	3547	1442
MEAN	9.70	8.55	8.62	9.47	10.2	12.3	14.8	35.5	120	178	114	48.1
MAX	13	9.8	11	11	13	20	19	66	175	270	215	348
MIN	7.7	7.2	7.4	8.7	8.7	10	12	18	66	115	44	12
AC-FT	597	509	530	583	566	756	883	2180	7150	10920	7040	2860
CAL YR 1977	TOTAL	6521.0	MEAN	17.9	MAX	83	MIN	5.1	AC-FT	12930		
WTR YR 1978	TOTAL	17429.9	MEAN	47.8	MAX	348	MIN	7.2	AC-FT	34570		

10276000 BIG PINE CREEK NEAR BIG PINE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF BIG PINE CREEK AND UPPER AND
LOWER GIROUX DITCHES, NEAR BIG PINE, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	10	11	12	14	18	21	71	165	209	67
2	15	12	10	12	12	14	17	22	72	158	229	63
3	15	12	9.6	12	12	14	17	23	76	139	211	61
4	15	12	9.9	12	12	18	16	27	83	125	201	72
5	14	13	9.6	12	13	18	16	28	89	129	205	353
6	17	13	10	13	14	16	15	27	100	147	183	259
7	15	13	10	12	14	15	15	27	129	170	185	123
8	15	13	10	12	13	14	15	28	151	178	211	65
9	15	13	10	12	16	14	16	31	178	174	201	41
10	15	13	9.8	12	13	14	16	34	163	199	189	31
11	14	13	11	12	14	14	17	36	133	190	169	27
12	14	13	11	12	13	14	19	38	133	165	185	26
13	14	12	11	12	15	14	19	44	153	163	158	30
14	14	12	11	14	14	13	18	51	152	206	136	34
15	14	12	11	13	14	13	19	51	141	245	113	43
16	14	12	11	14	13	13	18	47	128	250	107	41
17	14	12	14	13	13	14	17	43	120	220	100	39
18	14	11	13	14	13	14	17	44	128	197	94	36
19	14	9.7	11	14	13	15	18	46	139	177	88	34
20	14	11	12	13	13	15	17	49	140	169	83	33
21	14	12	12	12	13	16	17	53	147	165	80	31
22	14	12	13	12	13	16	18	56	148	175	73	29
23	14	11	13	12	13	15	18	55	136	191	66	30
24	14	11	12	12	13	15	19	47	125	210	61	29
25	13	11	12	12	13	16	21	43	121	205	59	28
26	13	11	12	12	13	16	19	40	125	252	58	28
27	13	11	14	12	13	16	19	41	125	283	59	34
28	13	11	13	12	14	16	21	47	117	244	61	33
29	13	12	12	12	---	17	21	58	122	201	63	33
30	13	12	12	12	---	18	22	66	144	185	71	33
31	13	---	12	12	---	23	---	71	---	197	71	---
TOTAL	438	358.7	351.9	383	371	474	535	1294	3789	5874	3979	1786
MEAN	14.1	12.0	11.4	12.4	13.3	15.3	17.8	41.7	126	189	128	59.5
MAX	17	13	14	14	16	23	22	71	178	283	229	353
MIN	13	9.7	9.6	11	12	13	15	21	71	125	58	26
AC-FT	869	711	698	760	736	940	1060	2570	7520	11650	7890	3540
CAL YR 1977	TOTAL	8977.6	MEAN 24.6	MAX 96	MIN 9.6	AC-FT	17810					
WTR YR 1978	TOTAL	19633.6	MEAN 53.8	MAX 353	MIN 9.6	AC-FT	38940					

OWENS LAKE BASIN

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 37°03'15", long 118°13'33", in SW¼NE¼ sec.26, T.10 S., R.34 E., Inyo County, about 100 ft (30 m) west of center of dam, and 8.4 mi (13.5 km) southeast of Big Pine.

DRAINAGE AREA.--1,964 mi² (5,087 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year. Since November 1951 in files of city of Los Angeles, Department of Water and Power as Owens River at Tinemaha Dam.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 3,860 ft (1,177 m), from topographic map.

REMARKS.--Records poor. Flow regulated since 1941 by Lake Crowley, capacity, 183,500 acre-ft (226 km³) and several small reservoirs, combined capacity, 41,400 acre-ft (51.0 km³). Diversions from both main stream and tributaries. Water imported from Mono Basin since 1941 for diversion to Los Angeles Aqueduct which diverts 4 mi (6 km) downstream.

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 795 ft³/s (22.5 m³/s) Sept. 22, 1976; minimum daily, 5.0 ft³/s (0.14 m³/s) Sept. 15, 16, 25-30, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 701 ft³/s (19.9 m³/s) Sept. 27; minimum daily, 99 ft³/s (2.80 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	254	378	378	326	553	352	597	603	447	540	640
2	229	209	378	378	326	553	352	597	510	447	540	640
3	220	192	378	378	326	553	352	600	452	447	540	645
4	209	190	378	378	326	553	352	603	452	445	540	651
5	206	192	380	378	326	550	352	603	449	445	543	365
6	204	226	376	380	326	454	352	603	449	442	545	99
7	208	233	374	380	326	347	495	603	449	442	545	105
8	208	233	374	378	328	347	589	603	449	442	545	201
9	202	235	374	376	330	347	595	603	449	442	545	405
10	202	204	376	378	326	350	597	600	449	445	545	412
11	250	194	378	378	324	350	595	600	449	445	545	461
12	299	190	378	380	326	350	597	600	449	445	545	561
13	301	192	378	380	324	356	597	600	447	445	545	561
14	301	222	380	380	324	354	603	597	449	445	545	561
15	301	244	383	378	324	354	600	597	449	445	545	605
16	299	254	380	378	324	352	600	597	452	447	543	651
17	303	227	378	341	324	352	600	597	449	447	540	645
18	305	211	378	324	324	352	600	597	445	449	540	648
19	303	215	380	324	326	352	597	597	447	452	543	651
20	301	209	383	324	326	354	592	597	449	454	545	667
21	299	254	380	326	326	354	595	600	449	454	543	698
22	303	303	378	326	326	354	595	600	449	454	587	695
23	305	299	376	326	414	354	595	597	452	452	643	695
24	301	301	378	326	545	354	597	600	452	452	643	695
25	303	303	380	326	545	352	597	600	452	452	645	695
26	303	303	383	326	548	352	597	600	452	454	643	692
27	263	303	378	326	548	352	600	603	452	456	645	701
28	252	305	374	326	548	352	597	603	452	459	645	698
29	252	307	376	326	---	352	595	603	449	461	643	698
30	258	339	378	326	---	352	595	600	449	464	645	698
31	256	---	380	326	---	352	---	600	---	495	643	---
TOTAL	8185	7343	11723	10955	10312	12013	16332	18597	13704	13971	17789	17139
MEAN	264	245	378	353	368	388	544	600	457	451	574	571
MAX	305	339	383	380	548	553	603	603	603	495	645	701
MIN	202	190	374	324	324	347	352	597	445	442	540	99
AC-FT	16230	14560	23250	21730	20450	23830	32390	36890	27180	27710	35280	34000
CAL YR 1977 TOTAL	94114.0			MEAN 258	MAX 695	MIN	5.0	AC-FT 186700				
WTR YR 1978 TOTAL	158063.0			MEAN 433	MAX 701	MIN	99	AC-FT 313500				

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
 CHEMICAL ANALYSES: Water years 1975 to current year.
 BIOLOGICAL DATA: Water years 1975 to current year.
 SPECIFIC CONDUCTANCE: Water years 1975 to current year.
 WATER TEMPERATURES: Water years 1975 to current year.
 SEDIMENT RECORDS: Water years 1975 to current year (partial-record station).

PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: May 1975 to current year.
 WATER TEMPERATURES: February 1975 to current year.

INSTRUMENTATION.--Specific conductance recorder since May 1975. Temperature recorder since February 1975.

REMARKS.--Records good. Periods of missing temperature and conductivity data due to equipment malfunction.

COOPERATION.--Pesticide samples were collected by U.S. Geological Survey and analyzed by Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 442 micromhos Feb. 13, 1978; minimum recorded, 143 micromhos July 29, 1978.

WATER TEMPERATURES: Maximum recorded 26.5°C July 20, 1978; minimum recorded, 1.5°C Jan. 2, Dec. 23-27, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 442 micromhos Feb. 13; minimum recorded, 143 micromhos July 29.

WATER TEMPERATURES: Maximum recorded, 26.5°C July 20; minimum recorded, 2.5°C Dec. 22 and Jan. 24.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
17...	1530	305	342	7.6	17.0	5	--	8.9	K2	59
NOV										
21...	1615	305	347	8.2	6.0	4	--	10.4	K1	87
DEC										
28...	1200	374	393	8.5	5.0	6	--	11.3	K1	K270
JAN										
17...	1315	322	397	8.3	7.5	6	--	13.0	<1	76
FEB										
01...	1400	326	422	8.2	6.5	4	--	11.7	<1	23
27...	0915	548	399	--	10.0	--	--	10.7	<1	K13
APR										
06...	1415	352	404	--	11.5	10	--	9.4	K2	24
MAY										
03...	1500	597	392	--	17.5	--	3.8	8.7	K1	22
JUN										
29...	1245	449	180	7.2	20.0	--	3.4	7.6	K4	K17
JUL										
27...	1615	457	158	7.2	22.5	--	9.0	7.5	K13	29
AUG										
15...	0800	535	172	7.1	22.0	--	25	7.1	K9	K2
SEP										
28...	0830	698	245	7.4	17.0	--	2.0	8.7	K2	K2

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT										
17...	88	0	26	5.6	40	48	1.9	4.6	150	0
NOV										
21...	87	0	26	5.3	39	48	1.8	4.3	140	0
DEC										
28...	96	0	29	5.8	47	50	2.1	5.5	150	0
JAN										
17...	94	0	28	5.9	47	50	2.1	5.1	160	0
FEB										
01...	110	0	32	6.3	48	48	2.0	5.5	160	0
27...	--	--	--	--	--	--	--	--	--	--
APR										
06...	90	0	27	5.6	52	54	2.4	5.9	160	--
MAY										
03...	88	0	26	5.5	54	55	2.5	5.5	--	--
JUN										
29...	54	0	17	2.7	17	39	1.0	2.6	--	--
JUL										
27...	43	0	14	2.0	15	42	1.0	2.1	--	--
AUG										
15...	46	0	15	2.1	17	43	1.1	2.9	--	--
SEP										
28...	70	0	22	3.6	25	42	1.3	3.7	--	--

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

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 17...	120	6.0	27	15	.7	32	216	225	.23	.08
NOV 21...	110	1.4	28	15	.7	33	212	220	.15	.04
DEC 28...	120	.8	38	22	.8	35	258	257	.17	.00
JAN 17...	130	1.3	40	18	.8	34	256	258	.00	.02
FEB 01...	130	1.6	46	25	.9	32	268	275	.02	.00
27...	--	--	--	--	--	--	--	--	.01	.00
APR 06...	130	--	38	25	.9	30	249	263	.01	.08
MAY 03...	140	--	24	25	.9	28	241	253	.02	.10
JUN 29...	55	--	21	5.8	.7	27	113	127	.03	.03
JUL 27...	47	--	19	4.4	.4	14	102	99	.08	.01
AUG 15...	57	--	18	5.0	.4	16	110	111	.09	.24
SEP 28...	89	--	19	10	.6	20	157	157	.14	.05

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 17...	--	--	--	--	.13	--	--	.11	.08
NOV 21...	--	--	--	--	.19	--	--	.08	.05
DEC 28...	--	--	--	--	.28	--	--	.08	.06
JAN 17...	.29	--	.31	.19	.12	.31	1.4	.08	.04
FEB 01...	1.8	--	1.8	1.5	.32	1.8	8.1	.09	.04
27...	.51	.51	.51	--	.23	.52	2.3	.05	.04
APR 06...	2.3	--	2.4	2.3	.13	2.4	11	.12	.05
MAY 03...	--	--	--	--	.17	--	--	.08	.04
JUN 29...	.37	--	.40	.13	.27	.43	1.9	.07	.05
JUL 27...	.69	--	.70	.23	.47	.78	3.5	.11	.05
AUG 15...	.76	--	1.0	.43	.57	1.1	4.8	.12	.08
SEP 28...	1.1	--	1.1	.59	.51	1.2	5.5	.06	.06

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC TOTAL (UG/L		ARSENIC SUS- PENDED TOTAL (UG/L		ARSENIC DIS- SOLVED (UG/L		BARIUM, TOTAL RECOV- ERABLE (UG/L		BARIUM, SUS- PENDED RECOV- ERABLE (UG/L		BARIUM, DIS- SOLVED (UG/L	
						AS	AS)	AS	AS)	AS	AS)	AS	BA)	AS	BA)	AS	BA)
OCT 17...	1530	305	342	7.6	17.0	33		13		20		500		400		100	
JAN 17...	1315	322	397	8.3	7.5	37		4		33		100		0		100	
APR 06...	1415	352	404	--	11.5	45		0		45		100		100		0	
JUL 27...	1615	457	158	7.2	22.5	10		2		8		200		200		20	

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUS- PENDE D RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE D RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE D RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE D RECOV- ERABLE (UG/L AS CU)
OCT 17...	<10	<9	1	10	10	0	<50	<50	0	<10	<7
JAN 17...	--	--	15	10	10	0	0	0	1	28	20
APR 06...	5	1	4	0	0	0	4	2	2	43	31
JUL 27...	5	3	2	0	0	0	0	0	0	50	37

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 17...	3	620	--	30	<100	<97	3	40	30	8	.0
JAN 17...	8	330	--	50	--	--	7	20	10	10	.0
APR 06...	12	660	--	60	200	190	14	200	200	0	.0
JUL 27...	13	890	760	130	33	28	5	50	40	6	.1

[illegible]

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 17...	1530	305	342	7.6	17.0	--	5.9	.7	--
NOV 21...	1615	305	347	8.2	6.0	--	--	--	ND
DEC 28...	1200	374	393	8.5	5.0	3.5	--	--	--
JAN 17...	1315	322	397	8.3	7.5	--	--	.3	--
FEB 01...	1400	326	422	8.2	6.5	3.9	--	--	ND
APR 06...	1415	352	404	--	11.5	--	5.2	.3	--
MAY 03...	1500	597	392	--	17.5	3.2	--	--	ND
JUN 29...	1245	449	180	7.2	20.0	3.7	--	--	--
JUL 27...	1615	457	158	7.2	22.5	--	4.0	.2	--
AUG 15...	0800	535	172	7.1	22.0	4.3	--	--	ND
SEP 28...	0830	698	245	7.4	17.0	4.1	--	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ATRA- ZINE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ATRA- ZINE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 21...	1615	305	347	8.2	6.0	ND	ND	ND	ND	ND	ND
FEB 01...	1400	326	422	8.2	6.5	ND	--	ND	--	ND	--
MAY 03...	1500	597	392	--	17.5	ND	--	ND	--	ND	--
AUG 15...	0800	535	172	7.1	22.0	ND	--	ND	--	ND	--

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)
NOV 21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 03...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
AUG 15...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

ND Material specifically analyzed for but not detected.

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 03...	--	ND	--	ND	--	ND	--	ND	--	ND	--
AUG 15...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SIMA- ZINE TOTAL COUL- SON COND. (UG/L)	SIMA- ZINE IN BOTTOM MATERI- AL (UG/ KG DRY SOLIDS)
NOV 21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 03...	ND	--	ND	--	ND	--	ND	--	ND	--
AUG 15...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 03...	ND	--	ND	--	--	--	--	--	--	--
AUG 15...	ND	--	ND	--	--	--	--	--	--	--

ND Material specifically analyzed for but not detected.

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 21,77 1615	FEB 27,78 0915	MAY 3,78 1500	JUN 29,78 1245	JUL 27,78 1615	AUG 15,78 0800						
TOTAL CELLS/ML	2900	43000	9600	5700	14000	870						
DIVERSITY: DIVISION	1.1	0.3	0.2	1.8	1.1	0.7						
..CLASS	1.1	0.3	0.2	1.9	1.1	0.7						
...ORDER	1.6	0.4	1.1	2.9	1.3	0.7						
...FAMILY	2.3	0.4	1.3	3.7	1.6	1.4						
....GENUS	2.8	0.4	1.3	4.0	1.9	1.7						
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT		
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
...SCHROEDERIA	--	-	--	-	--	-	93	2	--	-	8	1
...COELASTRACEAE												
...COELASTRUM	--	-	--	-	--	-	--	-	--	-	32	4
...HYDRODICTYACEAE												
...PEDIASTRUM	--	-	--	-	--	-	740	13	250	2	--	-
...MICRACTINIACEAE												
...MICRACTINIUM	--	-	1600	4	--	-	--	-	--	-	--	-
...OOCYSTACEAE												
...ANKISTRODESMUS	67	2	--	-	--	-	46	1	*	0	*	0
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	1400	9	560#	64
...KIRCHNERIELLA	--	-	--	-	--	-	*	0	*	0	--	-
...OOCYSTIS	--	-	--	-	--	-	160	3	--	-	--	-
...SELENASTRUM	--	-	--	-	62	1	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	*	0	--	-	--	-
...WESTELLA	--	-	--	-	--	-	--	-	--	-	48	6
...SCENEDESMACEAE												
...SCENEDESMUS	--	-	--	-	--	-	93	2	*	0	69	8
...TETRASPORALES												
...COCCOMYXACEAE												
...ELAKATOTHRIX	--	-	--	-	--	-	93	2	100	1	--	-
...PALMELLACEAE												
...SPHAEROCYSTIS	--	-	--	-	--	-	420	7	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
...CHLAMYDOMONAS	--	-	400	1	62	1	190	3	--	-	--	-
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
...CYCLOTELLA	--	-	40000#	94	5800#	60	160	3	320	2	*	0
...MELOSIRA	--	-	--	-	--	-	390	7	1000	7	140#	16
...STEPHANODISCUS	470#	16	--	-	--	-	120	2	--	-	--	-
...PENNALES												
...ACHNANTHACEAE												
...ACHNANTHES	67	2	--	-	--	-	--	-	*	0	--	-
...COCCONEIS	400	14	--	-	--	-	46	1	*	0	--	-
...RHOICOSPHENIA	--	-	--	-	--	-	--	-	84	1	--	-
...CYMBELLACEAE												
...AMPHORA	--	-	--	-	--	-	--	-	*	0	--	-
...CYMBELLA	--	-	*	0	--	-	--	-	--	-	--	-
...EPITHEMIA	--	-	*	0	--	-	*	0	--	-	--	-
...RHOPALODIA	--	-	--	-	--	-	--	-	*	0	--	-
...DIATOMACEAE												
...DIATOMA	--	-	--	-	3300#	35	46	1	120	1	--	-
...FRAGILARIACEAE												
...ASTERIONELLA	--	-	*	0	62	1	--	-	--	-	--	-
...FRAGILARIA	--	-	--	-	--	-	69	1	120	1	--	-
...SYNEORA	--	-	--	-	--	-	--	-	*	0	--	-
...GOMPHONEMACEAE												
...GOMPHONEMA	67	2	--	-	62	1	--	-	*	0	--	-
...NAVICULACEAE												
...DIPLONEIS	--	-	--	-	--	-	46	1	--	-	--	-
...NAVICULA	200	7	*	0	120	1	160	3	130	1	--	-
...PINNULARIA	--	-	--	-	--	-	--	-	*	0	--	-
...NITZSCHIA												
...NITZSCHIA	--	-	--	-	--	-	--	-	*	0	--	-
...DENTICULA	200	7	*	0	62	1	160	3	170	1	*	0
...TABELLARIACEAE												
...TABELLARIA	67	2	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
...OCHROMONAS	--	-	--	-	--	-	210	4	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
...CRYPTOMONODACEAE												
...CRYPTOMONAS	--	-	400	1	--	-	250	4	--	-	--	-

See footnotes at end of table.

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 21,77 1615		FEB 27,78 0915		MAY 3,78 1500		JUN 29,78 1245		JUL 27,78 1615		AUG 15,78 0800	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...HORMOGONALES												
...OSCILLATORIAEAE												
....PHORMIDIUM	530#	19	--	-	--	-	--	-	--	-	--	-
...CHROCCOCCALES												
...CHROCCOCCAEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	270	2	--	-
....ANACYSTIS	--	-	--	-	--	-	460	8	--	-	--	-
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	930#	16	--	-	--	-
...OSCILLATORIAEAE												
....OSCILLATORIA	800#	28	--	-	--	-	720	13	--	-	--	-
...CHROCCOCCALES												
...CHROCCOCCAEAE												
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-	10000#	70	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENAEAE												
....EUGLENA	--	-	--	-	--	-	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	62	1	--	-	--	-	--	-

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

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

PERIPHYTON

DATE	TIME	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
NOV						
21...	1615	1.30	1.11	5.51	5.12	35
DEC						
28...	1200	16.9	1.00	6.61	4.57	37
APR						
06...	1415	1.56	.210	3.38	2.52	39
JUN						
29...	1245	3.70	.530	3.78	2.96	57
JUL						
27...	1615	4.71	1.92	5.55	3.64	29

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	354	336	344	340	335	337	378	364	369	409	400	404
2	343	329	335	336	327	331	375	361	369	407	401	404
3	351	332	338	333	328	331	375	365	369	410	403	407
4	343	336	339	337	334	336	378	371	374	415	406	411
5	363	335	343	338	334	336	378	373	376	414	408	412
6	348	335	341	346	339	342	378	374	376	411	408	409
7	340	324	330	338	327	333	379	363	374	412	408	410
8	327	322	325	333	327	330	377	367	373	411	406	408
9	331	324	328	327	323	325	376	370	374	407	399	404
10	335	325	331	328	321	325	375	366	372	408	404	405
11	334	324	330	332	326	329	373	365	371	406	401	403
12	334	327	331	337	330	333	375	369	372	404	402	403
13	333	325	329	341	336	338	375	370	373	408	391	403
14	330	319	326	353	341	346	375	368	372	412	403	407
15	331	323	328	352	338	344	374	369	372	405	400	403
16	337	332	335	341	328	335	377	371	374	405	393	401
17	341	329	337	343	337	339	376	368	373	403	396	401
18	342	335	339	352	342	345	370	366	368	404	401	402
19	342	333	338	357	352	355	374	366	369	401	396	400
20	341	334	337	365	356	361	407	372	385	421	401	405
21	340	329	334	358	345	351	412	393	403	419	403	411
22	338	334	336	351	337	343	400	390	392	410	404	407
23	339	335	337	348	339	344	394	389	391	427	408	419
24	339	334	337	359	345	349	396	390	394	428	417	423
25	340	329	337	358	343	349	398	393	395	427	416	421
26	343	334	338	355	347	351	397	393	395	422	415	417
27	346	340	343	361	355	358	399	395	397	424	418	421
28	344	340	342	359	350	357	397	392	395	427	418	422
29	342	335	339	365	359	362	394	389	392	426	422	424
30	344	334	339	367	361	364	398	393	395	424	419	421
31	343	335	338	---	---	---	403	397	400	420	412	418
MONTH	363	319	336	367	321	343	412	361	381	428	391	410
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	422	418	420	412	369	394	387	377	383	---	---	---
2	420	415	417	392	382	386	386	379	383	---	---	---
3	418	413	415	402	361	388	396	377	388	391	380	386
4	414	400	410	380	357	370	403	387	395	391	380	386
5	414	409	410	383	367	378	---	---	---	388	376	385
6	412	407	409	388	381	383	---	---	---	389	380	384
7	412	408	409	384	375	379	---	---	---	386	374	381
8	412	396	408	412	380	394	---	---	---	381	365	373
9	402	396	399	402	383	390	---	---	---	373	366	369
10	398	376	389	397	388	391	---	---	---	378	361	370
11	394	388	390	396	390	393	---	---	---	375	359	370
12	413	386	393	397	390	394	---	---	---	372	351	360
13	442	397	414	394	384	387	---	---	---	369	351	360
14	416	394	403	390	384	388	---	---	---	362	351	357
15	423	410	417	392	386	389	---	---	---	373	354	363
16	431	410	419	389	384	386	---	---	---	366	356	361
17	430	421	425	384	374	379	---	---	---	357	349	354
18	437	424	431	382	377	379	---	---	---	350	331	341
19	440	428	435	387	378	382	---	---	---	344	320	332
20	437	427	432	389	383	386	---	---	---	331	318	325
21	432	429	431	391	382	386	---	---	---	325	309	317
22	431	425	428	390	382	387	---	---	---	323	308	316
23	429	425	427	392	384	389	---	---	---	343	307	326
24	428	415	421	392	386	389	---	---	---	332	303	312
25	414	406	409	391	386	388	---	---	---	316	297	307
26	409	399	404	389	381	386	---	---	---	317	301	308
27	417	392	404	390	387	389	---	---	---	311	300	305
28	424	406	417	396	391	393	---	---	---	308	292	300
29	---	---	---	392	378	389	---	---	---	299	291	296
30	---	---	---	390	382	387	---	---	---	309	290	302
31	---	---	---	389	376	381	---	---	---	306	281	293
MONTH	442	376	414	412	357	386	---	---	---	391	281	343

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	291	283	287	---	---	---	163	144	156	234	222	228
2	296	275	289	---	---	---	163	147	156	242	226	232
3	294	276	289	---	---	---	164	145	154	241	233	236
4	289	281	286	---	---	---	162	144	153	243	236	239
5	286	277	283	---	---	---	164	153	159	238	203	223
6	279	260	269	---	---	---	166	152	157	227	193	210
7	263	245	256	---	---	---	165	155	161	225	208	217
8	258	235	248	---	---	---	164	157	162	226	211	221
9	250	224	237	---	---	---	168	159	164	219	206	211
10	248	229	238	---	---	---	169	162	166	212	199	207
11	261	225	244	---	---	---	165	157	161	215	209	213
12	231	209	221	---	---	---	164	156	160	211	203	208
13	224	200	214	---	---	---	163	156	159	206	201	204
14	214	196	204	---	---	---	168	162	164	206	202	204
15	226	192	213	---	---	---	164	159	161	---	---	---
16	210	194	201	---	---	---	164	155	161	---	---	---
17	218	194	206	---	---	---	168	160	164	---	---	---
18	201	192	197	---	---	---	173	167	169	---	---	---
19	207	199	203	---	---	---	176	162	168	---	---	---
20	201	190	195	---	---	---	186	171	178	---	---	---
21	198	187	193	---	---	---	189	173	181	---	---	---
22	197	190	193	---	---	---	199	183	190	---	---	---
23	195	179	187	---	---	---	197	180	187	---	---	---
24	184	171	179	---	---	---	199	182	191	---	---	---
25	186	175	181	---	---	---	203	185	191	---	---	---
26	186	180	183	---	---	---	201	184	194	---	---	---
27	189	180	185	166	157	162	209	193	199	---	---	---
28	187	178	183	167	147	157	205	196	202	249	242	246
29	182	177	180	154	143	150	222	204	212	249	240	246
30	---	---	---	161	154	158	232	210	219	245	238	242
31	---	---	---	166	154	161	229	210	215	---	---	---
MONTH	296	171	222	---	---	---	232	144	175	---	---	---
YEAR	442	143	326									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.0	14.0	16.0	13.5	10.5	12.0	9.5	8.0	8.5	6.5	5.5	6.0
2	17.5	13.5	15.5	14.5	10.5	12.0	9.0	7.5	8.0	6.0	5.5	6.0
3	17.5	13.5	15.5	14.0	10.0	12.0	8.5	7.5	8.0	5.5	5.5	5.5
4	17.0	13.0	15.0	13.5	10.0	11.5	8.5	7.5	8.0	5.5	5.5	5.5
5	17.0	14.5	16.0	13.0	10.0	11.0	9.0	7.5	8.5	6.0	5.0	5.5
6	18.5	15.0	16.5	10.5	8.0	9.0	9.0	7.5	8.0	6.0	5.5	5.5
7	17.0	14.0	15.5	11.0	7.0	9.0	8.0	7.5	7.5	6.5	5.5	6.0
8	16.5	13.5	15.5	11.5	8.0	9.5	8.0	7.0	7.5	6.5	5.5	6.0
9	16.5	13.5	15.0	11.5	8.0	9.5	8.0	6.5	7.0	6.5	6.0	6.0
10	16.5	14.0	15.5	11.5	7.5	9.5	7.0	6.0	7.0	6.0	5.5	5.5
11	16.5	14.0	15.5	11.5	8.5	10.0	7.0	6.0	6.5	6.5	5.5	6.0
12	16.5	14.5	15.5	12.0	8.0	10.0	7.0	6.0	6.5	6.0	6.0	6.0
13	16.5	14.0	15.5	11.5	8.0	9.5	7.0	6.5	6.5	6.5	5.5	6.0
14	17.0	14.0	15.5	11.0	7.5	9.5	7.0	6.0	6.5	7.0	6.5	6.5
15	16.5	13.5	15.5	12.0	8.5	10.0	8.0	7.0	7.5	7.5	6.5	7.0
16	16.5	13.5	15.0	12.0	9.0	10.0	7.5	6.5	7.0	6.5	6.0	6.5
17	16.5	13.5	15.0	11.5	8.5	10.0	6.5	6.0	6.0	7.0	6.0	6.5
18	16.0	13.5	15.0	10.5	8.5	9.5	6.0	5.5	6.0	6.5	5.5	6.0
19	15.5	13.5	14.5	9.0	6.5	8.0	5.5	4.0	4.5	6.5	6.0	6.5
20	16.5	13.0	14.5	7.0	4.5	6.0	4.5	3.5	4.0	6.5	6.0	6.0
21	16.0	12.5	14.5	7.0	5.0	6.0	4.5	3.0	4.0	6.5	6.0	6.0
22	15.5	12.5	14.0	9.0	6.5	7.5	3.5	2.5	3.0	6.5	5.5	6.0
23	15.0	12.0	13.5	9.5	7.5	8.5	3.5	3.0	3.0	5.5	4.5	5.0
24	15.5	12.0	13.5	9.5	7.5	8.5	4.0	3.0	3.5	4.0	2.5	3.0
25	15.5	12.0	14.0	9.5	7.5	8.5	4.0	3.0	3.5	4.0	3.0	3.5
26	15.5	12.0	13.5	10.0	7.5	9.0	5.5	4.0	4.0	4.5	3.5	4.0
27	14.5	11.5	13.0	9.5	8.0	8.5	5.5	4.5	5.0	5.0	4.0	4.5
28	13.5	11.0	12.0	8.5	7.0	8.0	6.0	4.5	5.5	6.0	4.5	5.0
29	14.0	10.5	12.0	10.0	8.0	8.5	7.0	6.5	6.5	6.5	5.0	5.5
30	13.5	10.0	11.5	9.0	7.5	8.5	7.5	7.0	7.5	6.5	5.5	6.0
31	13.5	10.0	11.5	---	---	---	7.0	6.0	6.5	6.5	5.5	6.0
MONTH	18.5	10.0	14.5	14.5	4.5	9.5	9.5	2.5	6.0	7.5	2.5	5.5

OWENS LAKE BASIN

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.0	5.5	6.0	10.5	9.5	10.0	13.0	12.0	12.5	15.0	12.5	13.5
2	7.5	6.5	7.0	10.5	10.0	10.5	14.0	12.5	13.0	14.5	12.5	13.5
3	9.5	7.5	8.5	10.5	10.0	10.5	13.5	13.0	13.0	16.5	13.5	15.0
4	---	---	---	10.5	9.5	10.0	13.0	11.5	12.5	17.0	15.0	16.0
5	---	---	---	10.0	9.5	9.5	12.5	11.5	12.0	16.0	12.5	14.0
6	---	---	---	10.5	9.5	10.0	12.0	11.5	12.0	13.0	11.0	12.0
7	---	---	---	10.5	9.5	10.0	11.5	10.0	11.0	14.5	11.5	13.0
8	---	---	---	11.5	10.5	11.0	10.0	8.5	9.5	17.0	13.5	15.0
9	---	---	---	11.5	10.5	10.5	10.5	8.5	9.5	18.0	15.5	16.5
10	---	---	---	11.5	10.0	10.5	11.5	10.0	11.0	18.5	16.0	17.0
11	---	---	---	11.0	10.5	11.0	14.0	11.5	12.5	19.0	16.5	17.5
12	---	---	---	10.5	10.0	10.5	14.0	13.5	13.5	19.0	16.0	17.5
13	---	---	---	10.0	9.0	9.5	14.5	14.0	14.0	19.0	16.0	18.0
14	---	---	---	10.5	9.5	10.0	14.5	14.0	14.0	20.0	17.0	18.5
15	---	---	---	11.0	10.0	10.0	14.0	11.5	12.5	20.0	16.5	18.0
16	---	---	---	11.5	9.5	10.5	13.0	11.5	12.0	18.5	13.0	15.5
17	---	---	---	12.0	11.0	11.5	12.5	11.0	11.5	17.0	12.5	15.0
18	---	---	---	12.0	11.5	12.0	13.0	11.5	12.0	18.5	13.5	16.0
19	---	---	---	13.0	12.0	12.5	13.5	12.5	13.0	19.5	15.0	18.0
20	---	---	---	13.0	12.5	13.0	13.5	12.0	12.5	20.5	17.0	18.5
21	---	---	---	13.5	12.5	13.0	12.5	11.0	12.0	21.0	18.0	19.0
22	---	---	---	13.5	13.0	13.0	12.5	11.0	12.0	20.0	17.0	19.0
23	---	---	---	13.5	13.0	13.0	13.5	12.0	13.0	20.5	16.0	18.5
24	---	---	---	14.0	12.5	13.0	15.0	13.5	14.0	19.0	14.5	16.5
25	---	---	---	14.5	13.0	13.5	14.0	12.0	13.0	17.5	14.5	16.0
26	---	---	---	14.5	13.0	13.5	15.0	13.0	14.0	18.5	15.0	16.5
27	10.0	9.0	9.5	14.0	13.5	14.0	15.0	13.0	14.0	20.5	15.5	18.0
28	9.5	9.0	9.0	14.5	13.5	14.0	15.5	13.5	15.0	20.5	17.5	19.0
29	---	---	---	14.5	13.5	14.0	16.0	15.0	15.5	22.5	17.5	20.0
30	---	---	---	14.5	13.5	14.0	16.0	15.0	15.5	24.5	20.0	21.0
31	---	---	---	13.5	12.5	13.0	---	---	---	21.0	17.0	19.0
MONTH	---	---	---	14.5	9.0	11.5	16.0	8.5	12.5	24.5	11.0	17.0
JUNE				JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	21.5	18.0	19.5	21.5	20.5	21.0	23.0	21.5	22.0	21.0	20.5	21.0
2	22.0	18.0	19.5	22.5	20.5	21.5	23.5	22.0	22.5	21.0	20.5	21.0
3	21.5	18.5	19.5	24.0	20.0	21.0	24.0	22.0	22.5	21.0	21.0	21.0
4	24.0	18.5	21.0	23.0	20.0	21.0	24.0	22.0	22.5	21.0	19.5	20.0
5	24.0	20.5	21.5	22.5	20.0	21.5	23.5	22.0	23.0	20.0	17.5	19.0
6	24.5	20.5	21.5	23.5	21.0	21.5	24.0	22.5	23.0	17.5	16.5	17.0
7	23.5	20.5	21.5	25.0	21.5	22.0	24.0	22.5	23.5	18.0	16.5	17.5
8	24.0	20.0	22.0	23.0	21.5	22.0	24.5	23.0	23.5	18.0	16.5	17.5
9	25.0	20.5	22.0	25.5	21.0	22.5	24.5	23.0	24.0	17.0	16.5	16.5
10	23.5	20.5	21.5	25.0	22.0	22.5	24.5	22.5	23.5	17.5	16.5	17.0
11	23.0	19.0	21.0	26.0	21.5	22.5	23.0	21.5	22.0	17.5	16.5	17.0
12	22.0	19.0	20.0	25.0	21.0	22.0	22.5	21.5	22.0	17.5	16.5	17.0
13	22.0	19.5	20.0	26.0	21.5	22.5	22.0	21.5	21.5	16.5	16.0	16.5
14	22.0	19.5	20.5	24.5	22.0	23.0	22.0	21.0	21.5	16.5	15.5	16.0
15	22.5	18.0	20.0	24.5	22.0	22.5	21.0	20.0	20.5	17.0	15.5	16.0
16	22.0	19.5	20.0	24.5	21.5	22.5	21.0	20.5	20.5	17.0	15.5	16.0
17	21.5	19.5	20.5	24.5	22.0	23.0	22.0	20.5	21.0	17.0	15.5	16.0
18	21.5	20.0	20.5	26.0	22.0	23.0	22.0	19.5	21.0	16.5	15.0	15.5
19	22.0	19.0	20.0	25.5	20.5	22.5	20.0	19.5	19.5	15.0	14.5	15.0
20	22.0	19.0	20.5	26.5	21.5	22.5	20.5	20.0	20.0	14.5	14.0	14.0
21	22.0	19.0	20.0	24.5	21.0	22.5	20.0	20.0	20.0	14.5	13.5	14.0
22	23.0	20.0	20.5	23.0	22.5	22.5	20.0	19.5	19.5	15.0	13.5	14.0
23	23.5	20.0	21.0	24.0	22.5	23.0	20.0	19.5	19.5	15.5	14.5	14.5
24	22.0	20.0	20.5	24.0	22.5	23.5	20.0	19.0	19.5	16.5	14.5	15.5
25	24.0	20.0	21.0	24.5	23.5	24.0	20.0	19.0	19.5	17.0	15.0	16.0
26	23.0	20.0	21.5	24.5	22.0	23.5	20.0	19.0	19.5	17.5	15.5	16.0
27	23.0	20.0	21.0	24.0	21.5	23.0	20.5	19.5	19.5	17.5	16.5	17.0
28	22.0	19.5	20.0	23.0	21.5	22.0	21.0	20.0	20.0	17.5	16.5	17.0
29	23.5	19.5	20.5	22.0	21.0	21.5	21.5	20.0	20.5	18.5	17.5	18.0
30	21.0	20.0	20.5	22.5	21.5	22.0	21.5	21.0	21.0	18.5	17.5	18.0
31	---	---	---	22.5	21.5	22.0	21.0	20.5	21.0	---	---	---
MONTH	25.0	18.0	20.5	26.5	20.0	22.5	24.5	19.0	21.5	21.0	13.5	17.0
YEAR	26.5	2.5	14.5									

10277400 OWENS RIVER BELOW TINEMAHA RESERVOIR, NEAR BIG PINE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
17...	1530	305	17.0	44	26
NOV					
21...	1615	305	6.0	56	34
DEC					
28...	1200	374	5.0	33	58
JAN					
17...	1315	322	7.5	16	78
FEB					
01...	1400	326	6.5	13	83
27...	0915	548	10.0	46	67
APR					
06...	1415	352	11.5	29	86
MAY					
03...	1500	597	17.5	18	74
JUN					
29...	1245	449	20.0	14	79
JUL					
27...	1615	457	22.5	33	92
AUG					
15...	0800	535	22.0	20	98
SEP					
28...	0830	698	17.0	13	77

10281800 INDEPENDENCE CREEK BELOW PINYON CREEK, NEAR INDEPENDENCE, CA

LOCATION.--Lat 36°46'43", long 118°15'49", in NE¼SE¼NW¼ sec.27, T.13 S., R.34 E., Inyo County, on right bank 0.2 mi (0.3 km) downstream from Pinyon Creek, and 4.0 mi (6.4 km) southwest of Independence.

DRAINAGE AREA.--18.1 mi² (46.9 km²).

PERIOD OF RECORD.--January 1923 to current year. Prior to October 1959 monthly discharge only, published in WSP 1734.

GAGE.--Water-stage recorder and Parshall flume (Cipolletti weir used during low flow). Altitude of gage is 5,300 ft (1,615 m), from topographic map. See WSP 1734 for history of changes prior to Dec. 13, 1936.

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

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--55 years (water years 1924-78), 12.4 ft³/s (0.351 m³/s), 8,980 acre-ft/yr (11.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 169 ft³/s (4.79 m³/s) June 1, 1969, gage height, 4.45 ft (1.356 m); no flow Mar. 8-14, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 49 ft³/s (1.39 m³/s) July 27; no flow Mar. 8-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.5	2.3	3.1	2.8	5.7	14	17	29	30	40	33
2	2.8	2.5	2.3	3.1	2.8	5.5	13	17	33	30	40	33
3	2.8	2.5	2.3	3.1	2.9	5.7	13	19	31	28	39	33
4	2.8	2.5	2.3	2.8	3.1	8.7	13	20	30	27	39	33
5	2.8	2.7	2.3	2.8	3.3	8.3	12	19	30	26	38	33
6	4.9	2.7	2.3	3.2	4.1	7.5	12	21	30	26	38	33
7	3.9	2.7	2.3	2.9	4.9	2.9	12	21	30	31	37	33
8	3.8	2.9	2.3	2.9	4.9	0	12	19	31	34	36	30
9	3.5	2.8	2.3	3.3	6.8	0	12	18	28	35	35	28
10	3.5	2.8	2.3	3.5	7.5	0	12	18	30	36	35	25
11	3.5	2.8	2.3	3.2	6.6	0	12	19	35	37	34	24
12	3.3	2.8	2.3	3.1	5.2	0	12	21	36	34	32	22
13	3.1	2.7	2.3	3.1	5.0	0	12	22	37	34	31	21
14	3.1	2.5	2.3	3.5	4.5	0	12	22	36	34	30	21
15	2.9	2.5	2.5	4.2	4.2	8.7	12	23	35	34	28	21
16	2.9	2.7	2.4	5.7	4.2	13	12	26	32	34	25	19
17	2.9	2.5	5.0	5.4	4.1	12	12	25	30	34	24	18
18	2.9	2.4	3.9	4.9	3.9	13	12	25	30	34	23	18
19	3.1	2.2	2.8	4.2	3.9	13	13	25	30	34	21	18
20	3.1	1.4	3.3	3.9	4.1	12	13	25	31	35	19	17
21	3.1	2.4	3.3	3.5	4.2	11	13	25	33	36	18	17
22	3.1	2.7	3.2	3.5	4.7	11	13	25	33	37	19	16
23	3.1	2.7	3.5	3.1	4.7	11	13	25	32	38	19	15
24	2.9	2.8	3.5	2.7	4.9	11	14	23	31	39	18	14
25	2.9	2.8	3.2	3.2	4.9	11	15	23	30	40	17	14
26	2.8	2.7	3.3	2.8	4.9	14	15	21	29	47	16	13
27	2.8	2.7	4.1	2.8	4.9	16	15	21	29	49	16	13
28	2.8	2.5	3.6	2.8	5.0	14	17	25	28	46	17	13
29	2.8	2.5	3.5	2.7	---	14	17	28	28	43	18	12
30	2.7	2.5	3.3	2.7	---	14	17	30	29	41	18	12
31	2.8	---	3.1	2.8	---	16	---	29	---	40	18	---
TOTAL	96.2	77.4	89.7	104.5	127.0	259.0	396	697	936	1103	838	652
MEAN	3.10	2.58	2.89	3.37	4.54	8.35	13.2	22.5	31.2	35.6	27.0	21.7
MAX	4.9	2.9	5.0	5.7	7.5	16	17	30	37	49	40	33
MIN	2.7	1.4	2.3	2.7	2.8	0	12	17	28	26	16	12
AC-FT	191	154	178	207	252	514	785	1380	1860	2190	1660	1290
CAL YR 1977 TOTAL	2152.4			MEAN 5.90	MAX 24	MIN 1.4	AC-FT 4270					
WTR YR 1978 TOTAL	5375.8			MEAN 14.7	MAX 49	MIN 0	AC-FT 10660					

10285700 OWENS RIVER AT KEELER BRIDGE, NEAR LONE PINE, CA

LOCATION.--Lat 36°34'46", long 118°01'06", in NE¼NW¼NW¼ sec.1, T.16 S., R.36 E., Inyo County, on right bank under old timber bridge 0.5 mi (0.8 km) upstream from bridge on State Highway 190, and 3.4 mi (5.5 km) southeast of Lone Pine.

DRAINAGE AREA.--2,604 mi² (6,744 km²).

PERIOD OF RECORD.--January 1927 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Cipolletti weir. Altitude of gage is 3,600 ft (1,097 m), from topographic map. See WSP 1734 for history of changes prior to Feb. 14, 1935. Feb. 14, 1935, to Nov. 22, 1964, water-stage recorder and Cipolletti weir at same site and datum. Nov. 23, 1964, to June 26, 1967, nonrecording gage and Cipolletti weir at same site and datum.

REMARKS.--Records poor. Natural flow affected by storage in several reservoirs, many natural lakes, diversions for irrigation, and return flow from irrigated areas. Major portion of discharge from basin is diverted through Los Angeles Aqueduct. Discharge reported herein is wasted into Owens Lake.

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,360 ft³/s (38.5 m³/s) June 19, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 18 ft³/s (0.51 m³/s) Apr. 2, 3; minimum daily, 0.20 ft³/s (0.01 m³/s) July 8-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.8	4.5	7.3	9.5	8.5	13	6.4	2.2	.50	5.0	.50
2	1.1	1.8	4.5	7.3	9.5	8.5	18	6.1	2.2	.40	5.0	.50
3	1.1	1.8	4.5	7.3	9.5	8.5	18	6.1	2.0	.40	5.0	.50
4	1.1	1.8	4.5	7.3	9.5	8.5	15	5.8	2.0	.50	5.0	.50
5	1.1	1.8	4.5	7.3	9.5	8.5	13	5.8	1.8	.40	5.0	.50
6	1.1	2.0	4.7	7.3	9.5	8.8	12	5.5	1.8	.40	5.0	.50
7	.90	2.2	4.7	7.3	9.5	8.8	11	5.3	1.6	.30	5.0	.60
8	1.1	2.2	4.7	7.3	9.5	8.8	11	5.0	1.4	.20	5.0	9.2
9	1.1	2.4	4.7	7.6	9.5	8.8	10	5.0	1.4	.20	5.0	8.8
10	1.1	2.4	4.7	7.9	9.5	8.8	10	4.7	1.2	.20	5.0	4.7
11	1.1	2.6	4.7	8.2	9.5	8.8	9.8	4.7	1.2	.20	5.0	3.7
12	1.1	2.6	5.0	8.2	9.5	8.8	9.5	4.7	1.1	.20	5.0	3.5
13	1.1	2.8	5.0	8.2	9.5	8.8	9.2	4.2	.90	.20	5.0	3.5
14	1.1	3.0	5.3	8.5	9.5	8.8	8.5	4.2	.90	.20	5.0	3.5
15	1.1	3.2	5.3	9.2	9.5	9.2	8.5	3.7	.90	.20	5.0	3.5
16	1.2	3.2	5.3	9.5	9.5	9.2	8.8	3.7	.80	.20	5.0	3.5
17	1.2	3.5	5.5	11	9.5	9.2	8.8	3.7	.60	.20	5.0	3.2
18	1.2	3.5	5.8	11	9.5	9.5	8.5	3.5	.60	.20	5.0	3.0
19	1.2	3.7	6.4	11	9.5	9.5	8.5	3.2	.60	.20	5.0	2.8
20	1.2	3.7	6.4	12	9.5	9.5	7.9	3.2	.60	.20	5.0	2.6
21	1.4	3.7	6.1	11	9.5	9.5	7.6	3.0	.60	.20	5.0	2.6
22	1.4	4.0	6.1	11	9.5	9.5	7.3	3.0	.60	.20	5.0	2.6
23	1.4	4.0	6.1	10	9.5	9.8	7.3	2.8	.50	.20	5.0	2.8
24	1.4	4.2	6.1	9.8	9.5	9.5	7.3	2.8	.50	.20	5.0	3.5
25	1.4	4.2	6.1	9.5	9.5	9.5	7.3	2.8	.50	.20	5.0	4.0
26	1.4	4.2	6.4	9.2	9.5	9.5	7.0	2.8	.50	.20	5.0	4.0
27	1.4	4.2	7.0	9.2	9.5	9.5	7.0	2.8	.50	.20	5.0	4.2
28	1.4	4.5	7.6	9.2	9.5	9.2	7.0	2.8	.60	.20	5.0	4.5
29	1.4	4.5	7.6	9.2	---	9.2	6.7	2.8	.60	.20	.50	4.7
30	1.6	4.5	7.6	9.2	---	8.8	6.7	2.6	.50	.20	.50	5.0
31	1.6	---	7.0	9.2	---	11	---	2.4	---	.20	.50	---
TOTAL	38.10	94.0	174.4	277.2	266.0	282.8	290.2	125.1	31.20	7.70	141.50	97.00
MEAN	1.23	3.13	5.63	8.94	9.50	9.12	9.67	4.04	1.04	.25	4.56	3.23
MAX	1.6	4.5	7.6	12	9.5	11	18	6.4	2.2	.50	5.0	9.2
MIN	.90	1.8	4.5	7.3	9.5	8.5	6.7	2.4	.50	.20	.50	.50
AC-FT	76	186	346	550	528	561	576	248	62	15	281	192
CAL YR 1977	TOTAL	1498.90	MEAN 4.11	MAX 16	MIN 0	AC-FT 2970						
WTR YR 1978	TOTAL	1825.20	MEAN 5.00	MAX 18	MIN .20	AC-FT 3620						

OWENS LAKE BASIN

10286000 COTTONWOOD CREEK NEAR OLANCHA, CA

LOCATION.--Lat 36°26'20", long 118°04'48", Inyo National Forest, Inyo County, just downstream from intake to Cottonwood powerhouse, and 11.2 mi (18.0 km) north of Olancha.

DRAINAGE AREA.--40.1 mi² (103.9 km²).

PERIOD OF RECORD.--January 1906 to March 1911, January 1914 to current year; combined records of creek and flow through powerhouse, November 1938 to current year. Monthly discharge only January 1914 to September 1959, published in WSP 1314 and 1734.

REVISED RECORDS.--WDR CA-73-1: 1972.

GAGE.--Water-stage recorder and Cipolletti weir on powerhouse diversion. Altitude of gage is 4,660 ft (1,420 m), from topographic map. See WSP 1734 for history of changes prior to Oct. 31, 1938. Since May 15, 1969, supplementary gage at site 5.0 mi (8.0 km) downstream at different datum, and is presently used in computation of flow for the creek.

REMARKS.--Records poor. Cottonwood powerhouse, maximum capacity, 22 ft³/s (0.623 m³/s) has diverted since Nov. 13, 1908. Discharge figures for creek only are estimated by correlation with station 3.0 mi (4.8 km) downstream at the Los Angeles Aqueduct. For records of combined discharge of Cottonwood Creek and powerhouse, see following page.

COOPERATION.--Records were furnished by city of Los Angeles, Department of Water and Power.

AVERAGE DISCHARGE.--Combined creek and powerhouse: 68 years (water years 1907-10, 1915-78), 23.0 ft³/s (0.651 m³/s), 16,660 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 520 ft³/s (14.7 m³/s) June 3, 1969, gage height, unknown; no flow for periods in some years.
Combined flow: Maximum discharge, 520 ft³/s (14.7 m³/s) June 3, 1969; minimum daily, 0.30 ft³/s (0.008 m³/s) Nov. 8, 1977.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.30	6.7	14	12	4.3	23	47	455	216	100	14
2		.30	6.7	16	12	.90	14	48	481	208	95	9.0
3		.30	6.7	16	12	.90	13	65	481	201	91	10
4		.30	6.7	16	12	1.5	10	79	477	190	80	8.0
5		.30	6.7	11	13	2.5	6.0	97	495	186	74	168
6		.30	6.1	12	13	2.9	5.6	107	549	180	74	137
7		.30	6.1	12	14	2.8	4.4	105	605	177	74	90
8		.30	6.1	13	7.0	0	2.8	122	575	169	74	85
9		2.2	5.5	13	1.4	0	1.8	125	614	167	74	79
10		6.3	5.5	13	1.4	0	2.4	153	610	165	71	71
11		7.9	5.5	13	.20	0	4.6	181	656	164	74	60
12		7.3	5.5	12	.20	0	11	211	635	164	78	52
13		7.6	5.5	13	.20	0	17	254	619	158	68	48
14		6.3	5.5	13	.20	0	17	279	556	158	61	48
15		6.3	5.5	13	.20	0	21	312	463	148	55	51
16		6.3	5.5	13	.20	0	18	312	413	142	46	42
17		6.3	8.7	12	.20	0	15	188	375	138	40	36
18		6.9	6.9	12	.20	0	14	188	355	130	38	32
19		5.1	5.5	14	.20	0	14	302	338	124	37	35
20		4.5	6.9	15	.20	0	17	315	331	118	36	32
21		7.3	8.3	17	.20	0	18	340	317	111	32	28
22		6.9	8.3	19	.20	0	19	354	299	105	28	26
23		6.9	8.3	19	.20	0	22	336	290	98	28	22
24		6.8	8.3	18	.20	0	33	333	276	97	24	20
25		7.3	8.3	17	.20	0	40	161	265	103	20	17
26		7.3	10	15	.20	0	38	244	260	141	18	17
27		7.3	16	14	.20	0	34	249	251	134	17	16
28		6.9	15	14	.20	0	40	282	238	125	15	15
29		6.9	14	14	---	2.1	50	322	235	108	14	13
30		6.5	15	13	---	5.5	52	358	232	105	11	13
31		---	14	13	---	27	---	410	---	107	10	---
TOTAL	0	145.50	249.3	439	101.40	50.40	577.6	6879	12746	4537	1557	1294.0
MEAN	0	4.85	8.04	14.2	3.62	1.63	19.3	222	425	146	50.2	43.1
MAX	0	7.9	16	19	14	27	52	410	656	216	100	168
MIN	0	.30	5.5	11	.20	0	1.8	47	232	97	10	8.0
AC-FT	0	289	494	871	201	100	1150	13640	25280	9000	3090	2570
CAL YR 1977	TOTAL	520.80	MEAN	1.43	MAX	19	MIN	0	AC-FT	1030		
WTR YR 1978	TOTAL	28576.20	MEAN	78.3	MAX	656	MIN	0	AC-FT	56680		

10286000 COTTONWOOD CREEK NEAR OLANCHA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF COTTONWOOD CREEK AND
POWERHOUSE NEAR OLANCHA, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.1	6.7	14	12	14	41	64	472	226	110	20
2	4.0	4.1	6.7	16	12	11	32	66	500	215	105	23
3	4.0	4.3	6.7	16	12	12	31	84	499	207	100	24
4	4.0	4.6	6.7	16	12	13	28	97	495	198	90	22
5	4.3	4.3	6.7	11	13	14	24	115	512	193	85	173
6	4.5	4.3	6.1	12	13	15	24	123	567	187	83	142
7	5.0	4.6	6.1	12	14	15	22	122	621	184	85	102
8	4.5	4.30	10	13	14	14	21	139	583	177	85	97
9	4.5	2.2	5.5	13	7.4	14	19	142	630	177	85	92
10	4.3	6.3	9.5	13	13	13	19	170	610	176	82	84
11	4.3	7.9	9.5	13	12	13	23	197	656	173	85	72
12	4.3	7.3	9.5	12	12	12	29	227	635	172	90	65
13	4.3	7.6	9.5	13	12	11	36	269	619	166	79	61
14	4.3	6.3	9.5	13	12	11	35	295	556	168	72	60
15	4.3	6.3	5.5	13	13	11	39	328	463	161	66	64
16	4.3	6.3	5.5	13	13	11	37	328	419	160	59	55
17	4.3	6.3	8.7	12	12	12	32	205	381	155	53	50
18	4.3	6.9	6.9	12	12	12	31	205	362	148	51	45
19	4.3	5.1	5.5	14	10	13	31	319	347	141	49	48
20	4.3	4.5	6.9	15	10	14	36	334	341	135	47	45
21	4.0	7.3	8.3	17	10	14	35	359	327	127	43	41
22	3.8	6.9	8.3	19	10	15	37	372	309	122	38	39
23	3.8	6.9	8.3	19	10	15	40	354	297	116	38	35
24	3.8	6.8	8.3	18	10	15	50	351	286	113	35	33
25	3.8	7.3	8.3	17	10	16	56	179	273	121	33	30
26	3.8	7.3	10	15	9.7	17	57	264	266	159	32	30
27	3.8	7.3	16	14	9.7	17	54	268	261	153	31	29
28	3.6	6.9	15	14	10	17	59	301	248	144	29	28
29	3.8	6.9	14	14	---	19	66	341	244	125	28	26
30	3.6	6.5	15	13	---	24	68	375	242	121	25	25
31	3.8	---	14	13	---	45	---	427	---	116	24	---
TOTAL	127.7	169.56	273.2	439	319.8	469	1112	7420	13021	4936	1917	1660
MEAN	4.12	5.65	8.81	14.2	11.4	15.1	37.1	239	434	159	61.8	55.3
MAX	5.0	7.9	16	19	14	45	68	427	656	226	110	173
MIN	3.6	3.30	5.5	11	7.4	11	19	64	242	113	24	20
AC-FT	253	336	542	871	634	930	2210	14720	25830	9790	3800	3290
CAL YR 1977 TOTAL	2997.86			MEAN 8.21	MAX 36	MIN .30	AC-FT 5950					
WTR YR 1978 TOTAL	31864.26			MEAN 87.3	MAX 656	MIN .30	AC-FT 63200					

MONO LAKE BASIN

10287000 MONO LAKE NEAR MONO LAKE, CA

LOCATION.--Lat 37°58'46", long 119°08'11", in NW¼ sec.5, T.2 N., R.26 E., Mono County, on west bank 1 mi (2 km) south of town of Mono Lake.

DRAINAGE AREA.--785 mi² (2,033 km²).

PERIOD OF RECORD.--June 1912 to current year. Records prior to September 1934, published in WSP 765.

GAGE.--Nonrecording gage or reference point read once a week. Gage readings have been reduced to elevations to National Geodetic Vertical Datum of 1929. Gage heights prior to October 1944 are converted to elevations to NGVD in WSP 1314.

REMARKS.--Since 1941 water diverted to Owens Lake basin via Mono tunnel, capacity, 200 ft³/s (5.66 m³/s).

COOPERATION.--Records were furnished by City of Los Angeles, Department of Water and Power.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 6,428.1 ft (1,959.28 m) July 18, 1919, present datum; minimum observed, 6,374.65 ft (1,942.993 m) Sept. 25, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
Oct. 6	6375.20	Mar. 13	6375.64	June 15	6375.48	July 27	6375.28
13	6375.08	Apr. 12	6375.75	20	6375.39	Aug. 3	6375.24
Nov. 8	6374.91	May 16	6375.66	29	6375.41	17	6375.23
16	6374.81	25	6375.50	July 6	6375.34	Sept. 15	6375.29
Dec. 30	6374.95	June 2	6375.53	13	6375.31	18	6374.69
Jan. 20	6375.20	8	6375.46	20	6375.30	25	6374.65
Mar. 3	6375.46						

10287070 MILL CREEK BELOW LUNDY LAKE, NEAR MONO LAKE, CA

LOCATION.--Lat 38°01'58", long 119°12'53", in SE¼NE¼ sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, at road crossing 1,500 ft (457 m) downstream from Lundy Lake Dam, and 4.9 mi (7.9 km) northwest of Mono Lake Post Office.

DRAINAGE AREA.--18.1 mi² or 46.9 km² (natural flow).

PERIOD OF RECORD.--October 1942 to current year. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

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

REMARKS.--Flow regulated for power development by Lundy Lake, capacity, 3,820 acre-ft (4.71 hm³). Records for "actual flow" include Mill Creek, Lundy powerplant tailrace, and Upper Conway ditch. Records for "natural flow" are computed as the "actual flow" plus change in contents and evaporation of Lundy Lake.

COOPERATION.--Records were furnished by Southern California Edison Co. and reviewed by the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (Actual flow).--37 years, 28.1 ft³/s (0.796 m³/s), 20,360 acre-ft/yr (25.1 hm³/yr).
(Natural flow).--37 years, 29.8 ft³/s (0.844 m³/s), 21,590 acre-ft/yr (26.6 hm³/yr).

EXTREMES (ACTUAL FLOW) FOR PERIOD OF RECORD (SINCE 1970).--Maximum daily discharge, 141 ft³/s (3.99 m³/s) July 28, 1978; no flow many days in 1971 and 1974.

EXTREMES (ACTUAL FLOW) FOR CURRENT YEAR.--Maximum daily discharge, 141 ft³/s (3.99 m³/s) July 28; minimum daily, 4.3 ft³/s (0.12 m³/s) Nov. 25 to Dec. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	5.3	4.3	7.9	10	11	14	13	62	73	103	69
2	7.7	5.4	4.3	7.9	9.4	11	17	17	62	73	106	69
3	9.7	5.4	4.3	7.9	9.2	10	20	20	62	74	107	68
4	7.9	5.4	4.3	7.9	9.2	10	20	20	62	74	102	68
5	5.0	5.6	4.9	8.1	9.2	10	20	23	77	74	96	52
6	4.9	5.6	5.1	8.1	9.2	10	20	30	106	75	93	38
7	5.0	5.6	5.1	9.4	9.2	11	20	30	111	75	93	38
8	5.0	5.6	4.9	10	9.2	11	20	30	126	77	93	38
9	5.0	5.6	4.6	10	9.2	11	19	30	127	78	93	38
10	5.0	5.6	4.6	10	10	11	19	34	128	79	93	39
11	5.0	5.6	4.6	10	9.2	11	20	37	129	83	93	39
12	5.0	5.6	4.9	10	9.2	11	20	51	126	84	92	38
13	4.9	5.3	4.9	7.9	9.2	11	20	59	127	96	92	38
14	4.9	5.2	4.9	6.8	9.2	11	20	55	128	105	91	39
15	4.9	5.2	5.2	6.9	9.2	11	20	57	128	106	90	45
16	4.9	5.2	5.9	6.9	9.2	11	20	60	128	108	89	67
17	4.9	4.9	5.9	6.6	9.2	11	20	62	126	108	88	67
18	4.9	4.5	9.4	6.6	9.2	12	20	62	123	109	88	48
19	4.9	4.5	5.4	6.6	9.2	12	20	62	86	105	87	38
20	5.0	4.5	5.4	6.6	9.2	12	20	62	66	93	86	36
21	5.0	4.5	5.7	6.6	9.4	12	20	62	65	90	84	35
22	5.0	4.5	5.9	6.6	9.0	13	20	62	65	91	82	47
23	5.0	4.5	5.9	6.6	8.2	14	20	62	66	92	81	67
24	5.0	4.5	5.9	6.6	11	14	20	64	66	92	79	67
25	5.0	4.3	5.9	8.1	11	14	20	62	67	93	78	67
26	5.0	4.3	5.9	9.4	11	14	20	59	68	107	78	66
27	5.0	4.3	5.9	9.4	11	14	20	59	69	134	77	66
28	5.0	4.3	5.9	9.4	11	14	20	59	70	141	75	66
29	5.0	4.3	6.9	9.4	---	14	20	59	70	128	74	66
30	5.0	4.3	7.9	9.4	---	14	16	59	71	106	69	45
31	5.2	---	7.9	9.4	---	14	---	61	---	98	70	---
TOTAL	166.0	149.4	172.6	253.0	267.4	370	585	1482	2767	2921	2722	1564
MEAN	5.35	4.98	5.57	8.16	9.55	11.9	19.5	47.8	92.2	94.2	87.8	52.1
MAX	9.7	5.6	9.4	10	11	14	20	64	129	141	107	69
MIN	4.9	4.3	4.3	6.6	8.2	10	14	13	62	73	69	35
AC-FT	329	296	342	502	530	734	1160	2940	5490	5790	5400	3100
(†)	366	339	414	467	492	718	1080	3060	6570	7230	3980	2320

CAL YR 1977 TOTAL 4037.7 MEAN 11.1 MAX 63 MIN 4.1 AC-FT 8010 † 8390
WTR YR 1978 TOTAL 13419.4 MEAN 36.8 MAX 141 MIN 4.3 AC-FT 26620 † 27040

† Computed natural flow, in acre-feet.

MONO LAKE BASIN

10287290 RUSH CREEK BELOW AGNEW LAKE, NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'32", long 119°07'47", in NE¼SW¼ sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, 500 ft (152 m) downstream from Agnew Lake Dam, and 3.4 mi (5.5 km) southwest of town of June Lake.

DRAINAGE AREA.--23.3 mi² or 60.3 km² (natural flow).

PERIOD OF RECORD.--October 1951 to current year. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.--Water-stage recorder and Parshall flume on creek. Altitude of gage is 8,480 ft (2,585 m), from topographic map.

REMARKS.--Flow regulated for power development by Waugh, Gem, and Agnew Lakes, combined capacity, 23,420 acre-ft (28.9 hm³) and Rush Creek powerplant. "Actual flow" is total flow of Rush Creek below Agnew Lake and Rush Creek powerplant tailrace. "Natural flow" is the sum of "actual flow," change in contents and evaporation for Waugh, Gem, and Agnew Lakes.

COOPERATION.--Records furnished by Southern California Edison Co., and reviewed by the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (Actual flow).--27 years, 54.3 ft³/s (1.538 m³/s), 39,340 acre-ft/yr (48.5 hm³/yr).
(Natural flow).--27 years, 59.0 ft³/s (1.671 m³/s), 42,750 acre-ft/yr (52.7 hm³/yr).

EXTREMES (ACTUAL FLOW) FOR PERIOD OF RECORD (SINCE 1970).--Maximum daily discharge, 421 ft³/s (11.9 m³/s) July 15, 1978; minimum daily, 0.90 ft³/s (0.025 m³/s) Aug. 31 to Sept. 2, 1976.

EXTREMES (ACTUAL FLOW) FOR CURRENT YEAR.--Maximum daily discharge, 421 ft³/s (11.9 m³/s) July 15; minimum daily, 13 ft³/s (0.37 m³/s) Jan. 26 to Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	36	20	14	13	35	43	18	83	99	223	86
2	20	36	20	14	13	39	61	18	84	100	206	84
3	18	36	20	14	18	39	61	18	84	95	210	86
4	18	36	21	14	18	39	61	18	132	96	199	87
5	18	33	19	14	18	38	61	18	155	97	208	88
6	19	18	18	14	20	38	61	18	164	100	186	110
7	20	14	18	14	19	37	61	18	169	99	176	263
8	20	19	16	14	20	39	61	18	177	100	180	215
9	20	21	15	14	19	45	61	44	183	102	176	144
10	20	22	15	14	20	37	61	60	183	101	178	108
11	20	21	15	14	20	37	60	60	183	115	170	102
12	20	21	14	14	20	37	60	71	186	265	153	90
13	20	19	14	14	20	37	60	68	193	315	133	87
14	20	19	14	14	20	37	60	73	193	371	109	86
15	20	20	14	14	19	37	60	81	195	421	96	84
16	20	19	14	14	20	37	60	81	194	418	89	83
17	21	20	14	14	20	37	60	81	194	360	87	91
18	21	19	14	14	19	37	60	52	196	322	85	86
19	20	20	15	14	19	37	60	66	198	285	87	86
20	21	18	15	14	19	37	60	80	200	262	86	86
21	20	18	14	14	21	37	60	70	204	266	90	86
22	20	18	14	14	20	37	60	80	204	281	85	86
23	21	19	14	14	20	37	60	81	206	310	77	86
24	20	20	14	14	20	37	35	81	206	327	85	86
25	21	21	14	14	20	36	18	81	210	310	82	86
26	20	20	14	13	20	36	18	82	208	366	85	85
27	26	19	14	13	20	36	18	82	210	384	85	85
28	36	18	14	13	20	36	18	82	209	324	85	85
29	36	18	14	13	---	37	18	82	209	266	87	85
30	36	20	14	13	---	38	18	82	162	225	88	85
31	36	---	14	13	---	38	---	83	---	220	83	---
TOTAL	688	658	479	428	535	1161	1515	1847	5374	7402	3969	3007
MEAN	22.2	21.9	15.5	13.8	19.1	37.5	50.5	59.6	179	239	128	100
MAX	36	36	21	14	21	45	61	83	210	421	223	263
MIN	18	14	14	13	13	35	18	18	83	95	77	83
AC-FT	1360	1310	950	849	1060	2300	3010	3660	10660	14680	7870	5960
(†)	7	16	388	712	633	605	859	9710	21780	20160	6300	5490

CAL YR 1977 TOTAL 7280 MEAN 19.9 MAX 44 MIN 10 AC-FT 14440 † 13730
WTR YR 1978 TOTAL 27063 MEAN 74.1 MAX 421 MIN 13 AC-FT 53680 † 66660

† Computed natural flow, in acre-feet.

LOCATION.--Lat 37°48'23", long 119°06'29", in NE¼ sec.4, T.2 S., R.26 E., Mono County, on left bank in narrows, 0.6 mi (1.0 km) upstream from Grant Lake, and 2.7 mi (4.3 km) northwest of town of June Lake.

PERIOD OF RECORD.--December 1936 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

REMARKS.--Records poor. Flow regulated by Gem Lake, Lake Agnew, Waugh Lake, combined capacity, 23,400 acre-ft (28.9 hm³) and by many natural lakes. No diversion above station.

AVERAGE DISCHARGE.--41 years (water years 1938-78), 80.8 ft³/s (2.288 m³/s), 58,540 acre-ft/yr (72.2 hm³/yr).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 514 ft³/s (14.6 m³/s) July 16; minimum daily, 20 ft³/s (0.57 m³/s) Dec. 14.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	42	28	24	24	37	74	68	209	232	293	108
2	28	43	28	24	24	48	86	67	209	221	277	108
3	28	43	28	24	25	52	92	71	207	210	267	108
4	29	43	28	25	27	57	93	67	228	200	262	114
5	28	44	28	28	31	56	92	81	275	197	260	145
6	28	36	27	28	34	52	95	75	300	206	246	159
7	29	27	26	28	33	52	92	73	323	219	230	267
8	29	26	25	26	32	52	90	74	348	224	232	278
9	29	28	24	28	36	58	89	90	370	222	230	204
10	29	31	22	28	39	57	89	124	372	233	232	160
11	29	31	22	27	35	52	91	133	341	232	228	142
12	29	31	21	27	35	52	96	138	334	212	232	133
13	29	30	21	26	35	52	96	160	355	385	192	123
14	29	28	20	27	34	52	96	164	357	433	166	120
15	29	28	25	30	32	52	97	185	348	494	148	121
16	28	27	24	30	31	52	95	178	332	514	139	120
17	28	27	28	31	31	52	95	168	321	471	131	120
18	28	27	30	29	31	52	95	151	323	417	128	117
19	28	26	26	28	31	53	95	138	325	376	126	113
20	28	25	26	28	31	54	97	170	328	348	125	112
21	29	28	26	27	31	56	96	167	330	334	120	111
22	29	32	28	27	30	57	96	181	337	348	120	108
23	29	29	31	26	30	57	97	184	332	370	108	108
24	29	29	28	26	30	58	93	173	332	396	108	108
25	29	29	27	26	30	58	82	164	326	391	108	107
26	29	29	29	26	29	59	70	159	323	415	108	106
27	28	29	27	26	29	61	67	159	323	461	108	106
28	33	29	28	25	30	64	68	166	312	421	108	106
29	39	28	27	25	---	65	68	181	305	357	108	105
30	41	28	26	25	---	74	68	195	300	305	109	105
31	42	---	26	25	---	80	---	207	---	287	107	---
TOTAL	927	933	810	830	870	1733	2650	4311	9425	10223	5336	3942
MEAN	29.9	31.1	26.1	26.8	31.1	55.9	88.3	139	314	330	172	131
MAX	42	44	31	31	39	80	97	207	372	514	293	278
MIN	28	25	20	24	24	37	67	67	207	197	107	105
AC-FT	1840	1850	1610	1650	1730	3440	5260	8550	18690	20280	10580	7820
CAL YR 1977	TOTAL	12018	MEAN	32.9	MAX	86	MIN	20	AC-FT	23840		
WTR YR 1978	TOTAL	41990	MEAN	115	MAX	514	MIN	20	AC-FT	83290		

11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA

LOCATION.--Lat 32°34'30", long 116°45'11", in NW¼NW¼SW¼ sec.26, T.18 S., R.2 E., San Diego County, on right bank 0.8 mi (1.3 km) upstream from confluence with Tecate Creek, and 5.1 mi (8.2 km) south of Dulzura.

DRAINAGE AREA.--310 mi² (803 km²).

PERIOD OF RECORD.--October 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 569.40 ft (173.553 m) National Geodetic Vertical Datum of 1929 (levels by International Boundary and Water Commission).

REMARKS.--Records fair. Flow regulated by Moreña Reservoir, capacity, 50,120 acre-ft (61.8 hm³) and Barrett Reservoir, capacity, 44,760 acre-ft (55.2 hm³). Water diverted from Barrett Reservoir through San Diego and Dulzura conduits to Lower Otay Reservoir.

AVERAGE DISCHARGE.--42 years, 6.06 ft³/s (0.172 m³/s), 4,390 acre-ft/yr (5.41 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft³/s (123 m³/s) Feb. 7, 1937, gage height, 9.65 ft (2.941 m) from rating curve extended above 1,500 ft³/s (42.5 m³/s); no flow for part of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,910 ft³/s (54.1 m³/s) Mar. 1, gage height, 7.71 ft (2.350 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	1.4	776	41	13	.75			
2				0	.80	600	33	19	.69			
3				0	.50	365	28	14	.55			
4				0	.30	244	24	10	.47			
5				0	4.0	589	22	8.5	.46			
6				0	12	303	20	7.2	.48			
7				0	15	205	33	5.7	.47			
8				0	18	161	31	4.9	.42			
9				0	26	140	28	4.6	.33			
10				.36	98	145	23	4.1	.29			
11				1.9	80	138	19	3.8	.26			
12				.82	56	278	17	3.7	.21			
13				.42	158	192	15	3.5	.18			
14				1.6	195	146	14	3.3	.14			
15				150	108	119	14	3.3	.11			
16				26	64	99	18	3.4	.08			
17				138	43	85	17	2.9	.04			
18				34	30	75	13	2.2	0			
19				29	22	68	11	1.8	0			
20				24	17	63	10	2.0	0			
21				16	14	58	9.8	2.3	0			
22				12	11	53	8.9	2.7	0			
23				8.5	8.9	49	7.5	3.1	0			
24				6.0	7.9	43	6.2	3.1	0			
25				4.4	7.0	36	7.1	3.0	0			
26				3.4	6.6	32	7.4	2.7	0			
27				2.5	8.7	30	7.0	2.4	0			
28				1.5	50	27	6.7	2.0	0			
29				1.1	---	25	6.7	1.4	0			
30				2.3	---	25	6.8	.90	0			
31		---		3.0	---	42	---	.75	---			---
TOTAL	0	0	0	466.80	1063.10	5211	505.1	145.25	5.93	0	0	0
MEAN	0	0	0	15.1	38.0	168	16.8	4.69	.20	0	0	0
MAX	0	0	0	150	195	776	41	19	.75	0	0	0
MIN	0	0	0	0	.30	25	6.2	.75	0	0	0	0
AC-FT	0	0	0	926	2110	10340	1000	288	12	0	0	0
CAL YR 1977	TOTAL	3.41	MEAN	.009	MAX	.94	MIN	0	AC-FT	6		
WTR YR 1978	TOTAL	7397.18	MEAN	20.3	MAX	776	MIN	0	AC-FT	14670		

TIJUANA RIVER BASIN

11012500 CAMPO CREEK NEAR CAMPO, CA

LOCATION.--Lat 32°35'28", long 116°31'29", in SW¼NE¼SE¼ sec.24, T.18 S., R.4 E., San Diego County, on left bank just upstream from bridge on State Highway 94, and 3.5 mi (5.6 km) southwest of Campo.

DRAINAGE AREA.--85.0 mi² (220.2 km²), of which 3 mi² (8 km²) are in Mexico.

PERIOD OF RECORD.--October 1936 to current year.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft (664.135 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft (0.3 m) higher.

REMARKS.--Records poor. Flow regulated by small conservation reservoir 1 mi (1.6 km) upstream since August 1956. No diversion above station.

AVERAGE DISCHARGE.--42 years, 1.56 ft³/s (0.044 m³/s), 1,130 acre-ft/yr (1.39 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 880 ft³/s (24.9 m³/s) Feb. 6, 1937, gage height, 4.80 ft (1.463 m), present datum, from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of velocity-area study and cross-sectional area at control; no flow for part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74 ft³/s (2.10 m³/s) Mar. 2, gage height, 2.42 ft (0.738 m); no flow most days from October to January.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.01	11	10	6.1	2.4	1.3	.18	.48
2			0	0	.01	38	7.8	5.0	2.4	1.2	.18	.27
3			0	0	.01	27	6.2	3.9	2.3	1.2	.19	.20
4			0	0	.01	18	5.9	3.7	2.3	1.1	.19	.21
5			0	0	.02	36	6.0	3.7	2.3	1.0	.20	.22
6			0	0	.02	19	5.4	3.7	2.2	.99	.20	.21
7			0	0	.02	12	12	3.4	2.1	.94	.21	.16
8			0	0	.02	8.4	11	3.2	1.9	.77	.21	.15
9			0	.01	.04	9.7	8.9	3.0	1.9	.75	.22	.22
10			0	.02	.05	13	6.7	2.8	1.9	.92	.22	.37
11			0	0	.04	13	5.5	3.0	1.9	.54	.22	.37
12			0	0	.04	33	5.1	3.1	1.8	.51	.22	.36
13			0	0	.05	18	4.7	3.1	1.7	.39	.19	.36
14			0	.03	.05	14	4.7	3.2	1.7	.36	.24	.27
15			0	.08	.05	12	4.9	3.2	1.7	.28	.28	.17
16			0	.03	.05	10	7.2	3.4	1.7	.19	.25	.31
17			0	.02	.05	9.1	5.3	3.3	1.6	.18	.39	.59
18			0	.01	.05	9.1	4.5	3.0	1.5	.18	.19	.44
19			0	.04	.05	9.1	4.2	2.4	1.5	.18	.17	.26
20			0	.01	.04	8.4	4.1	2.7	1.5	.18	.51	.16
21			0	0	.04	8.4	4.1	2.7	1.5	.25	.20	.14
22			0	.01	.05	9.1	3.9	2.5	1.3	.23	.19	.14
23			0	0	.05	9.1	3.6	2.5	1.2	.18	.20	.25
24			0	0	.05	7.8	3.5	2.5	1.3	.30	.19	.49
25			0	0	.05	6.7	3.4	2.3	1.3	.73	.26	.33
26			.01	.01	.05	6.2	3.5	2.5	1.2	.62	.36	.11
27			0	.01	.06	6.2	3.4	2.6	1.3	.52	.23	.09
28			.01	.01	.10	5.9	3.3	2.6	1.3	.46	.22	.08
29			0	.01	---	4.9	3.3	2.5	1.3	.39	.21	.08
30			0	.02	---	4.6	3.4	2.3	1.2	.27	.21	.08
31		---	0	.02	---	10	---	2.3	---	.18	.24	---
TOTAL	0	0	.02	.34	1.13	406.7	165.5	96.2	51.2	17.29	7.17	7.57
MEAN	0	0	.0006	.011	.040	13.1	5.52	3.10	1.71	.56	.23	.25
MAX	0	0	.01	.08	.10	38	12	6.1	2.4	1.3	.51	.59
MIN	0	0	0	0	.01	4.6	3.3	2.3	1.2	.18	.17	.08
AC-FT	0	0	.04	.7	2.2	807	328	191	102	34	14	15
CAL YR 1977	TOTAL	2.11	MEAN .006	MAX	.07	MIN 0	AC-FT	4				
WTR YR 1978	TOTAL	753.12	MEAN 2.06	MAX	38	MIN 0	AC-FT	1490				

11013000 TIJUANA RIVER NEAR DULZURA, CA

LOCATION.--Lat 32°33'56", long 116°46'27", in E½ sec.33, T.18 S., R.2 E., San Diego County, on left bank 0.5 mi (0.8 km) downstream from confluence of Cottonwood and Tecate Creeks, and 5.5 mi (8.8 km) south of Dulzura.

DRAINAGE AREA.--481 mi² (1,250 km²), of which 70 mi² (181 km²) are in Mexico.

PERIOD OF RECORD.--October 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 542.42 ft (165.330 m) National Geodetic Vertical Datum of 1929 (levels by International Boundary and Water Commission). Prior to Sept. 19, 1939, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair. Flow regulated by Morena Reservoir, capacity, 50,210 acre-ft (61.9 hm³) and Barrett Reservoir, capacity, 44,760 acre-ft (55.2 hm³). Water diverted from Barrett Reservoir through San Diego and Dulzura conduits to Lower Otay Reservoir.

AVERAGE DISCHARGE.--42 years, 9.96 ft³/s (0.282 m³/s), 7,220 acre-ft/yr (8.90 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft³/s (133 m³/s) Feb. 7, 1937, gage height, 8.50 ft (2.591 m) present datum, from rating curve extended above 300 ft³/s (8.50 m³/s) on basis of velocity-area studies; no flow for part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) Mar. 1, gage height, 8.00 ft (2.438 m); minimum daily, 0.05 ft³/s (0.001 m³/s) Oct. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.11	.18	.18	1.5	1750	78	21	.80	.20	.20	.18
2	.12	.12	.16	.18	.88	1300	52	27	.70	.20	.20	.16
3	.12	.12	.12	.18	.59	900	41	19	.60	.20	.20	.14
4	.13	.12	.10	.18	.40	600	34	14	.50	.20	.19	.13
5	.12	.12	.10	.18	4.3	1300	33	12	.50	.20	.20	.18
6	.22	.14	.10	.18	18	800	30	10	.50	.20	.20	.19
7	.16	.14	.12	.18	21	500	72	7.6	.50	.20	.20	.20
8	.07	.12	.12	.18	32	350	58	6.3	.45	.20	.21	.18
9	.07	.12	.12	.20	45	320	46	5.8	.35	.20	.20	.16
10	.07	.14	.12	9.2	172	330	36	4.7	.30	.20	.19	.16
11	.07	.12	.12	7.1	132	310	29	4.0	.30	.20	.19	.18
12	.07	.12	.12	1.9	86	710	26	3.8	.25	.20	.19	.18
13	.06	.14	.12	1.1	299	450	23	3.6	.20	.20	.19	.20
14	.05	.14	.12	2.1	286	250	22	3.4	.20	.20	.18	.20
15	.05	.12	.12	349	146	170	22	3.4	.20	.20	.18	.21
16	.06	.10	.12	50	94	130	30	3.5	.20	.20	.17	.48
17	.06	.12	.12	274	74	120	25	3.0	.20	.20	.16	.30
18	.06	.12	.14	63	55	110	20	2.3	.20	.20	.13	.25
19	.07	.14	.14	58	44	95	18	1.9	.20	.20	.16	.25
20	.07	.16	.18	49	34	90	16	2.1	.20	.20	.16	.21
21	.08	.14	.18	33	28	80	16	2.4	.20	.20	.14	.25
22	.06	.14	.20	24	23	75	16	2.8	.20	.20	.12	.20
23	.06	.14	.20	16	19	70	14	3.2	.20	.20	.11	.24
24	.06	.18	.23	8.1	16	59	12	3.2	.20	.20	.13	.21
25	.06	.18	.23	5.2	14	48	13	3.1	.20	.20	.17	.19
26	.06	.14	.26	3.8	13	41	13	2.8	.20	.20	.15	.20
27	.08	.14	.26	2.5	17	38	13	2.5	.20	.20	.17	.20
28	.09	.16	.30	1.7	73	36	13	2.1	.20	.20	.18	.18
29	.09	.18	.20	1.2	---	34	13	1.5	.20	.20	.18	.18
30	.10	.18	.20	2.5	---	36	14	1.0	.20	.20	.20	.14
31	.12	---	.18	3.6	---	93	---	.90	---	.20	.19	---
TOTAL	2.69	4.11	4.98	967.64	1748.67	11195	848	183.90	9.35	6.20	5.44	6.13
MEAN	.087	.14	.16	31.2	62.5	361	28.3	5.93	.31	.20	.18	.20
MAX	.22	.18	.30	349	299	1750	78	27	.80	.20	.21	.48
MIN	.05	.10	.10	.18	.40	34	12	.90	.20	.20	.11	.13
AC-FT	5.3	8.2	9.9	1920	3470	22210	1680	365	19	12	11	12
CAL YR 1977 TOTAL		81.56	MEAN	.22	MAX	2.5	MIN	.03	AC-FT	162		
WTR YR 1978 TOTAL		14982.11	MEAN	41.0	MAX	1750	MIN	.05	AC-FT	29720		

11013200 RODRIGUEZ RESERVOIR AT RODRIGUEZ DAM, BAJA CALIFORNIA, MEXICO

LOCATION.--Lat 32°26'40", long 116°54'25", Baja California, Mexico, at Rodriguez Dam on Rio de las Palmas, 0.2 mi (0.3 km) upstream from Arroyo Matanuco, and 10 mi (16 km) southeast of Tijuana.

DRAINAGE AREA.--977 mi² (2,530 km²), of which 10 mi² (26 km²) are in the United States.

PERIOD OF RECORD.--April 1937 to current year. Published with record for Tijuana River near Nestor, Calif., October 1953 to September 1957. Monthend contents for April 1937 to September 1950 published in WSP 1315-B and for October 1950 to September 1960 in WSP 1735.

GAGE.--Nonrecording gage read once a day. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by National Irrigation Commission, Mexico).

REMARKS.--Reservoir is formed by thin-shell concrete-arch dam completed in 1936; storage began in 1937. Capacity table is based on surveys made in 1927. Maximum storage at crest of spillway gates, elevation, 410.10 ft (124.998 m), 111,070 acre-ft (137 hm³); at spillway lip, elevation, 380.08 ft (115.848 m), 74,580 acre-ft (92.0 hm³); dead storage below outlet, elevation, 267.39 ft (81.500 m), 1,650 acre-ft (2.03 hm³) included in contents. Reservoir stores water for irrigation of 3,000 acres (12.1 km²) on both banks 0.5 to 5.5 mi (0.8 to 8.8 km) downstream and municipal supply for city of Tijuana. Since August 1972 Colorado River water diverted through Otay aqueduct into the reservoir for Tijuana emergency use; this year 82.5 acre-ft (102,000 m³) was imported.

COOPERATION.--Records were furnished by Ministry of Hydraulic Resources, Government of Mexico, through International Boundary and Water Commission, United States section.

EXTREMES FOR PERIOD OF RECORD.--Reservoir spilled during March 1938, September 1940, February to May 1941, March 1942, February and March 1944; reservoir dry Apr. 2, 1964, to Apr. 9, 1965, Aug. 21 to Nov. 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 82,520 acre-ft (102 hm³) Apr. 22-26; minimum observed, 632 acre-ft (0.780 hm³) Dec. 21, 22, 23.

MONTHEND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Contents (acre- feet)	Change in contents (acre- feet)
Sept. 30.....	1100	--
Oct. 31.....	910	-190
Nov. 30.....	743	-167
Dec. 31.....	724	-19
CAL YR 1977.....	--	-1996
Jan. 31.....	6540	+5816
Feb. 28.....	18650	+12110
Mar. 31.....	78010	+59360
Apr. 30.....	82370	+4360
May 31.....	81060	-1310
June 30.....	79420	-1640
July 31.....	77710	-1710
Aug. 31.....	75990	-1720
Sept. 30.....	74370	-1620
WTR YR 1978	--	+73270

11013500 TIJUANA RIVER NEAR NESTOR, CA

LOCATION.--Lat 32°33'06", long 117°05'00", on line between secs.3 and 4, T.19 S., R.2 W., San Diego County, on downstream side of Hollister Street bridge, 1.7 mi (2.7 km) south of Nestor, and 2.9 mi (4.7 km) upstream from mouth at Pacific Ocean.

DRAINAGE AREA.--1,695 mi² (4,390 km²), of which 1,236 mi² (3,201 km²) are in Mexico.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1914 to September 1915, October 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 15.14 ft (4.615 m) National Geodetic Vertical Datum of 1929. See WSP 1735 for history of changes prior to Aug. 5, 1958.

REMARKS.--Records fair. Flow regulated by Moreña Reservoir, capacity, 50,210 acre-ft (61.9 hm³) and Barrett Reservoir, capacity, 44,760 acre-ft (55.2 hm³) in the United States, and Rodriguez Reservoir (station 11013200) in Mexico. Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek. AVERAGE DISCHARGE represents flow to the ocean regardless of upstream development.

COOPERATION.--One discharge measurement was furnished by U. S. International Boundary and Water Commission.

AVERAGE DISCHARGE.--43 years, 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1936).--Maximum discharge, 17,700 ft³/s (501 m³/s) Feb. 7, 1937, gage height, 8.20 ft (2.499 m), datum then in use, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of velocity-depth relation and cross section after peak; no flow parts of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,370 ft³/s (180 m³/s) Mar. 1; gage height, 7.96 ft (2.426 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	0	3800	215	15				
2				0	0	2990	127	13				
3				0	0	2260	83	14				
4				0	0	1430	62	15				
5				0	0	2650	52	13				
6				0	0	1460	46	11				
7				0	0	750	104	7.7				
8				0	0	500	101	7.1				
9				0	2.2	300	75	5.9				
10				7.6	226	220	61	4.3				
11				0	398	180	52	3.3				
12				0	326	1710	45	3.3				
13				0	710	910	40	3.3				
14				7.2	914	838	36	3.0				
15				1770	424	755	33	2.0				
16				401	166	480	36	1.3				
17				1730	153	440	37	.28				
18				295	108	415	37	0				
19				130	69	405	36	0				
20				146	50	400	34	0				
21				104	26	600	31	0				
22				54	5.5	435	33	0				
23				29	4.8	360	30	0				
24				12	4.4	419	27	0				
25				2.3	4.4	324	23	0				
26				0	4.1	255	22	0				
27				0	4.8	216	21	0				
28				0	74	125	19	0				
29				0	---	69	14	0				
30				0	---	62	13	0				
31				0	---	133	---	0				
TOTAL	0	0	0	4688.1	3674.2	25891	1545	122.48	0	0	0	0
MEAN	0	0	0	151	131	835	51.5	3.95	0	0	0	0
MAX	0	0	0	1770	914	3800	215	15	0	0	0	0
MIN	0	0	0	0	0	62	13	0	0	0	0	0
AC-FT	0	0	0	9300	7290	51350	3060	243	0	0	0	0
CAL YR 1977 TOTAL	44.14			MEAN .12	MAX 19	MIN 0	AC-FT 88					
WTR YR 1978 TOTAL	35920.78			MEAN 98.4	MAX 3800	MIN 0	AC-FT 71250					

TIJUANA RIVER BASIN

11013500 TIJUANA RIVER NEAR NESTOR, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1969 to September 1978 (discontinued).

SEDIMENT RECORDS: October 1969 to September 1978 (discontinued).

REMARKS.--Sediment table omitted for no flow periods October to December and July to September.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 10,000 mg/L Mar. 1, 1978; minimum daily mean, no flow for many days each year.

SEDIMENT DISCHARGE: Maximum daily, 122,000 tons (111,000 metric tons) Mar. 1, 1978; minimum daily, 0 tons for many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 10,000 mg/L Mar. 1; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 122,000 tons (111,000 metric tons) Mar. 1; minimum daily, 0 tons for many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	---	18.0		20.5	---			
2				---	---	15.0		---	---			
3				---	---	---		---	---			
4				---	---	---		19.5	---			
5				---	---	---		---	---			
6				---	---	---		---	---			
7				---	---	---		21.5	---			
8				---	---	---		---	---			
9				---	---	---		25.5	---			
10				---	---	---		---	---			
11				---	---	---		26.0	---			
12				---	---	---		29.5	---			
13				---	---	---		28.0	---			
14				16.0	---	---		---	---			
15				16.0	---	---		27.0	---			
16				16.0	---	---		---	---			
17				---	16.0	---		---	---			
18				16.5	---	---		---	---			
19				---	---	---		---	---			
20				---	---	---		---	---			
21				---	---	---		---	---			
22				---	---	---		---	---			
23				15.5	---	17.5		---	---			
24				---	---	---		---	---			
25				---	---	---		---	---			
26				---	---	---		---	---			
27				---	---	---		---	---			
28				---	---	---		---	---			
29				---	---	---		---	---			
30				---	---	---		---	---			
31				---	---	---		---	---			
MONTH				---	---	---		---	---			

11013500 TIJUANA RIVER NEAR NESTOR, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	0	0	0	0	0	0	3800	18000	122000
2	0	0	0	0	0	0	2990	5300	45700
3	0	0	0	0	0	0	2260	3950	25300
4	0	0	0	0	0	0	1430	3900	21400
5	0	0	0	0	0	0	2650	8330	37700
6	0	0	0	0	0	0	1460	3030	12900
7	0	0	0	0	0	0	750	1830	3710
8	0	0	0	0	0	0	500	1580	2130
9	0	0	0	2.2	165	8.8	300	1420	1150
10	7.6	2120	82	226	4780	3340	220	1370	814
11	0	0	0	398	2400	2580	180	1300	632
12	0	0	0	326	1500	1320	1710	4240	22000
13	0	0	0	710	4030	9140	910	2690	9490
14	7.2	881	98	914	4110	10700	838	3040	6940
15	1770	8370	55700	424	1700	1950	755	2580	5260
16	401	1780	3090	166	800	359	480	2030	2630
17	1730	3650	22200	153	316	131	440	1800	2140
18	295	800	637	108	300	87	415	1660	1860
19	130	375	132	69	250	47	405	1580	1730
20	146	205	81	50	175	24	400	1550	1670
21	104	150	42	26	100	7.0	600	2670	5610
22	54	125	18	5.5	50	.74	435	1650	1940
23	29	100	7.8	4.8	30	.39	360	169	164
24	12	75	2.4	4.4	25	.30	419	300	339
25	2.3	51	.54	4.4	20	.24	324	175	153
26	0	0	0	4.1	18	.20	255	150	103
27	0	0	0	4.8	20	.26	216	120	70
28	0	0	0	74	2400	638	125	110	37
29	0	0	0	---	---	---	69	100	19
30	0	0	0	---	---	---	62	75	13
31	0	0	0	---	---	---	133	1580	609
TOTAL	4688.10	---	82090.74	3674.20	---	30333.93	25891	---	336213

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	215	1880	1140	15	14	.57			
2	127	900	309	13	14	.49			
3	83	450	101	14	15	.57			
4	62	300	50	15	15	.61			
5	52	250	35	13	13	.46			
6	46	210	26	11	11	.33			
7	104	798	260	7.7	10	.21			
8	101	200	55	7.1	11	.21			
9	75	110	22	5.9	12	.19			
10	61	80	13	4.3	10	.12			
11	52	50	7.0	3.3	7	.06			
12	45	40	4.9	3.3	20	.18			
13	40	32	3.5	3.3	12	.11			
14	36	28	2.7	3.0	12	.10			
15	33	24	2.1	2.0	11	.06			
16	36	26	2.5	1.3	10	.04			
17	37	27	2.7	.28	5	0			
18	37	26	2.6	0	0	0			
19	36	25	2.4	0	0	0			
20	34	22	2.0	0	0	0			
21	31	20	1.7	0	0	0			
22	33	21	1.9	0	0	0			
23	30	25	2.0	0	0	0			
24	27	22	1.6	0	0	0			
25	23	20	1.2	0	0	0			
26	22	19	1.1	0	0	0			
27	21	18	1.0	0	0	0			
28	19	15	.77	0	0	0			
29	14	12	.45	0	0	0			
30	13	10	.35	0	0	0			
31	---	---	---	0	0	0			
TOTAL	1545	---	2055.47	122.48	---	4.31	0	0	0

YEAR 35920.78

450697.5

TIJUANA RIVER BASIN

11013500 TIJUANA RIVER NEAR NESTOR, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM
JAN 16...	1330	16.0	261	1060	747	--	91	95	96	97
MAR 02...	1430	15.0	2340	4150	26200	--	39	45	49	52
23...	1200	17.5	362	169	165	53	61	64	66	67

DATE	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
JAN 16...	--	97	--	98	--	99	--	100	--	--
MAR 02...	53	--	56	--	68	--	95	--	100	--
23...	--	70	--	81	--	95	--	99	--	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	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
JUN 01...	1150	1	.00	1	10	51	90	99	100	--
01...	1155	1	.00	--	5	27	65	93	100	--
01...	1200	1	.00	4	15	50	83	96	100	--
01...	1205	1	.00	3	11	35	66	84	95	100
01...	1210	1	.00	4	17	51	91	99	100	--

11014000 JAMUL CREEK NEAR JAMUL, CA

LOCATION.--Lat 32°38'15", long 116°53'00", in NE¼ sec.4, T.18 S., R.1 E., San Diego County, on right bank 300 ft (91 m) upstream from Otay Road crossing at upper end of Lower Otay Reservoir, 1.4 mi (2.3 km) downstream from Dulzura Creek, and 5.5 mi (8.8 km) south of Jamul.

DRAINAGE AREA.--70.2 mi² (181.8 km²).

PERIOD OF RECORD.--April 1940 to September 1978 (discontinued).

GAGE.--Water-stage recorder and broad-crested weir control with low-water venturi-type flume. Datum of gage is 511.64 ft (155.948 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair. No regulation above station. Water diverted from Cottonwood Creek at Barrett Reservoir via San Diego and Dulzura conduit into Dulzura Creek, a tributary to Jamul Creek, and is included in discharge for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Dec. 1, 1947, gage height, 6.42 ft (1.957 m), present datum, from rating curve extended above 1,200 ft³/s (34.0 m³/s); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), on basis of rating curve extended above 1,200 ft³/s (23 m³/s):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	1030	311 8.81	3.49 1.064	Mar. 1	0900	*3650 103	6.16 1.878
Jan. 15	0645	1110 31.4	4.16 1.268	Mar. 4	1900	2830 80.1	5.47 1.667
Jan. 17	0345	439 12.4	3.62 1.103	Mar. 12	1445	482 13.7	3.67 1.119
Feb. 10	0700	429 12.1	3.64 1.109	Mar. 31	0530	132 3.74	3.13 0.954
Feb. 14	0430	838 23.7	3.98 1.213				

Minimum daily discharge, no flow some months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	1.4	1570	47	18	21	28	33	30
2			0	0	1.3	1110	32	11	23	28	33	30
3			0	0	.91	577	26	8.0	23	29	33	30
4			0	0	.89	683	22	6.0	23	29	33	31
5			0	0	12	1150	20	5.0	21	29	32	29
6			0	0	5.9	400	18	4.0	21	32	33	6.8
7			0	0	4.3	200	68	3.5	29	32	33	4.7
8			0	0	11	150	56	3.0	47	26	34	5.8
9			0	.60	12	95	40	5.4	47	30	28	1.5
10			0	20	127	80	31	8.0	45	32	29	1.0
11			0	2.4	109	88	26	8.0	33	31	29	.85
12			0	.80	71	277	23	8.0	25	30	29	.67
13			0	0	172	138	21	4.0	26	30	29	.43
14			0	12	307	100	20	2.5	26	30	29	1.1
15			0	244	98	75	19	2.0	26	30	29	19
16			0	17	60	60	39	1.5	26	30	30	27
17			0	117	40	50	22	1.0	26	30	29	27
18			0	25	30	45	16	1.0	26	30	29	27
19			0	15	21	40	14	.85	25	5.0	30	28
20			0	9.0	16	35	10	.75	25	20	30	28
21			0	6.0	13	32	9.0	.65	25	20	30	28
22			0	4.5	11	32	7.5	.55	26	23	29	27
23			0	3.0	8.5	32	6.5	.50	26	23	30	27
24			0	2.5	7.1	29	5.5	18	26	23	30	28
25			0	2.0	6.3	27	5.0	16	26	25	30	25
26			0	1.9	5.6	24	4.5	16	26	28	30	5.3
27			0	1.8	9.4	22	4.0	16	27	28	30	.50
28			0	1.5	211	22	3.5	16	28	31	30	1.3
29			.75	1.4	---	21	3.0	17	28	33	31	13
30			0	1.7	---	21	3.0	17	28	33	30	17
31		---	0	1.6	---	58	---	18	---	33	31	---
TOTAL	0	0	.75	490.70	1372.60	7243	621.5	237.20	830	861.0	945	500.95
MEAN	0	0	.024	15.8	49.0	234	20.7	7.65	27.7	27.8	30.5	16.7
MAX	0	0	.75	244	307	1570	68	18	47	33	34	31
MIN	0	0	0	0	.89	21	3.0	.50	21	5.0	28	.43
AC-FT	0	0	1.5	973	2720	14370	1230	470	1650	1710	1870	994

CAL YR 1977 TOTAL 29.72 MEAN .081 MAX 6.7 MIN 0 AC-FT 59
WTR YR 1978 TOTAL 13102.70 MEAN 35.9 MAX 1570 MIN 0 AC-FT 25990

11014550 LOWER OTAY RESERVOIR NEAR CHULA VISTA, CA

LOCATION (REVISED).--Lat 32°36'33", long 116°55'45", in NE¼NE¼ sec.13, T.18 S., R.1 E., San Diego County, on outlet tower near right bank, 1,000 ft (305 m) west of right end of Savage Dam on Otay River, and 9 mi (14 km) east of Chula Vista.

DRAINAGE AREA.--99.0 mi² (256.4 km²).

PERIOD OF RECORD.--October 1945 to September 1959 (published with Otay River at Savage Dam, station 11014500). October 1972 to current year. Records of monthend gage heights October 1936 to September 1945, in files of San Diego County Department of Sanitation and Flood Control.

GAGE (CORRECTED).--Nonrecording gage. Datum of gage is 347.20 ft (105.827 m) National Geodetic Vertical Datum of 1929 (levels by County of San Diego); gage readings have been reduced to NGVD. Since October 1972 to current year, supplementary water-stage recorder for flood warning only 30 ft (9.1 m) upstream from right end of dam at datum 50.0 ft (15.24 m) higher.

REMARKS.--Reservoir is formed by gravity section cyclopean concrete and masonry dam, built in 1919. Capacity from Geological Survey table dated Apr. 3, 1956. Maximum capacity at top of spillway gates, 56,520 acre-ft (69.7 hm³), elevation, 490.70 ft (149.565 m). Capacity at permanent spillway level, 49,510 acre-ft (61.0 hm³), elevation, 484.70 ft (147.737 m). Dead storage below lowest outlet, 1,150 acre-ft (1.42 hm³), elevation, 395.05 ft (120.411 m). Dulzura conduit carries water from Barrett Reservoir on Cottonwood Creek to Dulzura Creek, where water is carried to the reservoir by Jamul Creek (station 11014000). Reservoir storage includes supplemental Colorado River water. Small diversions for local use near reservoir. Water used for municipal supply by city of San Diego.

COOPERATION.--Gage heights were furnished by City of San Diego, Utilities and Engineering Division.

EXTREMES FOR PERIOD OF RECORD (1945-59 AND SINCE 1972).--Maximum contents observed, 48,200 acre-ft (59.4 hm³) Oct. 31, 1945, elevation, 493.87 ft (150.532 m); minimum observed, 3,160 acre-ft (3.90 hm³) Dec. 31, 1951, elevation, 407.56 ft (124.224 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 32,310 acre-ft (39.8 hm³) May 7, elevation, 466.70 ft (142.250 m); minimum observed, 5,450 acre-ft (6.72 hm³) Jan. 3, elevation, 416.76 ft (127.028 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	422.48	7280	--
Oct. 31.....	417.45	5650	-1630
Nov. 30.....	417.20	5580	-70
Dec. 31.....	416.77	5450	-130
CAL YR 1977.....	--	--	-1710
Jan. 31.....	423.66	7690	+2240
Feb. 28.....	435.25	12370	+4680
Mar. 31.....	463.90	30040	+17670
Apr. 30.....	466.68	32290	+2250
May 31.....	465.89	31640	-650
June 30.....	465.18	31070	-570
July 31.....	464.18	30270	-800
Aug. 31.....	463.48	29650	-620
Sept. 30.....	462.06	28610	-1040
WTR YR 1978.....	--	--	+21330

11015000 SWEETWATER RIVER NEAR DESCANSO, CA

LOCATION.--Lat 32°50'05", long 116°37'20", in NW¼SE¼ sec.25, T.15 S., R.3 E., San Diego County, near right bank at Los Terrenitos Road bridge, 0.7 mi (1.1 km) downstream from unnamed tributary, and 1.3 mi (2.1 km) south of Descanso.

DRAINAGE AREA.--45.4 mi² (117.6 km²).

PERIOD OF RECORD.--October 1905 to September 1927, October 1956 to current year. Monthly discharge only for October to December 1905, January to February 1916, February, March, June to September 1927, published in WSP 1315-B. Combined records of river and diversion since October 1956.

GAGE.--Water-stage recorder on river; water-stage recorder on concrete diversion. Datum of river gage is 3,269.24 ft (996.464 m) National Geodetic Vertical Datum of 1929. Prior to June 25, 1927, nonrecording gages at several sites within 0.1 mi (0.2 km) upstream at various datums. Diversion gage at different datum.

REMARKS.--Records good. No regulation above station. Sweetwater River diversion diverts 0.3 mi (0.5 km) above station for irrigation below. No flow at diversion since November 1976.

AVERAGE DISCHARGE.--Creek only: 44 years, 9.86 ft³/s (0.279 m³/s), 7,140 acre-ft/yr (8.80 hm³/yr). Combined creek and diversion: 22 years, 4.18 ft³/s (0.118 m³/s), 3,030 acre-ft/yr (3.74 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 11,200 ft³/s (317 m³/s) Feb. 16, 1927, gage height, 13.2 ft (4.023 m), from floodmarks, site and datum then in use, on basis of slope-area measurement of maximum flow; no flow many days in most years. Combined creek and diversion: Maximum discharge, 3,890 ft³/s (110 m³/s) Dec. 6, 1966; no flow many days in each year.

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

Date	Time	Creek Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Creek Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 15	0415	140 3.96	5.52 1.682	Mar. 2	1800	*1150 32.6	8.12 2.475
Feb. 10	1130	263 7.45	6.11 1.862	Mar. 5	1830	630 17.8	7.17 2.185
Feb. 13	0400	224 6.34	5.95 1.814	Mar. 12	1145	168 4.76	5.68 1.731

Creek only: Minimum daily discharge, no flow Oct. 1 to Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.18	.39	.54	431	51	36	9.5	2.3	.58	.25
2		0	.20	.27	.42	654	48	29	9.0	2.2	.54	.23
3		0	.18	.25	.36	234	43	25	9.0	2.1	.72	.35
4		0	.14	.27	.30	228	43	24	8.5	1.7	.58	.30
5		0	.18	.36	3.5	482	43	24	8.5	1.6	.54	.58
6		0	.22	.62	13	237	40	23	8.0	1.6	.46	.94
7		0	.20	.39	19	140	68	22	8.0	1.5	.46	.77
8		0	.20	.22	19	108	60	21	7.5	1.3	.50	.67
9		0	.18	.77	23	92	56	20	7.0	1.1	.54	.62
10		0	.16	1.8	159	91	49	20	6.5	1.1	.54	.58
11		0	.14	.72	94	98	46	19	5.9	1.0	.58	.58
12		0	.13	.27	73	147	43	18	5.5	1.1	.58	.58
13		0	.10	.18	194	106	40	18	5.4	1.1	.50	.62
14		0	.22	1.1	113	93	40	17	5.0	1.0	.37	.77
15		0	.16	39	73	85	42	17	4.8	1.0	.34	.72
16		.11	.14	5.4	56	72	68	16	4.5	.94	.31	.72
17		.08	.14	36	43	61	46	15	3.9	.88	.29	.58
18		.10	.56	6.5	37	58	42	15	3.9	.77	.42	.62
19		.13	.27	2.3	32	56	40	14	4.1	.72	.38	.58
20		.14	.16	1.6	29	54	37	14	3.5	.67	.31	.46
21		.14	.11	.88	25	56	35	14	3.4	.67	.13	.46
22		.14	.13	.72	24	59	32	13	3.4	.67	.28	.39
23		.16	.20	.58	22	56	31	13	3.2	.54	.26	.39
24		.14	.22	.50	21	50	29	12	3.1	.58	.25	.33
25		.14	.25	.39	19	46	29	12	2.8	.58	.29	.27
26		.13	1.0	.36	17	43	29	12	2.7	.54	.42	.25
27		.16	1.1	.30	19	40	28	11	2.6	.62	.42	.20
28		.14	1.6	.27	58	38	27	10	2.5	.58	.42	.18
29		.14	2.6	.25	---	37	26	10	2.6	.72	.26	.16
30		.16	.94	.50	---	41	27	9.5	2.4	.62	.25	.18
31		---	.54	.82	---	56	---	9.5	---	.77	.25	---
TOTAL	0	2.01	12.55	103.98	1187.12	4049	1238	533.0	156.7	32.57	12.77	14.33
MEAN	0	.067	.40	3.35	42.4	131	41.3	17.2	5.22	1.05	.41	.48
MAX	0	.16	2.6	39	194	654	68	36	9.5	2.3	.72	.94
MIN	0	0	.10	.18	.30	37	26	9.5	2.4	.54	.13	.16
AC-FT	0	4.0	25	206	2350	8030	2460	1060	311	65	25	28

CAL YR 1977 TOTAL 101.01 MEAN .28 MAX 7.2 MIN 0 AC-FT 200
WTR YR 1978 TOTAL 7342.03 MEAN 20.1 MAX 654 MIN 0 AC-FT 14560

NOTE.--No flow at diversion since November 1976; combined table is the same as creek table this year.

11016550 SWEETWATER RESERVOIR NEAR NATIONAL CITY, CA

LOCATION.--Lat 32°41'20", long 117°00'35", in La Nacion Grant, San Diego County, at Sweetwater Dam on Sweetwater River, 6 mi (10 km) east of National City, and 8 mi (13 km) upstream from mouth.

DRAINAGE AREA.--182 mi² (471 km²).

PERIOD OF RECORD.--October 1943 to September 1966 (published with Sweetwater River at Sweetwater Dam, station 11016500). October 1972 to current year. Records of monthend gage heights October 1891 to September 1943, in files of San Diego County Department of Sanitation and Flood Control.

GAGE.--Nonrecording gage. Datum of gage is 149.28 ft (45.501 m) National Geodetic Vertical Datum of 1929 (levels by San Diego County); gage readings have been reduced to elevations above NGVD. Prior to Oct. 1, 1972 non-recording gage at same site at datum 0.16 ft (0.049 m) lower. Oct. 1, 1972, to Mar. 6, 1975, water-stage recorder for flood warning only at same site and datum.

REMARKS.--Reservoir is formed by concrete-gravity dam. Dam completed Apr. 7, 1888, to elevation 223.82 ft (68.220 m), raised to elevation 228.82 ft (69.744 m) in 1895, and raised to elevation 243.82 ft (74.316 m) in 1911. In 1939 the spillway was completed at its present elevation. Capacity table dated December 1947. Capacity of reservoir at spillway level, 27,690 acre-ft (34.1 hm³), elevation, 238.82 ft (72.792 m). Dead storage below lowest outlet, 4.0 acre-ft (4,930 m³), elevation, 168.82 ft (51.456 m). Diversions for irrigation. Regulation at Loveland Reservoir. Water is released by California-American Water Co. as required for irrigation and domestic use in Chula Vista, National City, and contiguous areas.

COOPERATION.--Gage heights were furnished by Sweetwater Authority of South Bay Irrigation District.

EXTREMES FOR PERIOD OF RECORD (1943-66 AND SINCE 1972).--Maximum contents observed, 24,410 acre-ft (30.1 hm³) Apr. 20, 1978, elevation, 235.37 ft (71.741 m); minimum observed, 1,740 acre-ft (2.15 hm³) Nov. 1, 1949, elevation, 188.48 ft (57.449 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 24,410 acre-ft (30.1 hm³) Apr. 20, elevation, 235.37 ft (71.741 m); minimum observed, 4,840 acre-ft (5.97 hm³) Oct. 5, elevation, 200.66 ft (61.161 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	200.67	4850	--
Oct. 31.....	201.17	5010	+160
Nov. 30.....	201.34	5080	+70
Dec. 31.....	201.13	5000	-80
CAL YR 1977.....	--	--	-1590
Jan. 31.....	203.44	5780	+780
Feb. 28.....	206.31	6850	+1070
Mar. 31.....	230.69	20570	+13720
Apr. 30.....	235.01	24090	+3520
May 31.....	233.48	22800	-1290
June 30.....	231.90	21520	-1280
July 31.....	230.15	20160	-1360
Aug. 31.....	228.08	18610	-1550
Sept. 30.....	226.34	17390	-1220
WTR YR 1978.....	--	--	+12540

11020600 EL CAPITAN RESERVOIR NEAR LAKESIDE, CA

LOCATION.--Lat 32°53'00", long 116°48'25", in NE&SE&NE& sec.7, T.15 S., R.2 E., San Diego County, on outlet tower 100 ft (30 m) upstream of El Capitan Dam on San Diego River (revised), and 7 mi (11 km) east of Lakeside.

DRAINAGE AREA.--188 mi² (487 km²).

PERIOD OF RECORD.--October 1936 (corrected) to September 1966 (published with San Diego River at El Capitan Dam, station 11020500). October 1972 to current year. October 1936 to September 1945, published in WSP 1315-B, not equivalent owing to exclusion of greater part of flow released from Cuyamaca Reservoir.

GAGE (CORRECTED).--Nonrecording gage. Datum of gage is 553.0 ft (168.55 m) National Geodetic Vertical Datum of 1929 (levels by City of San Diego); gage readings have been reduced to NGVD. October 1972 to current year, supplementary water-stage recorder used for flood warning only on left side of outlet tower at datum 110.0 ft (33.53 m) higher.

REMARKS.--Reservoir is formed by hydraulic fill-rock embankment, completed in 1935. Capacity table dated Mar. 29, 1956. Capacity of reservoir at spillway level, 112,810 acre-ft (139 hm³), elevation, 750.00 ft (228.600 m). Dead storage below lowest outlet, 59.2 acre-ft (73,000 m³), elevation, 574.00 ft (174.955 m). Reservoir storage includes supplemental Colorado River water. No significant diversion above reservoir. Flow partly regulated by Cuyamaca Reservoir. Water is released as required for municipal use and irrigation.

COOPERATION.--Gage heights were furnished by City of San Diego, Utilities and Engineering Division.

EXTREMES FOR PERIOD OF RECORD (1945-66 AND SINCE 1972).--Maximum contents observed, 72,330 acre-ft (89.2 hm³) May 29, 1978, elevation, 720.46 ft (219.596 m); minimum observed, 2,252 acre-ft (2.78 hm³) May 1, 1957, elevation, 606.28 ft (184.794 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 72,330 acre-ft (89.2 hm³) May 29, elevation, 720.46 ft (219.596 m); minimum observed, 10,250 acre-ft (12.6 hm³) Jan. 8, elevation, 637.16 ft (194.206 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	649.48	15290	--
Oct. 31.....	649.22	15170	-120
Nov. 30.....	643.70	12770	-2400
Dec. 31.....	637.74	10460	-2310
CAL YR 1977.....	--	--	-430
Jan. 31.....	647.60	14430	+3970
Feb. 28.....	669.81	26570	+12140
Mar. 31.....	709.96	60630	+34060
Apr. 30.....	717.52	68920	+8290
May 31.....	720.40	72260	+3340
June 30.....	718.70	70270	-1990
July 31.....	715.76	66930	-3340
Aug. 31.....	712.20	63010	-3920
Sept. 30.....	707.84	58430	-4580
WTR YR 1978.....	--	--	+43140

SAN DIEGO RIVER BASIN

11022100 SAN VICENTE RESERVOIR NEAR LAKESIDE, CA

LOCATION.--Lat 32°54'45", long 116°55'25", in SE¼SW¼NW¼ sec.31, T.14 S., R.1 E., San Diego County, at outlet tower near center of upstream face of San Vicente Dam on San Vicente Creek, and 3.6 mi (5.8 km) north of Lakeside.

DRAINAGE AREA.--74.2 mi² (192.2 km²).

PERIOD OF RECORD.--October 1946 to September 1961 (published as San Vicente Creek at San Vicente Dam, at Foster, station 11022000), October 1972 to current year.

GAGE (CORRECTED).--Nonrecording gage. Datum of gage is 460.0 ft (140.208 m) National Geodetic Vertical Datum of 1929 (levels by County of San Diego); gage readings have been reduced to elevations NGVD. October 1972 to current year, supplementary water-stage recorder used for flood warning only, at same site at datum 100 ft (30.5 m) higher.

REMARKS.--Reservoir is formed by concrete-gravity dam, constructed in 1941-43 by city of San Diego; storage began during construction period. Capacity table is dated Feb. 18, 1944. Capacity of reservoir at spillway level, 90,230 acre-ft (111 hm³), elevation, 650 ft (198.1 m). Dead storage below lowest outlet, 350 acre-ft (432,000 m³), elevation, 493.0 ft (150.27 m). Reservoir storage includes supplemental water from the San Diego River, Santa Ysabel Creek, and Colorado River basins. No diversion above reservoir. Water is released as required for municipal use.

COOPERATION.--Gage heights were furnished by city of San Diego, Utility and Engineering Division.

EXTREMES FOR PERIOD OF RECORD (1946-61 AND SINCE 1972).--Maximum contents observed, 90,230 acre-ft (111 hm³), spilling, Apr. 6, 1978, elevation, 650.00 ft (198.120 m); minimum observed, 12,390 acre-ft (15.3 hm³) Nov. 1, 1947, elevation, 549.22 ft (167.402 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 90,230 acre-ft (111 hm³), spilling, Apr. 6, elevation, 650.00 ft (198.120 m); minimum observed, 62,220 acre-ft (76.7 hm³) Oct. 18, elevation, 621.77 ft (189.515 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	622.44	62830	--
Oct. 31.....	622.44	62830	0
Nov. 30.....	625.61	65760	+2930
Dec. 31.....	629.49	69430	+3670
CAL YR 1977.....	--	--	+10150
Jan. 31.....	638.28	78050	+8620
Feb. 28.....	644.02	83930	+5880
Mar. 31.....	648.66	88800	+4870
Apr. 30.....	647.44	87510	-1290
May 31.....	644.88	84820	-2690
June 30.....	640.36	80160	-4660
July 31.....	635.16	74940	-5220
Aug. 31.....	632.50	72330	-2610
Sept. 30.....	628.80	68770	-3560
WTR YR 1978.....	--	--	+5940

11022500 SAN DIEGO RIVER NEAR SANTEE, CA

LOCATION.--Lat 32°49'29", long 117°03'17", in Ex Mission San Diego Grant, San Diego County, on right bank in Mission Gorge, 0.2 mi (0.3 km) upstream from left tributary, 6 mi (10 km) west of Santee, and 18 mi (29 km) downstream from El Capitan Reservoir.

DRAINAGE AREA.--377 mi² (976 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1912 to December 1915, March 1916 to current year. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (54.9 m), from topographic map. Prior to Nov. 10, 1920, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum. Nov. 10, 1920, to Dec. 1, 1954, water-stage recorder at present site at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records fair. Flow regulated by Cuyamaca Reservoir, capacity, 11,540 acre-ft (46.7 hm³), El Capitan Reservoir (station 11020500), and San Vicente Reservoir (station 11022000). Diversions by city of San Diego for municipal supply and by Helix Irrigation District. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development.

AVERAGE DISCHARGE.--65 years (water years 1913-15, 1917-78), 22.3 ft³/s (0.632 m³/s), 16,160 acre-ft/yr (19.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,200 ft³/s (1,990 m³/s) Jan. 27, 1916, based on slope-conveyance computation of peak flow, gage height, 25.1 ft (7.651 m), from floodmarks, site and datum then in use; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,010 ft³/s (85.2 m³/s) Jan. 15, gage height, 10.95 ft (3.338 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s); minimum daily, 0.31 ft³/s (0.009 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.82	1.3	13	37	959	87	24	7.6	6.2	4.5	3.7
2	.31	.82	1.3	9.6	31	888	60	24	7.3	6.1	4.8	3.4
3	.32	.84	1.3	8.1	28	504	49	21	7.5	5.8	4.9	2.9
4	.32	.84	1.5	10	24	630	44	19	7.9	6.0	4.9	2.6
5	.32	.84	1.6	24	77	1580	42	18	8.0	6.7	4.6	2.5
6	12	1.1	1.8	44	81	1270	37	18	7.6	6.9	3.9	3.8
7	24	1.9	1.8	26	64	711	65	17	7.5	6.9	3.3	4.0
8	9.0	1.8	1.8	16	114	482	54	16	7.3	7.0	3.8	3.9
9	4.7	1.6	1.9	26	97	403	43	14	7.2	6.9	4.4	3.6
10	3.0	1.4	2.0	197	403	361	35	12	6.8	6.7	3.9	3.2
11	2.2	1.2	1.8	114	367	276	31	11	6.7	6.8	3.5	3.0
12	1.6	1.1	1.7	50	198	952	31	12	7.2	7.0	4.4	2.9
13	1.1	1.0	1.8	34	690	574	30	11	6.8	6.8	6.4	3.6
14	.97	1.1	1.6	214	554	377	29	11	6.2	6.7	10	4.8
15	.87	1.1	1.7	1200	188	294	28	11	5.7	7.1	13	5.2
16	.83	1.2	2.0	225	124	217	40	9.9	5.6	7.0	13	21
17	.77	1.1	2.1	814	83	148	32	9.3	5.3	6.5	13	28
18	.76	1.1	31	203	65	116	26	8.3	5.3	5.9	12	20
19	.76	1.1	32	141	55	104	25	9.1	5.6	5.6	10	15
20	1.2	1.1	14	112	47	99	24	9.1	5.6	5.1	8.8	10
21	1.9	1.2	8.1	85	41	98	23	9.3	6.1	5.0	7.7	6.7
22	1.6	1.3	5.5	64	37	98	22	9.4	6.1	4.7	6.5	4.4
23	1.3	1.3	6.4	51	32	93	22	9.5	5.9	4.7	6.2	3.1
24	1.1	1.3	8.4	44	29	78	23	9.9	5.8	4.7	5.8	2.2
25	.95	1.3	11	37	27	63	23	9.7	6.1	4.6	5.1	2.0
26	.88	1.4	73	33	26	48	24	9.9	6.6	4.5	4.7	2.0
27	.85	1.5	49	29	60	57	23	9.4	6.5	4.1	4.4	2.0
28	.88	1.6	34	27	307	59	22	9.3	6.4	4.2	4.0	2.0
29	.86	1.6	67	25	---	54	22	9.3	6.2	4.0	4.0	2.0
30	.86	1.4	31	48	---	53	22	8.9	6.3	4.0	4.0	2.0
31	.83	---	20	81	---	141	---	8.4	---	4.1	3.9	---
TOTAL	77.36	36.96	419.4	4004.7	3886	11787	1038	387.7	196.7	178.3	193.4	175.5
MEAN	2.50	1.23	13.5	129	139	380	34.6	12.5	6.56	5.75	6.24	5.85
MAX	24	1.9	73	1200	690	1580	87	24	8.0	7.1	13	28
MIN	.31	.82	1.3	8.1	24	48	22	8.3	5.3	4.0	3.3	2.0
AC-FT	153	73	832	7940	7710	23380	2060	769	390	354	384	348
CAL YR 1977 TOTAL	2343.37			MEAN 6.42	MAX 232	MIN 0	AC-FT 4650					
WTR YR 1978 TOTAL	22381.02			MEAN 61.3	MAX 1580	MIN .31	AC-FT 44390					

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1970 to September 1978 (discontinued).

SEDIMENT RECORDS: October 1969 to September 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 830 mg/L Jan. 15, 1978; minimum daily mean, 0 mg/L on many days in July and August, 1976 and August, 1977.

SEDIMENT DISCHARGE: Maximum daily, 3,230 tons (2,930 metric tons) Jan. 15, 1978; minimum daily, 0 tons on many days in 1969, 1970, 1976 and 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 830 mg/L Jan. 15; minimum daily mean, 2 mg/L on several days during December.

SEDIMENT DISCHARGE: Maximum daily, 3,230 tons (2,930 metric tons) Jan. 15; minimum daily, 0.01 tons (0.01 metric tons) many days during October, November, and December.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		17.0	---	---	---	16.0		---	24.0	27.0	22.0	---
2		---	13.5	---	15.5	---		---	---	---	---	26.5
3		---	---	---	---	---		---	25.5	---	27.5	---
4		---	---	---	---	---		---	---	26.5	---	---
5		---	---	15.5	---	---		19.5	24.0	26.0	28.5	25.0
6		---	---	16.5	---	---		---	---	---	---	23.5
7		---	12.5	---	---	---		---	---	26.5	---	---
8		---	14.0	---	---	---		---	25.5	---	---	---
9		---	26.0	14.5	---	---		---	---	24.5	---	24.0
10		---	---	---	---	---		22.5	27.5	---	28.5	---
11		---	15.0	---	---	---		---	---	---	---	---
12		---	---	15.5	---	---		---	27.5	---	28.5	22.5
13		---	---	---	---	---		22.0	---	27.5	---	---
14		---	---	---	---	---		---	---	---	---	22.0
15		---	14.0	---	---	---		26.0	26.5	29.0	---	21.0
16		13.5	---	---	---	---		---	---	---	---	---
17		---	---	---	---	18.0		---	27.0	---	26.0	---
18		14.5	14.5	---	---	---		25.0	---	28.0	---	---
19		---	13.5	---	---	---		---	---	---	---	19.5
20		---	---	16.5	---	---		25.5	26.5	28.0	26.5	---
21		---	---	---	15.5	---		---	---	---	---	18.0
22		11.5	13.5	---	---	---		---	26.5	---	---	---
23		---	---	---	---	---		24.0	---	28.0	25.0	---
24		---	---	---	---	---		---	28.0	---	---	---
25		---	---	11.0	---	---		23.0	---	28.5	28.0	---
26		---	16.0	14.5	---	---		---	---	---	25.0	---
27		14.5	17.5	---	---	---		---	26.0	28.5	---	---
28		---	15.0	---	---	---		---	---	---	---	---
29		13.5	17.5	---	---	---		23.5	26.0	28.0	---	---
30		---	---	---	---	---		---	---	---	---	---
31		---	---	15.5	---	---		26.0	---	---	---	---
MONTH		---	---	---	---	---		---	---	---	---	---

11022500 SAN DIEGO RIVER NEAR SANTEE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.32	6	.01	.82	4	.01	1.3	3	.01
2	.31	6	.01	.82	4	.01	1.3	3	.01
3	.32	6	.01	.84	4	.01	1.3	2	.01
4	.32	6	.01	.84	4	.01	1.5	2	.01
5	.32	6	.01	.84	4	.01	1.6	2	.01
6	12	49	3.5	1.1	10	.03	1.8	2	.01
7	24	46	3.0	1.9	14	.07	1.8	2	.01
8	9.0	32	.78	1.8	9	.04	1.8	2	.01
9	4.7	24	.30	1.6	7	.03	1.9	2	.01
10	3.0	19	.15	1.4	6	.02	2.0	2	.01
11	2.2	16	.10	1.2	6	.02	1.8	2	.01
12	1.6	13	.06	1.1	5	.01	1.7	2	.01
13	1.1	12	.04	1.0	4	.01	1.8	2	.01
14	.97	10	.03	1.1	3	.01	1.6	2	.01
15	.87	9	.02	1.1	3	.01	1.7	3	.01
16	.83	8	.02	1.2	3	.01	2.0	3	.02
17	.77	8	.02	1.1	3	.01	2.1	3	.02
18	.76	7	.01	1.1	3	.01	31	87	14
19	.76	7	.01	1.1	3	.01	32	62	6.2
20	1.2	12	.04	1.1	3	.01	14	35	1.3
21	1.9	14	.07	1.2	3	.01	8.1	22	.48
22	1.6	11	.05	1.3	3	.01	5.5	3	.04
23	1.3	9	.03	1.3	3	.01	6.4	3	.05
24	1.1	8	.02	1.3	3	.01	8.4	3	.07
25	.95	7	.02	1.3	3	.01	11	35	1.6
26	.88	7	.02	1.4	3	.01	73	130	38
27	.85	6	.01	1.5	3	.01	49	77	13
28	.88	5	.01	1.6	3	.01	34	51	6.8
29	.86	5	.01	1.6	3	.01	67	105	21
30	.86	5	.01	1.4	3	.01	31	70	5.9
31	.83	4	.01	---	---	---	20	55	3.0
TOTAL	77.36	---	8.39	36.96	---	.45	419.4	---	111.63

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	13	45	1.6	37	75	7.5	959	388	1170
2	9.6	35	.91	31	122	10	888	277	684
3	8.1	25	.55	28	80	6.0	504	110	150
4	10	20	.54	24	75	4.9	630	318	986
5	24	76	5.2	77	74	38	1580	598	2680
6	44	148	19	81	75	16	1270	497	1790
7	26	76	5.3	64	36	9.2	711	310	595
8	16	45	1.9	114	124	43	482	260	338
9	26	78	16	97	73	20	403	271	299
10	197	329	191	403	337	428	361	279	284
11	114	184	66	367	332	338	276	237	183
12	50	95	13	198	233	125	952	516	1380
13	34	74	6.8	690	567	1110	574	318	493
14	214	250	497	554	518	880	377	230	234
15	1200	830	3230	188	184	93	294	160	127
16	225	236	181	124	90	30	217	110	64
17	814	690	1810	83	65	15	148	73	29
18	203	160	88	65	70	12	116	67	21
19	141	133	54	55	75	11	104	64	18
20	112	50	15	47	75	9.5	99	62	17
21	85	35	8.0	41	103	11	98	61	16
22	64	25	4.3	37	75	7.5	98	60	16
23	51	26	3.6	32	60	5.2	93	60	15
24	44	27	3.2	29	55	4.3	78	50	11
25	37	28	2.8	27	50	3.6	63	45	7.7
26	33	25	2.2	26	55	3.9	48	41	5.3
27	29	22	1.7	60	79	22	57	38	5.8
28	27	20	1.5	307	232	226	59	36	5.7
29	25	20	1.4	---	---	---	54	35	5.1
30	48	55	16	---	---	---	53	35	5.0
31	81	79	23	---	---	---	141	141	76
TOTAL	4004.7	---	6270.50	3886	---	3489.6	11787	---	11716.6

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	87	98	23	24	7	.45	7.6	15	.31
2	60	62	10	24	8	.52	7.3	14	.28
3	49	47	6.2	21	7	.40	7.5	12	.24
4	44	39	4.6	19	7	.36	7.9	20	.43
5	42	31	3.5	18	6	.29	8.0	26	.56
6	37	28	2.8	18	6	.29	7.6	22	.45
7	65	70	16	17	6	.28	7.5	18	.36
8	54	49	7.1	16	5	.22	7.3	13	.26
9	43	39	4.5	14	5	.19	7.2	13	.25
10	35	32	3.0	12	5	.16	6.8	14	.26
11	31	27	2.3	11	6	.18	6.7	15	.27
12	31	24	2.0	12	7	.23	7.2	16	.31
13	30	21	1.7	11	8	.24	6.8	18	.33
14	29	19	1.5	11	12	.36	6.2	19	.32
15	28	17	1.3	11	18	.53	5.7	20	.31
16	40	30	3.2	9.9	15	.40	5.6	25	.38
17	32	23	2.0	9.3	13	.33	5.3	48	.69
18	26	20	1.4	8.3	12	.27	5.3	36	.52
19	25	17	1.1	9.1	15	.37	5.6	30	.45
20	24	16	1.0	9.1	24	.59	5.6	29	.44
21	23	14	.87	9.3	25	.63	6.1	29	.48
22	22	13	.77	9.4	26	.66	6.1	30	.49
23	22	12	.71	9.5	27	.69	5.9	20	.32
24	23	11	.68	9.9	34	.91	5.8	15	.23
25	23	10	.62	9.7	44	1.2	6.1	18	.30
26	24	10	.65	9.9	42	1.1	6.6	24	.43
27	23	10	.62	9.4	40	1.0	6.5	29	.51
28	22	9	.53	9.3	39	.98	6.4	31	.54
29	22	8	.48	9.3	37	.93	6.2	38	.64
30	22	8	.48	8.9	45	1.1	6.3	30	.51
31	---	---	---	8.4	53	1.2	---	---	---
TOTAL	1038	---	104.61	387.7	---	17.06	196.7	---	11.87
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.2	23	.39	4.5	22	.27	3.7	5	.05
2	6.1	25	.41	4.8	21	.27	3.4	5	.05
3	5.8	30	.47	4.9	20	.26	2.9	6	.05
4	6.0	39	.63	4.9	15	.20	2.6	9	.06
5	6.7	18	.33	4.6	12	.15	2.5	12	.08
6	6.9	20	.37	3.9	10	.11	3.8	7	.07
7	6.9	22	.41	3.3	8	.07	4.0	7	.08
8	7.0	24	.45	3.8	7	.07	3.9	8	.08
9	6.9	26	.48	4.4	8	.10	3.6	9	.09
10	6.7	25	.45	3.9	7	.07	3.2	6	.05
11	6.8	24	.44	3.5	10	.09	3.0	5	.04
12	7.0	23	.43	4.4	13	.15	2.9	4	.03
13	6.8	22	.40	6.4	18	.31	3.6	4	.04
14	6.7	18	.33	10	27	.73	4.8	4	.05
15	7.1	15	.29	13	34	1.2	5.2	6	.08
16	7.0	17	.32	13	21	.74	21	55	4.5
17	6.5	21	.37	13	16	.56	28	40	3.0
18	5.9	24	.38	12	15	.49	20	17	.92
19	5.6	35	.53	10	16	.43	15	13	.53
20	5.1	47	.65	8.8	18	.43	10	11	.30
21	5.0	41	.55	7.7	17	.35	6.7	8	.14
22	4.7	35	.44	6.5	16	.28	4.4	8	.10
23	4.7	27	.34	6.2	12	.20	3.1	7	.06
24	4.7	40	.51	5.8	9	.14	2.2	6	.04
25	4.6	50	.62	5.1	8	.11	2.0	5	.03
26	4.5	51	.62	4.7	7	.09	2.0	5	.03
27	4.1	52	.58	4.4	7	.08	2.0	4	.02
28	4.2	51	.58	4.0	7	.08	2.0	4	.02
29	4.0	50	.54	4.0	6	.06	2.0	4	.02
30	4.0	40	.43	4.0	6	.06	2.0	4	.02
31	4.1	30	.33	3.9	6	.06	---	---	---
TOTAL	178.3	---	14.07	193.4	---	8.21	175.5	---	10.63
YEAR 22381.02			21757.62						

11022500 SAN DIEGO RIVER NEAR SANTEE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC											
18...	1430	14.5	52	133	19	97	97	99	100	--	--
29...	1235	17.5	117	121	38	88	91	94	95	98	100
29...	1405	17.5	98	119	31	93	94	97	99	100	--
JAN											
05...	1400	16.0	22	89	5.3	98	99	100	--	--	--

LOS PENASQUITOS CREEK BASIN

11023250 POWAY CREEK NEAR POWAY, CA

LOCATION.--Lat 32°57'13", long 117°00'50", in SE¼NE¼SE¼ sec.18, T.14 S., R.1 W., San Diego County, on right bank 100 ft (30 m) downstream from unnamed tributary, 1,000 ft (300 m) upstream from bridge on Standish Drive, and 1.4 mi (2.3 km) southeast of Poway Post Office.

DRAINAGE AREA.--7.92 mi² (20.51 km²).

PERIOD OF RECORD.--October 1977 to current year. Records prior to October 1977 available in files of the Laguna Niguel Subdistrict office.

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

REMARKS.--Records poor. Flow partly regulated by small conservation reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 375 ft³/s (10.6 m³/s) Mar. 5, 1978, gage height 6.15 ft (1.875 m); no flow many months each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 375 ft³/s (10.6 m³/s) Mar. 5, gage height, 6.15 ft (1.875 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	1.0	70	4.2	1.0				
2			0	0	.80	66	4.2	.30				
3			0	0	1.5	47	4.2	.30				
4			0	0	3.5	56	4.2	.30				
5			0	1.0	4.0	119	3.7	.25				
6			0	.50	4.5	30	3.7	.25				
7			0	.10	5.0	22	5.4	.25				
8			0	0	6.3	18	4.2	.25				
9			0	0	6.1	22	3.0	.20				
10			0	3.0	15	17	2.5	.15				
11			0	.10	14	35	2.0	.12				
12			0	.01	10	25	2.0	.10				
13			0	0	41	16	2.0	.05				
14			0	3.7	28	11	2.0	.05				
15			0	16	17	9.0	2.0	.05				
16			0	11	10	8.0	2.0	.05				
17			0	24	7.2	7.0	1.5	.05				
18			0	5.4	6.0	6.5	1.2	.05				
19			0	5.4	5.2	5.7	.90	.05				
20			0	4.8	4.8	5.4	1.0	0				
21			0	3.7	4.5	5.2	1.0	0				
22			0	3.2	4.2	5.0	1.0	0				
23			0	2.5	4.2	4.8	.50	0				
24			0	1.2	4.2	4.8	.20	0				
25			0	1.0	4.2	4.8	.50	0				
26			0	.90	4.2	4.8	.30	0				
27			0	.90	5.4	4.8	.30	0				
28			.05	.90	10	4.8	.30	0				
29			1.0	.90	---	4.2	.50	0				
30			.10	.90	---	4.2	3.0	0				
31		---	0	2.2	---	6.0	---	0	---			---
TOTAL	0	0	1.15	93.31	231.80	649.0	63.50	3.82	0	0	0	0
MEAN	0	0	.037	3.01	8.28	20.9	2.12	.12	0	0	0	0
MAX	0	0	1.0	24	41	119	5.4	1.0	0	0	0	0
MIN	0	0	0	0	.80	4.2	.20	0	0	0	0	0
AC-FT	0	0	2.3	185	460	1290	126	7.6	0	0	0	0

WTR YR 1978 TOTAL 1042.58 MEAN 2.86 MAX 119 MIN 0 AC-FT 2070

11023310 RATTLESNAKE CREEK AT POWAY, CA

LOCATION.--Lat 32°57'07", long 117°02'56", in NE¼SE¼SE¼ sec.14, T.14 S., R.2 W., San Diego County, on right bank 400 ft (122 m) above mouth, and 1.0 mi (1.6 km) southwest of Poway Post Office.

DRAINAGE AREA.--8.13 mi² (21.1 km²).

PERIOD OF RECORD.--October 1977 to September 1978. Record prior to October 1977 is available in files of the subdistrict office.

GAGE.--Water-stage recorder. Altitude of gage is 457 ft (139 m), from topographic map.

REMARKS.--Records fair January to March and poor thereafter. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 285 ft³/s (8.07 m³/s) Jan. 10, 1978, gage height, 1.20 ft (0.366 m), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of step-backwater computations and slope conveyence at 1.20 ft (0.366 m); no flow for much of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) from rating curve extended as explained above, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	0800	*285 8.07	1.20 0.366	Mar. 1	1025	267 7.56	1.16 0.354
Jan. 15	0450	212 6.00	1.03 0.314	Mar. 4	1650	228 6.46	1.07 0.326
Feb. 10	0650	129 3.65	0.83 0.253	Mar. 11	1345	136 3.85	0.84 0.256
Feb. 13		Unknown					

Minimum daily discharge, no flow for many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.35	4.3	139	6.5	2.2	.05			
2			0	.35	2.2	82	6.0	.80	.05			
3			0	.16	3.1	37	5.5	1.4	.05			
4			0	3.1	10	69	5.0	1.4	.05			
5			0	8.6	10	62	5.5	.80	.05			
6			0	3.1	16	30	6.0	.80	.05			
7			0	.80	10	21	7.0	.80	.05			
8			0	.35	18	18	5.0	.80	.05			
9			0	16	21	24	4.5	.80	.05			
10			0	59	34	16	4.0	.35	.05			
11			0	10	60	50	4.0	.35	0			
12			0	2.2	35	30	4.0	.35	0			
13			0	.80	80	16	4.0	.16	0			
14			0	27	60	12	4.2	.16	0			
15			0	56	40	8.6	4.5	.16	0			
16			0	37	20	8.6	4.5	.16	0			
17			0	44	10	8.0	3.5	.16	0			
18			0	10	6.5	7.5	3.0	.16	0			
19			0	12	4.5	7.0	2.5	.16	0			
20			0	12	4.0	7.0	3.0	.16	0			
21			0	8.6	3.6	7.0	3.0	.16	0			
22			0	7.0	3.2	7.0	2.7	.16	0			
23			0	7.0	3.0	7.0	2.5	.16	0			
24			0	5.5	2.7	7.0	1.4	.16	0			
25			.62	4.3	2.4	7.0	2.2	.10	0			
26			2.2	4.3	2.2	7.0	2.2	.10	0			
27			0	4.3	2.0	6.4	1.4	.10	0			
28			1.4	4.3	15	6.0	1.4	.10	0			
29			3.1	4.3	---	6.0	1.4	.10	0			
30			.80	14	---	6.5	4.3	.10	0			
31		---	.35	7.0	---	8.0	---	.10	---			---
TOTAL	0	0	8.47	373.41	482.7	727.6	114.7	13.47	.50	0	0	0
MEAN	0	0	.27	12.0	17.2	23.5	3.82	.43	.017	0	0	0
MAX	0	0	3.1	59	80	139	7.0	2.2	.05	0	0	0
MIN	0	0	0	.16	2.0	6.0	1.4	.10	0	0	0	0
AC-FT	0	0	17	741	957	1440	228	27	1.0	0	0	0

CAL YR 1977 TOTAL 49.11 MEAN .13 MAX 13 MIN 0 AC-FT 97
WTR YR 1978 TOTAL 1720.85 MEAN 4.71 MAX 139 MIN 0 AC-FT 3410

LOS PENASQUITOS CREEK BASIN

11023325 BEELER CREEK AT POMERADO ROAD NEAR POWAY, CA

LOCATION.--Lat 32°56'23", long 117°03'57", in SW¼NW¼SW¼ sec.23, T.14 S., R.2 W., San Diego County, on right downstream wingwall of bridge on Pomerado Road, 0.8 mi (1.3 km) upstream from Poway Creek and 1.7 mi (2.7 km) southwest of Poway Post Office.

DRAINAGE AREA.--5.46 mi² (14.14 km²).

PERIOD OF RECORD.--October 1976 to current year. Record prior to October 1976 is available in files of subdistrict office.

GAGE.--Water-stage recorder. Altitude of gage is 465 ft (142 m), from topographic map.

REMARKS.--Records fair. Flow partially regulated by several conservation reservoirs above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) Mar. 4, 1978, gage height, 8.79 ft (2.679 m), on basis of slope-area measurement of peak flow; no flow for much of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 15	0515	390 11.0	8.51 2.594	Feb. 28	2035	236 6.68	7.93 2.417
Feb. 10	1240	134 3.79	7.40 2.256	Mar. 4	1820	*1080 30.6	8.79 2.679
Feb. 14	0045	201 5.69	7.77 2.368	Mar. 11	2300	111 3.14	6.38 1.945

Minimum daily discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	2.4	85	1.1	.10	.02			
2				0	1.9	56	1.1	.10	.03			
3				0	1.7	27	.88	.10	.03			
4				0	1.6	226	.79	.10	.03			
5				.06	3.6	113	.98	.10	.03			
6				.07	4.5	44	.98	.10	.03			
7				.03	12	22	2.0	.15	.03			
8				.02	36	11	1.3	.15	.03			
9				.47	29	13	.70	.15	.03			
10				9.5	68	7.3	.59	.26	.05			
11				16	96	55	.53	.26	.05			
12				4.5	64	63	.53	.26	.05			
13				2.0	134	28	.53	.26	.05			
14				15	88	17	.53	.20	.05			
15				175	44	8.1	.79	.15	.03			
16				80	20	6.1	.79	.15	.03			
17				114	12	2.8	.53	.10	.02			
18				50	6.7	2.4	.48	.07	0			
19				39	4.5	2.0	.34	.07	0			
20				25	4.0	1.9	.48	.07	0			
21				14	3.5	1.7	.48	.05	0			
22				8.3	2.9	1.9	.48	.05	0			
23				5.2	2.6	1.9	.34	.05	0			
24				4.4	2.2	1.5	.22	.05	0			
25				3.5	1.9	1.1	.20	.05	0			
26				2.8	1.8	.98	.20	.03	0			
27				2.4	1.7	.98	.15	.05	0			
28				2.3	40	1.1	.15	.05	0			
29				1.8	---	1.2	.10	.07	0			
30				3.0	---	.98	.10	.03	0			
31		---		3.3	---	2.6	---	.03	---			---
TOTAL	0	0	0	581.65	690.5	806.54	18.37	3.41	.59	0	0	0
MEAN	0	0	0	18.8	24.7	26.0	.61	.11	.020	0	0	0
MAX	0	0	0	175	134	226	2.0	.26	.05	0	0	0
MIN	0	0	0	0	1.6	.98	.10	.03	0	0	0	0
AC-FT	0	0	0	1150	1370	1600	36	6.8	1.2	0	0	0
CAL YR 1977 TOTAL	2.23		MEAN .006	MAX	.20	MIN 0	AC-FT	4				
WTR YR 1978 TOTAL	2101.06		MEAN 5.76	MAX	226	MIN 0	AC-FT	4170				

11023330 LOS PENASQUITOS CREEK BELOW POWAY CREEK, NEAR POWAY, CA

LOCATION.--Lat 32°56'58", long 117°04'08", in NW¼NE¼NE¼ sec.22, T.14 S., R.2 W., San Diego County, on right bank at Cobblestone Creek Road, 0.2 mi (0.3 km) downstream from confluence of Poway and Pomerado Creeks, and 2.0 mi (3.2 km) southwest of Poway.

DRAINAGE AREA.--31.2 mi² (80.8 km²).

PERIOD OF RECORD.--October 1970 to current year.

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

REMARKS.--Records good. Flow partly regulated by small conservation reservoirs.

AVERAGE DISCHARGE.--8 years, 3.93 ft³/s (0.111 m³/s), 2,850 acre-ft/yr (3.51 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,530 ft³/s (100 m³/s) Mar. 1, 1978, gage height, 9.85 ft (3.002 m), on basis of slope-area measurement of peak flow; no flow for parts of some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) revised, and maximum (*), from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 10	0710	1550	43.9	8.51	2.594	Feb. 13	2345	1110	31.4	8.04	2.451
Jan. 15	0530	1910	54.1	8.81	2.685	Mar. 1	1030	*3530	100	9.85	3.002
Feb. 6	1835	295	8.35	6.65	2.027	Mar. 4	†1700	†1300	36.8	Unknown	
Feb. 11	1145	278	7.87	6.60	2.012	Mar. 12	0115	520	14.7	7.18	2.188

† Estimated.

Minimum daily discharge, no flow many days during November and December.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	0	.20	5.0	926	13	14	.75	.15	.17	.06
2	.01	.01	0	.12	3.9	397	15	4.9	.66	.14	.16	.06
3	.02	.01	0	.37	3.5	149	9.1	4.1	.66	.12	.15	.05
4	.02	.01	0	8.3	3.3	361	9.1	4.4	.66	.10	.13	.05
5	.02	.14	0	26	36	442	8.3	4.5	.66	.13	.12	9.6
6	.10	.09	0	16	50	236	8.0	3.9	.66	.12	.13	18
7	.01	.02	0	1.9	55	229	34	3.4	.57	.14	.17	2.1
8	.01	.01	0	.47	48	157	11	3.0	.50	.09	.18	1.1
9	.01	.01	0	39	34	70	8.9	3.0	.36	.10	.15	.84
10	.01	0	0	234	121	53	7.9	2.6	.20	.13	.18	.52
11	.01	0	0	34	122	89	7.8	2.6	.20	.12	.20	.54
12	.01	0	.01	6.6	72	192	7.1	2.5	.31	.21	.12	.49
13	.01	0	.01	4.1	366	70	6.9	2.2	.09	.21	.10	.48
14	.01	0	0	113	195	50	6.7	2.1	.12	.21	.11	.33
15	.01	0	0	516	58	35	16	2.0	.31	.12	.06	.19
16	.01	0	0	179	39	25	14	2.1	.20	.10	.10	.84
17	.01	0	.01	314	28	20	6.2	1.7	.15	.20	.06	.29
18	.01	0	9.0	46	24	19	5.4	1.7	.15	.16	.06	.16
19	.01	0	.26	50	21	18	5.0	1.7	.20	.12	.06	.11
20	.01	0	0	38	19	18	4.4	1.7	.20	.09	.06	.09
21	.01	0	0	19	18	18	4.3	1.8	.20	.08	.07	.10
22	.01	0	.01	14	17	18	4.1	1.7	.20	.07	.08	.05
23	.01	0	1.9	11	16	17	3.9	1.5	.26	.09	.07	.05
24	.01	0	.18	7.6	15	17	3.9	1.4	.20	.11	.06	.04
25	.01	0	11	6.3	15	15	4.1	1.5	.20	.11	.07	.07
26	.01	0	17	5.5	14	13	3.8	1.4	.20	.08	.07	.04
27	.01	0	3.3	4.9	24	13	3.6	1.4	.20	.07	.06	.05
28	.01	0	7.6	4.6	77	12	3.5	1.3	.22	.07	.12	.08
29	.01	0	14	4.0	---	9.9	3.6	.96	.20	.09	.10	.10
30	.01	0	.91	29	---	15	3.8	.86	.12	.04	.10	.11
31	.01	---	.38	11	---	57	---	.75	---	.16	.08	---
TOTAL	.43	.31	65.57	1743.96	1499.7	3760.9	242.4	82.67	9.61	3.73	3.35	36.59
MEAN	.014	.010	2.12	56.3	53.6	121	8.08	2.67	.32	.12	.11	1.22
MAX	.10	.14	17	516	366	926	34	14	.75	.21	.20	.18
MIN	.01	0	0	.12	3.3	9.9	3.5	.75	.09	.04	.06	.04
AC-FT	.9	.6	130	3460	2970	7460	481	164	19	7.4	6.6	73
CAL YR 1977	TOTAL	353.93	MEAN	.97	MAX	59	MIN	0	AC-FT	702		
WTR YR 1978	TOTAL	7449.22	MEAN	20.4	MAX	926	MIN	0	AC-FT	14780		

LOS PENASQUITOS CREEK BASIN

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA

LOCATION.--Lat 32°56'35", long 117°07'15", in Los Penasquitos Grant, San Diego County, on left bank 1.0 mi (1.6 km) downstream from Cypress Creek, and 5.5 mi (8.8 km) southwest of Poway.

DRAINAGE AREA.--42.1 mi² (109 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 260 ft (79.2 m), from topographic map.

REMARKS.--Records poor. No gage-height record Jan. 12 to Mar. 17. Flow partly regulated by several conservation reservoirs above station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

AVERAGE DISCHARGE.--14 years, 5.63 ft³/s (0.159 m³/s), 4,080 acre-ft/yr (5.03 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Dec. 6, 1966, gage height, 6.90 ft (2.103 m) in gage well, 7.70 ft (2.35 m), from profile of floodmarks, from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurement at gage height 6.23 ft (1.90 m) in gage well, 7.40 ft (2.26 m), from outside gage; no flow at times in 1968, 1972 and 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) revised, and maximum (*), from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of slope-area measurement at gage height 7.40 ft (2.256 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	0900	1500 42.5	7.00 2.134	Mar. 1	Unknown	*4700† 133	Unknown
Jan. 15	Unknown	2340 66.3	8.10 2.469	Mar. 5	Unknown	2200† 62.3	Unknown
Feb. 11	Unknown	770† 21.8	Unknown	Mar. 12	Unknown	1200† 34.0	Unknown
Feb. 13	Unknown	2000† 56.6	Unknown				

† Estimated.

Minimum daily discharge, 0.05 ft³/s (0.001 m³/s) Oct. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.06	.08	.96	10	1400	13	22	1.0	.35	.17	.40
2	.07	.06	.08	.65	7.0	600	14	9.4	1.0	.35	.23	.46
3	.06	.06	.08	.59	6.0	250	8.1	6.6	1.0	.35	.31	.35
4	.06	.07	.10	6.2	6.0	500	7.5	6.6	.90	.35	.27	.23
5	.06	.08	.10	29	60	650	7.0	6.8	.90	.35	.23	3.8
6	.17	.17	.10	57	90	450	6.6	6.8	.90	.35	.27	17
7	.17	.24	.10	11	100	400	47	5.8	.90	.35	.20	2.5
8	.15	.17	.10	2.2	80	250	19	4.9	.84	.35	.17	.90
9	.08	.15	.13	40	65	150	12	4.5	.84	.35	.27	.50
10	.08	.10	.15	426	200	90	9.8	4.0	.78	.40	.27	.31
11	.06	.08	.15	85	230	150	9.0	4.0	.66	.40	.23	.27
12	.06	.08	.15	15	130	350	9.0	3.5	.55	.35	.30	.27
13	.06	.08	.15	7.0	600	150	8.4	3.5	.50	.35	.30	.10
14	.05	.08	.13	150	250	100	8.0	3.0	.46	.35	.23	.31
15	.05	.08	.15	900	100	60	16	3.0	.40	.35	.31	.35
16	.10	.08	.15	350	70	40	33	3.0	.35	.30	.31	.31
17	.08	.07	.15	550	50	35	9.8	3.0	.35	.30	.23	.30
18	.08	.08	9.6	80	45	35	8.0	2.5	.31	.30	.27	.30
19	.07	.08	1.4	90	40	32	6.8	2.5	.30	.30	.23	.30
20	.08	.10	.42	70	35	31	6.8	2.5	.30	.31	.27	.30
21	.07	.10	.33	30	30	31	6.8	2.0	.30	.31	.27	.30
22	.07	.10	.29	25	30	34	7.1	2.0	.30	.31	.35	.30
23	.08	.13	.57	20	30	30	7.4	2.0	.30	.31	.31	.30
24	.07	.13	.42	15	25	15	7.4	2.0	.30	.31	.23	.30
25	.06	.10	4.3	10	25	12	7.7	2.0	.30	.27	.23	.30
26	.06	.10	11	9.0	25	10	8.0	1.5	.30	.23	.23	.30
27	.06	.13	15	8.5	40	8.6	7.4	1.5	.30	.20	.40	.30
28	.06	.13	7.6	8.0	150	8.3	7.1	1.5	.30	.20	.31	.30
29	.06	.10	23	7.0	---	7.8	7.1	1.5	.30	.20	.31	.30
30	.06	.10	6.5	50	---	11	7.4	1.5	.30	.23	.50	.30
31	.06	---	1.5	20	---	54	---	1.0	---	.20	.45	---
TOTAL	2.37	3.09	83.98	3073.10	2529.0	5944.7	332.2	126.4	16.24	9.63	8.66	32.26
MEAN	.077	.10	2.71	99.1	90.3	192	11.1	4.08	.54	.31	.28	1.08
MAX	.17	.24	23	900	600	1400	47	22	1.0	.40	.50	.17
MIN	.05	.06	.08	.59	6.0	7.8	6.6	1.0	.30	.20	.17	.10
AC-FT	4.7	6.1	167	6100	5020	11790	659	251	32	19	17	64

CAL YR 1977	TOTAL	503.03	MEAN	1.38	MAX	80	MIN	0	AC-FT	998
WTR YR 1978	TOTAL	12161.63	MEAN	33.3	MAX	1400	MIN	.05	AC-FT	24120

11025500 SANTA YSABEL CREEK NEAR RAMONA, CA

LOCATION.--Lat 33°06'25", long 116°51'55", in SW¼NW¼NE¼ sec.27, T.12 S., R.1 E., San Diego County, on left bank 1.6 mi (2.6 km) downstream from Temescal Creek, and 4.5 mi (7.2 km) north of Ramona.

DRAINAGE AREA.--112 mi² (290 km²).

PERIOD OF RECORD.--February 1912 to February 1923, October 1943 to current year. Monthly discharge only for February 1912, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete cutoff wall, repaired at times. Datum of gage is 847.88 ft (258.434 m) National Geodetic Vertical Datum of 1929 (levels by city of San Diego Water Department). See WSP 1315-A for history of changes prior to Feb. 3, 1923.

REMARKS.--Records poor. Flow regulated by Sutherland Reservoir (station 11024000) since July 1954. Some small diversions above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,400 ft³/s (804 m³/s) Jan. 27, 1916, gage height, 14.0 ft (4.27 m) datum then in use, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-conveyance computation of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s (113 m³/s) Mar. 1, gage height, 9.28 ft (2.829 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement of maximum flow; no flow many days during the year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.01	0	0	8.7	900	51	36	10	2.1	.27	0
2	0	0	.01	0	5.8	1000	42	30	9.8	2.0	.23	0
3	0	0	.01	0	4.7	500	38	27	9.5	2.0	.20	0
4	0	0	.01	0	3.7	660	35	25	9.0	2.0	.17	0
5	0	0	0	.01	7.9	900	37	24	8.7	2.0	.15	0
6	0	0	.01	.02	89	400	35	23	8.4	1.9	.14	.02
7	0	0	.01	.03	61	240	120	22	8.0	1.9	.11	.02
8	0	0	.01	.01	91	156	130	21	7.8	1.9	.10	.03
9	0	0	.01	1.0	104	134	120	21	7.4	1.8	.09	.03
10	0	0	.02	23	226	121	105	20	7.0	1.8	.08	.04
11	0	0	.02	22	160	136	70	21	6.7	1.7	.07	.05
12	0	0	.02	7.4	211	211	28	20	6.3	1.6	.07	.08
13	0	0	.02	2.9	372	119	27	19	6.0	1.5	.06	.20
14	0	0	.03	3.9	182	97	26	18	5.6	1.3	.06	1.0
15	0	0	.03	335	115	80	25	18	5.2	1.1	.05	1.2
16	0	0	.02	45	90	67	51	19	4.7	1.0	.04	1.4
17	0	0	.02	449	73	61	23	18	4.3	.86	.04	1.8
18	0	0	.03	44	62	59	21	17	3.6	.78	.03	1.3
19	0	.01	.02	29	53	57	19	16	3.3	.72	.03	.90
20	.01	0	.02	34	47	55	21	16	3.0	.66	.02	.50
21	.01	.01	.02	17	40	54	22	15	2.7	.60	.02	.30
22	.01	.01	.02	13	34	63	22	14	2.4	.56	.01	.10
23	.01	.01	.01	12	26	60	21	14	2.3	.52	.01	.07
24	.01	.01	.02	9.0	22	49	23	13	2.2	.47	0	.04
25	.01	.01	.02	7.6	20	42	24	13	2.2	.44	0	.03
26	.01	0	.02	7.5	19	39	25	13	2.2	.42	0	.02
27	.01	.01	.02	5.7	24	37	23	12	2.2	.39	0	.01
28	.01	.01	.02	5.1	100	36	22	12	2.1	.36	0	.01
29	.01	.01	.01	4.6	---	35	21	11	2.1	.34	0	.01
30	.01	0	0	6.6	---	40	25	11	2.1	.32	0	.01
31	.01	---	0	15	---	76	---	11	---	.30	0	---
TOTAL	.12	.10	.48	1099.37	2251.8	6484	1252	570	156.8	35.34	2.05	9.17
MEAN	.004	.003	.016	35.5	80.4	209	41.7	18.4	5.23	1.14	.066	.31
MAX	.01	.01	.03	449	372	1000	130	36	10	2.1	.27	1.8
MIN	0	0	0	0	3.7	35	19	11	2.1	.30	0	0
AC-FT	.2	.2	1.0	2180	4470	12860	2480	1130	311	70	4.1	18
CAL YR 1977 TOTAL	41.81	MEAN	.11	MAX	9.2	MIN	0	AC-FT	83			
WTR YR 1978 TOTAL	11861.23	MEAN	32.5	MAX	1000	MIN	0	AC-FT	23530			

SAN DIEGUITO RIVER BASIN

11026000 SANTA YSABEL CREEK NEAR SAN PASQUAL, CA

LOCATION.--Lat 33°05'10", long 116°54'56", in NE¼NW¼SE¼ sec.31, T.12 S., R.1 E., San Diego County, on left bank 1.1 mi (1.8 km) downstream from Clevenger Canyon, and 2 mi (3 km) east of San Pasqual.

DRAINAGE AREA.--128 mi² (332 km²).

PERIOD OF RECORD.--December 1905 to September 1910 and May 1911 to September 1912 (published as "near Escondido"), April 1947 to November 1955 (irrigation seasons only), April 1956 to current year. Records for October to December 1910, published in WSP 447, have been found to be in error and should not be used.

GAGE.--Water-stage recorder. Concrete control since April 1947. Altitude of gage is 510 ft (155 m), from topographic map. Dec. 17, 1905, to Sept. 30, 1912, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records fair. Flow regulated by Sutherland Reservoir, capacity, 29,680 acre-ft (36.6 hm³) since July 1954. Small diversion above station.

EXTREMES FOR PERIOD OF RECORD (1905-12 AND SINCE 1947).--Maximum discharge observed, 8,000 ft³/s (227 m³/s) Mar. 24, 1906, gage height, 6.3 ft (1.92 m), site and datum then in use; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,310 ft³/s (122 m³/s) Mar. 1, gage height, 10.27 ft (3.130 m); no flow much of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	9.1	1430	43	43	12	2.2	.20	0
2				0	6.3	1540	29	36	11	2.1	.18	0
3				0	5.4	517	24	30	10	1.9	.16	0
4				0	4.8	675	21	28	9.0	1.8	.14	0
5				0	10	1310	25	28	8.6	2.1	.12	.01
6				0	97	391	20	26	8.2	2.5	.10	.03
7				0	72	252	128	24	8.0	2.4	.09	.08
8				0	100	187	154	23	7.6	2.1	.07	.07
9				0	142	153	141	23	7.3	1.8	.06	.07
10				0	327	136	122	24	7.2	1.7	.04	.09
11				5.5	228	138	84	24	6.7	1.9	.03	.10
12				5.5	136	231	31	25	6.2	1.8	.03	.15
13				2.6	507	134	21	24	5.3	1.3	.02	.31
14				6.4	218	108	20	23	5.1	.88	.02	1.0
15				518	111	92	21	21	4.8	.95	.02	1.3
16				83	97	80	60	20	4.5	1.0	.01	1.6
17				638	82	77	26	19	4.1	.80	.01	1.9
18				89	68	75	23	18	3.7	.70	.01	1.5
19				51	57	74	22	18	3.4	.60	.01	.99
20				80	47	72	22	17	3.1	.54	.01	.56
21				54	38	69	25	17	2.7	.47	.01	.37
22				25	30	78	25	17	2.4	.42	.01	.23
23				13	25	78	24	17	2.3	.39	.01	.18
24				9.1	23	63	24	17	2.1	.36	.01	.12
25				7.4	21	56	25	16	1.8	.32	.01	.08
26				7.3	20	53	29	16	1.9	.30	.01	.06
27				6.3	27	51	25	16	2.3	.28	0	.05
28				5.7	155	50	24	16	2.3	.27	0	.04
29				5.3	---	48	24	13	2.5	.25	0	.03
30				9.0	---	54	25	12	2.5	.22	0	.04
31		---		14	---	82	---	11	---	.21	0	---
TOTAL	0	0	0	1635.1	2663.6	8354	1287	662	158.6	34.56	1.39	10.96
MEAN	0	0	0	52.7	95.1	269	42.9	21.4	5.29	1.11	.045	.37
MAX	0	0	0	638	507	1540	154	43	12	2.5	.20	1.9
MIN	0	0	0	0	4.8	48	20	11	1.8	.21	0	0
AC-FT	0	0	0	3240	5280	16570	2550	1310	315	69	2.8	22
CAL YR 1977 TOTAL	36.36			MEAN .10	MAX 5.3	MIN 0	AC-FT 72					
WTR YR 1978 TOTAL	14807.21			MEAN 40.6	MAX 1540	MIN 0	AC-FT 29370					

11027000 GUEJITO CREEK NEAR SAN PASQUAL, CA

LOCATION.--Lat 33°06'57", long 116°57'08", in NW¼NW¼SE¼ sec.23, T.12 S., R.1 W., San Diego County, on left bank 0.3 mi (0.5 km) upstream from Rockwood Canyon Creek, and 1.8 mi (2.9 km) north of San Pasqual.

DRAINAGE AREA.--22.5 mi² (58.3 km²).

PERIOD OF RECORD.--December 1946 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Records fair. No regulation above station. Diversion for irrigation 0.2 mi (0.3 km) upstream.

AVERAGE DISCHARGE.--31 years (water years 1948-78), 1.72 ft³/s (0.049 m³/s), 1,250 acre-ft/yr (1.54 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,920 ft³/s (82.7 m³/s) Dec. 6, 1966, gage height, 6.78 ft (2.067 m) from rating curve extended above 440 ft³/s (12.5 m³/s) on basis of slope-area measurements at gage heights 5.83 ft (1.777 m) and 6.30 ft (1.920 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) revised, and maximum (*), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurements at 7.45 ft (2.271 m) and 5.83 ft (1.777 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 9	2345	111	3.14	3.07	0.936	Feb. 13	0100	402	11.4	4.12	1.256
Jan. 16	2330	1820	51.5	6.32	1.926	Mar. 1	1045	*1950	55.2	6.46	1.969
Feb. 10	1345	229	6.49	3.55	1.082	Mar. 4	1815	1880	53.2	6.38	1.945

Minimum daily discharge, 0.01 ft³/s (<0.001 m³/s) Oct. 1, 6, 14-16, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.03	.04	.02	3.0	620	10	10	3.9	1.3	.79	.63
2	.02	.02	.04	.02	2.5	465	9.4	13	3.8	1.3	.76	.58
3	.02	.02	.04	.03	2.1	105	9.0	8.0	3.8	1.3	.84	.54
4	.02	.03	.04	.03	1.8	462	9.0	6.6	3.7	1.3	.81	.48
5	.02	.03	.03	.05	1.7	451	9.0	6.2	3.7	1.3	.68	.76
6	.01	.02	.02	.16	4.0	138	8.9	5.8	3.6	1.2	.63	2.1
7	.02	.02	.02	.19	7.2	87	19	5.6	3.4	1.2	.67	1.3
8	.02	.03	.02	.06	9.0	60	10	5.3	3.2	1.2	.70	1.0
9	.02	.03	.02	4.4	11	45	9.5	5.1	3.1	1.2	.72	.94
10	.02	.03	.03	24	58	41	9.1	4.8	3.1	1.1	.70	1.1
11	.02	.03	.04	6.7	28	38	9.0	4.7	3.1	1.1	.77	1.1
12	.03	.02	.06	1.7	15	66	8.7	4.7	2.9	1.1	.90	1.3
13	.03	.03	.09	.99	195	46	8.6	4.6	2.8	1.1	.73	1.5
14	.01	.03	.02	4.8	42	32	8.5	4.6	2.7	1.0	.77	1.6
15	.01	.03	.02	305	14	27	8.6	4.5	2.6	1.0	.72	1.5
16	.01	.03	.02	139	11	22	13	4.4	2.5	1.0	.67	1.5
17	.02	.03	.02	225	9.4	21	8.6	4.4	2.4	.97	.67	1.5
18	.02	.03	.02	14	8.4	20	8.4	4.4	2.3	.93	.66	1.4
19	.02	.02	.02	9.7	7.7	18	8.2	4.4	2.1	.82	.71	1.1
20	.03	.02	.02	9.1	7.2	17	8.1	4.4	1.9	.85	.70	.86
21	.03	.03	.02	5.7	6.6	16	8.6	4.3	1.8	.79	.66	.69
22	.04	.05	.02	4.2	5.9	15	9.3	4.3	1.7	.79	.67	.70
23	.02	.05	.02	3.6	5.4	20	7.7	4.2	1.6	.74	.69	.69
24	.03	.03	.02	3.1	5.2	34	7.6	4.2	1.5	.72	.65	.61
25	.02	.03	.02	2.8	5.0	23	7.8	4.2	1.4	.70	.68	.58
26	.01	.03	.04	2.6	4.8	17	9.0	4.2	1.4	.73	.80	.56
27	.02	.02	.02	2.4	6.7	15	7.1	4.1	1.4	.69	.77	.54
28	.02	.02	.03	2.2	25	13	6.9	4.1	1.4	.71	.77	.54
29	.02	.02	.03	2.0	---	11	6.8	4.0	1.4	.73	.78	.49
30	.02	.03	.02	1.9	---	9.4	6.9	4.0	1.4	.72	.76	.69
31	.02	---	.02	3.0	---	22	---	4.0	---	.73	.69	---
TOTAL	.63	.84	.89	778.45	502.6	2976.4	270.3	161.1	75.6	30.32	22.52	28.88
MEAN	.020	.028	.029	25.1	18.0	96.0	9.01	5.20	2.52	.98	.73	.96
MAX	.04	.05	.09	305	195	620	19	13	3.9	1.3	.90	2.1
MIN	.01	.02	.02	.02	1.7	9.4	6.8	4.0	1.4	.69	.63	.48
AC-FT	1.2	1.7	1.8	1540	997	5900	536	320	150	60	45	57
CAL YR 1977 TOTAL	54.76											
WTR YR 1978 TOTAL	4848.53											
MEAN				.15								
MAX				13.3								
MIN					5.6		.01					
AC-FT					620		.01					
WTR YR 1978 TOTAL								109				
AC-FT								9620				

SAN DIEGUITO RIVER BASIN

11028500 SANTA MARIA CREEK NEAR RAMONA, CA

LOCATION.--Lat 33°03'08", long 116°56'41", in SE¼SE¼SE¼ sec.11, T.13 S., R.1 W., San Diego County, on left bank 3.8 mi (6.1 km) northwest of Ramona, and 4.6 mi (7.4 km) upstream from mouth.

DRAINAGE AREA.--57.6 mi² (149.2 km²).

PERIOD OF RECORD.--November 1912 to September 1920, October 1946 to current year.

GAGE.--Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft (394.545 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, at datum 1.78 ft (0.543 m) lower.

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

AVERAGE DISCHARGE.--39 years (water years 1914-20, 1947-78) 3.85 ft³/s (0.109 m³/s), 2,790 acre-ft/yr (3.44 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft³/s (202 m³/s) Jan. 27, 1916, gage height, 14.1 ft (4.298 m); from floodmarks, present datum, from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurement of maximum flow; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) revised, and maximum (*), from rating curve extended above 100 ft³/s (2.83 m³/s) based on slope-area measurement made at 4.5 ft (1.37 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	1045	500 14.2	3.48 1.061	Mar. 1	1030	1650 46.7	5.04 1.536
Jan. 15	0600	1350 38.2	4.75 1.448	Mar. 5	0815	*2850 80.7	5.97 1.820
Jan. 17	0045	1030 29.2	4.40 1.341	Mar. 12	0315	637 18.0	3.77 1.149
Feb. 10	0815	250 7.08	2.80 0.853	Mar. 31	0700	207 5.86	2.69 0.820
Feb. 13	0500	787 22.3	4.03 1.228				

Minimum daily discharge, no flow in several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	10	930	53	20	1.6	.15	.02	.01
2				0	5.9	746	37	17	1.0	.18	.02	.01
3				0	4.0	209	31	14	.99	.14	.05	.01
4				0	3.5	482	28	13	1.0	.22	.04	0
5				0	21	1330	28	12	1.0	.12	.05	.02
6				0	41	278	26	11	.91	.06	.04	.04
7				0	34	222	65	8.8	.62	.07	.02	.03
8				0	41	200	53	7.2	.52	.08	.01	.01
9				2.3	33	180	40	7.6	.44	.05	.02	.02
10			168	150	160	29	6.3	6.3	.40	.05	.02	.02
11				61	94	150	25	5.8	.31	.04	.02	.02
12				6.2	53	357	23	5.5	.35	.03	.01	.03
13				2.2	420	255	21	5.3	.30	.03	.01	.02
14				28	132	170	21	4.3	.19	.01	.01	.02
15				429	55	110	23	4.2	.15	0	.01	.20
16				99	40	92	74	3.9	.13	0	.01	.30
17				373	32	84	29	3.2	.09	.03	.01	.02
18				45	27	76	22	2.5	.09	.04	0	.02
19				46	22	70	18	2.0	.34	.02	.01	.02
20				35	19	64	18	1.9	.14	.04	.01	.01
21				17	17	60	17	2.2	.15	.03	.01	.02
22				13	15	60	16	2.4	.16	.03	.01	0
23				11	14	80	15	2.5	.15	.03	.01	.01
24				7.9	12	114	13	2.4	.13	.07	.01	.01
25				6.5	11	64	13	2.4	.27	.05	.01	.01
26				5.9	10	47	14	2.2	.15	.06	.01	.01
27				4.8	26	35	13	2.0	.18	.09	.01	0
28				4.1	143	30	12	1.9	.12	.07	.01	.01
29				3.7	---	29	12	1.7	.25	.05	.01	.01
30				12	---	38	12	1.5	.15	.05	.01	.01
31		---		27	---	100	---	1.7	---	.03	0	---
TOTAL	0	0	0	1407.6	1485.4	6822	801	178.4	12.28	1.92	.49	.92
MEAN	0	0	0	45.4	53.1	220	26.7	5.75	.41	.062	.016	.031
MAX	0	0	0	429	420	1330	74	20	1.6	.22	.05	.30
MIN	0	0	0	0	3.5	29	12	1.5	.09	0	0	0
AC-FT	0	0	0	2790	2950	13530	1590	354	24	3.8	1.0	1.8

CAL YR 1977 TOTAL 3.07 MEAN .008 MAX .24 MIN 0 AC-FT 6
WTR YR 1978 TOTAL 10710.01 MEAN 29.3 MAX 1330 MIN 0 AC-FT 21240

11030020 LAKE HODGES NEAR ESCONDIDO, CA

LOCATION (REVISED).--Lat 33°02'41", long 117°07'39", in SE¼SE¼NW¼ sec.18, T.13 S., R.2 W., San Diego County, 20 ft (6 m) upstream from right upstream end of Hodges Dam on San Dieguito River, 6.4 mi (10.3 km) southwest of Escondido, and 20 mi (32 km) southwest of Sutherland Reservoir.

DRAINAGE AREA.--303 mi² (785 km²).

PERIOD OF RECORD.--October 1945 to September 1968 (published with San Dieguito River at Lake Hodges, station 11030000). October 1972 to current year. Records of monthend gage heights February 1919 to September 1945, in files of San Diego County Department of Sanitation and Flood Control.

GAGE (CORRECTED).--Nonrecording gage. Datum of gage is 200.0 ft (60.96 m) National Geodetic Vertical Datum of 1929 (levels by County of San Diego); gage readings have been reduced to elevations NGVD. Prior to Oct. 1, 1972, nonrecording gage at site 800 ft (244 m) upstream on right bank at same datum. October 1972 to current year, supplementary water-stage recorder used for flood warning only on left upstream face of dam at same datum.

REMARKS.--Reservoir is formed by multiple-arch reinforced concrete dam, constructed in 1917-19. Storage began in February 1919. Capacity table based on a 1948 survey; table dated Sept. 18, 1951. Capacity of reservoir at spillway level, 33,550 acre-ft (41.4 hm³), elevation, 315.0 ft (96.01 m). Dead storage below lowest outlet, 1,160 acre-ft (1.43 hm³), elevation, 254.0 ft (77.42 m) included in these records. Reservoir can be drawn down to 207 acre-ft (255,000 m³), elevation, 240.0 ft (73.15 m) by pumping. Water drawn from Lake Hodges passes through a conduit to San Dieguito re-regulating reservoir, from which it is released as required for municipal use. Flow regulated since July 1954 by Sutherland Reservoir (station 11024000). Diversions for irrigation above Lake Hodges.

COOPERATION.--Gage heights were furnished by City of San Diego, Utilities and Engineering Division.

EXTREMES FOR PERIOD OF RECORD (1945-68 AND SINCE 1972).--Maximum contents, 37,930 acre-ft (46.8 hm³) Apr. 1, 1946, elevation, 315.30 ft (96.103 m); minimum, 114 acre-ft (141,000 m³) Oct. 31, 1965, elevation, 235.80 ft (71.872 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 36,450 acre-ft (44.9 hm³), spilling, Mar. 5, elevation, 317.50 ft (96.774 m); minimum observed, 4,820 acre-ft (5.94 hm³) Dec. 4, elevation, 272.40 ft (83.028 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	273.00	4990	--
Oct. 31.....	272.45	4840	-150
Nov. 30.....	272.45	4840	0
Dec. 31.....	273.55	5150	+310
CAL YR 1977.....	--	--	+1190
Jan. 31.....	292.60	13450	+8300
Feb. 28.....	303.25	21210	+7760
Mar. 31.....	315.60	34300	+13090
Apr. 30.....	315.10	33680	-620
May 31.....	315.01	33560	-120
June 30.....	314.48	32920	-640
July 31.....	313.64	31900	-1020
Aug. 31.....	312.68	30770	-1130
Sept. 30.....	312.28	30310	-460
WTR YR 1978.....	--	--	+25320

ESCONDIDO CREEK BASIN

11030700 LAKE WOHLFORD NEAR ESCONDIDO, CA

LOCATION.--Lat 33°10'00", long 117°00'14", in NW¼NE¼ sec.5, T.12 S., R.1 W., San Diego County, on face of Lake Wohlford Dam, 330 ft (100 m) left of spillway, 3.9 mi (6.3 km) southeast of Valley Center Post Office, and 5.7 mi (9.2 km) northeast of Escondido.

DRAINAGE AREA.--7.96 mi² (20.62 km²).

PERIOD OF RECORD.--October 1972 to current year. October 1933 to September 1972 in files of San Diego County Department of Sanitation and Flood Control.

GAGE (CORRECTED).--Nonrecording gage. Datum of gage is 1,385.0 ft (422.15 m) National Geodetic Vertical Datum of 1929 (levels by city of Escondido Engineering Department); gage readings have been reduced to NGVD. Since October 1972, supplementary water-stage recorder for flood warning only, at same site at datum 15.0 ft (4.57 m) higher.

REMARKS.--Reservoir is formed by earthfill dam riprapped upstream and downstream, with concrete spillway anchored to natural rock. Dam was completed in 1932. Capacity table dated March 1955. Capacity at spillway level, 6,940 acre-ft (8.56 hm³), elevation, 1,480.0 ft (451.10 m). Dead storage below lowest outlet, 131 acre-ft (162,000 m³), elevation, 1,420.0 ft (432.82 m). Reservoir storage includes supplemental water diverted from the San Luis Rey River via Escondido Mutual Water Co.'s canal to Lake Wohlford Reservoir. Stored water is released for municipal use by Vista Irrigation District and city of Escondido.

COOPERATION.--Gage heights were furnished by Escondido Mutual Water Company.

EXTREMES FOR PERIOD OF RECORD (CORRECTED).--Maximum contents, 6,940 acre-ft (8.56 hm³) May 1-9, 1952, elevation, 1,480.0 ft (451.10 m); minimum, 809 acre-ft (997,000 m³) Dec. 1, 1953, elevation, 1,437.0 ft (438.00 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 6,900 acre-ft (8.51 hm³) April 6-11, elevation, 1,479.8 ft (451.04 m); minimum observed, 1,050 acre-ft (1.29 hm³) Dec. 23-25, elevation, 1,440.6 ft (439.09 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0700, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1443.0	1240	--
Oct. 31.....	1442.9	1230	-10
Nov. 30.....	1441.5	1120	-110
Dec. 31.....	1441.6	1130	+10
CAL YR 1977.....	--	--	-1740
Jan. 31.....	1456.0	2640	+1510
Feb. 28.....	1463.7	3800	+1160
Mar. 31.....	1479.6	6860	+3060
Apr. 30.....	1474.2	5720	-1140
May 31.....	1475.0	5880	+160
June 30.....	1475.2	5920	+40
July 31.....	1473.5	5580	-340
Aug. 31.....	1472.6	5400	-180
Sept. 30.....	1465.4	4090	-1310
WTR YR 1978.....	--	--	+2850

11031500 AGUA CALIENTE CREEK NEAR WARNER SPRINGS, CA

LOCATION.--Lat 33°17'19", long 116°39'11", in San Jose del Valle Grant, San Diego County, on downstream end of right pier of bridge on State Highway 79, 1.2 mi (1.9 km) upstream from Canada Verde Creek, and 1.2 mi (1.9 km) northwest of Warner Springs.

DRAINAGE AREA.--19.0 mi² (49.2 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,950 ft (899 m), from topographic map. Prior to Jan. 29, 1966, at site 120 ft (37 m) upstream at same datum, used as supplementary gage since Dec. 12, 1968.

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

AVERAGE DISCHARGE.--17 years, 1.41 ft³/s (0.040 m³/s), 1,020 acre-ft/yr (1.26 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Dec. 6, 1966, gage height, 5.18 ft (1.579 m), from rating curve extended above 240 ft³/s (6.80 m³/s); no flow for much of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	1030	88 2.49	2.47 0.753	Feb. 13	0700	130 3.68	2.62 0.799
Jan. 15	0600	323 9.15	3.56 1.085	Mar. 1	1400	*583 16.5	4.06 1.237
Feb. 10	1200	135 3.82	2.65 0.808	Mar. 5	0900	381 10.8	3.25 0.991

Minimum daily discharge, no flow Oct. 1 to Jan. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	3.5	287	13	10	.30	.09	.09	.03
2				0	2.5	355	10	6.0	.25	.05	.09	.03
3				0	2.0	142	8.5	4.5	.25	.05	.09	.03
4				0	2.0	173	7.5	3.5	.25	.03	.09	.03
5				11	4.5	220	6.5	3.0	.25	.03	.09	.03
6				4.5	10	92	6.5	2.5	.20	.04	.05	.05
7				2.5	8.0	54	22	2.5	.20	.05	.05	.03
8				1.5	6.0	38	15	2.0	.17	.05	.05	.03
9				1.0	35	35	11	1.5	.17	.03	.03	.03
10				40	87	35	9.0	1.5	.17	.03	.03	.03
11				21	43	38	7.5	1.5	.15	.03	.03	.05
12				5.0	27	42	6.5	1.5	.15	.03	.05	.05
13				2.0	100	26	5.5	1.0	.15	.03	.05	.05
14				4.0	65	21	5.1	1.0	.15	.03	.05	.01
15				136	45	17	5.1	.95	.15	.01	.05	.01
16				39	30	15	23	.85	.10	.03	.05	.01
17				92	22	14	12	.80	.10	.05	.05	.01
18				19	17	12	11	.75	.10	.03	.05	.03
19				25	13	11	9.0	.70	.10	.03	.03	.01
20				15	11	11	8.5	.65	.10	.03	.03	.03
21				10	8.5	10	7.5	.60	.10	.05	.03	.03
22				8.0	7.0	15	6.5	.55	.09	.03	.03	.01
23				6.0	5.5	12	6.0	.50	.17	.03	.03	.01
24				5.0	4.5	10	6.0	.50	.17	.03	.01	.03
25				4.0	4.0	9.0	6.5	.45	.09	.05	.01	.03
26				3.0	3.5	8.5	8.0	.40	.05	.05	.03	.03
27				2.5	3.0	8.0	6.5	.40	.09	.05	.05	.01
28				2.0	48	7.5	5.0	.35	.09	.09	.05	.03
29				2.0	---	7.0	4.5	.35	.09	.09	.05	.05
30				3.0	---	12	4.0	.30	.09	.17	.05	.05
31		---		4.0	---	19	---	.30	---	.09	.03	---
TOTAL	0	0	0	468.0	617.5	1756.0	262.7	51.40	4.49	1.48	1.47	.86
MEAN	0	0	0	15.1	22.1	56.6	8.76	1.66	.15	.048	.047	.029
MAX	0	0	0	136	100	355	23	10	.30	.17	.09	.05
MIN	0	0	0	0	2.0	7.0	4.0	.30	.05	.01	.01	.01
AC-FT	0	0	0	928	1220	3480	521	102	8.9	2.9	2.9	1.7
CAL YR 1977	TOTAL	12.40	MEAN .034	MAX	4.8	MIN 0	AC-FT	25				
WTR YR 1978	TOTAL	3163.90	MEAN 8.67	MAX	355	MIN 0	AC-FT	6280				

11033000 WEST FORK SAN LUIS REY RIVER NEAR WARNER SPRINGS, CA

LOCATION.--Lat 33°17'48", long 116°45'32", in San Jose del Valle Grant, San Diego County, on left bank 0.2 mi (0.3 km) upstream from Fink Road, 2.6 mi (4.2 km) upstream from mouth, and 7.5 mi (12.1 km) west of Warner Springs.

DRAINAGE AREA.--25.5 mi² (66.0 km²).

PERIOD OF RECORD.--January 1913 to November 1915, October 1956 to current year. Low-flow records not equivalent prior to Nov. 5, 1971, due to undetermined amount of underflow between sites.

REVISED RECORDS.--WDR CA-74: 1973(P).

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (853 m), from topographic map. Prior to Oct. 1, 1956, at different datum. Prior to Nov. 5, 1971, at site 500 ft (150 m) downstream at same datum.

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

AVERAGE DISCHARGE.--23 years (water years 1914-15, 1957-78), 7.75 ft³/s (0.219 m³/s), 5,610 acre-ft/yr (6.92 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,200 ft³/s (119 m³/s) Dec. 6, 1966, gage height, 11.87 ft (3.618 m), from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurement of maximum flow, maximum gage height, 14.35 ft (4.374 m) Mar. 4, 1978; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) revised, and maximum(*), from rating curve extended above 130 ft³/s (3.68 m³/s):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 15	0400	1650 46.7	13.64 4.157	Mar. 2	1045	1750 49.6	13.72 4.182
Feb. 6	1515	353 10.0	11.94 3.639	Mar. 4	1730	*2590 73.3	14.35 4.374
Feb. 10	1145	829 23.5	12.76 3.889	Apr. 16	0100	303 8.58	11.82 3.603
Feb. 13	0015	559 15.8	12.35 3.764				

Minimum daily discharge, no flow for part of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.11	42	745	60	45	7.0	1.5	.21	.45
2			0	.03	40	888	52	32	6.5	1.5	.21	.45
3			0	.03	37	245	45	27	6.0	1.5	.17	.48
4			0	27	36	680	48	25	5.5	1.5	.33	.45
5			0	77	62	663	51	25	5.0	1.5	.53	.62
6			0	46	129	200	42	25	5.0	1.4	.44	.73
7			0	33	109	170	97	23	4.5	1.1	.39	.47
8			0	27	108	150	60	22	4.5	.72	.49	.31
9			0	36	275	125	54	21	4.0	.52	.45	.29
10			0	142	554	115	47	20	4.0	.38	.48	.36
11			0	86	189	100	42	19	3.5	.29	.46	.40
12			0	44	167	95	39	17	3.5	.20	.45	.32
13			0	36	341	85	37	16	3.0	.06	.56	.23
14			0	57	151	80	37	15	3.0	.04	.49	.31
15			0	517	117	75	50	15	3.0	.03	.46	.39
16			0	184	98	70	112	14	2.5	.03	.40	.49
17			0	309	81	65	50	14	2.5	.02	.34	.39
18			0	85	67	61	43	13	2.5	.02	.32	.38
19			0	107	56	59	39	12	2.5	.02	.28	.35
20			0	76	49	56	37	12	2.0	.03	.33	.30
21			0	59	43	56	35	12	2.0	.03	.35	.25
22			0	53	38	73	34	12	2.0	.03	.45	.23
23			0	49	35	62	32	12	2.0	.03	.61	.34
24			0	45	32	53	30	10	2.0	.03	.63	.24
25			0	43	34	47	33	10	2.0	.05	.63	.32
26			.39	41	30	44	37	9.5	2.0	.07	.61	.36
27			2.8	39	51	42	31	9.0	2.0	.06	.62	.36
28			4.2	38	240	40	28	8.5	2.0	.07	.63	.36
29			3.5	37	---	38	27	8.0	1.5	.13	.57	.19
30			1.4	44	---	43	27	7.5	1.5	.09	.54	.13
31		---	.60	55	---	81	---	7.5	---	.19	.51	---
TOTAL	0	0	12.89	2392.17	3211	5306	1356	518.0	99.0	13.14	13.94	10.95
MEAN	0	0	.42	77.2	115	171	45.2	16.7	3.30	.42	.45	.37
MAX	0	0	4.2	517	554	888	112	45	7.0	1.5	.63	.73
MIN	0	0	0	.03	30	38	27	7.5	1.5	.02	.17	.13
AC-FT	0	0	26	4740	6370	10520	2690	1030	196	26	28	22
CAL YR 1977	TOTAL	346.41	MEAN	.95	MAX	29	MIN	0	AC-FT	687		
WTR YR 1978	TOTAL	12933.09	MEAN	35.4	MAX	888	MIN	0	AC-FT	25650		

11037700 PAUMA CREEK NEAR PAUMA VALLEY, CA

LOCATION.--Lat 33°20'10", long 116°58'25", in Pauma Grant, San Diego County, on right bank 0.3 mi (0.5 km) downstream from unnamed tributary, and 2.2 mi (3.5 km) north of Pauma Valley.

DRAINAGE AREA.--11.0 mi² (28.5 km²).

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

GAGE.--Water-stage recorder on creek; water-stage recorder and Parshall flume on diversion. Altitude of creek gage is 1,240 ft (378 m), from topographic map. Diversion gage is at different datum.

REMARKS.--Records fair. No regulation above station. Pauma Valley Water Co. diverts from a site 0.2 mi (0.3 km) upstream. For records of combined discharge of Pauma Creek and Pauma Valley Water Co.'s diversion, see following page.

AVERAGE DISCHARGE.--Creek only: 14 years, 3.76 ft³/s (0.106 m³/s), 2,720 acre-ft/yr (3.35 hm³/yr).
Combined creek and diversion: 14 years, 4.42 ft³/s (0.125 m³/s), 3,200 acre-ft/yr (3.95 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 2,100 ft³/s (59.5 m³/s) Dec. 6, 1966, gage height, 8.60 ft (2.621 m), from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of slope-area measurement at gage height 6.12 ft (1.865 m); no flow much of each year.
Combined creek and diversion: Maximum discharge, 2,100 ft³/s (59.5 m³/s) Dec. 6, 1966; minimum daily, 0.04 ft³/s (0.001 m³/s) July 29 to Aug. 2, 1972.

EXTREMES FOR CURRENT YEAR.--Creek only: Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*), from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of slope-area measurement at gage height 7.26 ft (2.213 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0100	61 1.73	3.25 0.991	Feb. 13	0600	90 2.55	3.80 1.158
Jan. 10	0830	83 2.35	3.68 1.122	Mar. 2	0930	*625 17.7	6.08 1.853
Jan. 15	0600	258 7.31	4.98 1.518	Mar. 5	0800	595 16.9	6.01 1.832
Jan. 16	2300	312 8.84	5.20 1.585	Mar. 11	2200	90 2.55	3.80 1.158
Jan. 19	1400	69 1.95	3.42 1.042	Apr. 7	0400	68 1.93	3.40 1.036
Feb. 6	1600	80 2.27	3.62 1.103	Apr. 16	0100	82 2.32	3.66 1.116
Feb. 10	1200	162 4.59	4.48 1.366				

No flow Oct. 1-27 and Nov. 4.

Combined creek and diversion: Maximum discharge, 625 ft³/s (17.7 m³/s) Mar. 2; minimum daily, 0.16 ft³/s (0.005 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.01	.02	.74	8.6	191	32	27	4.4	1.2	.74	.18
2	0	.01	.02	.61	7.3	299	28	19	4.4	1.1	.86	.18
3	0	.01	.02	.50	5.8	97	25	16	4.0	.98	1.1	.18
4	0	0	.02	14	4.7	192	26	15	3.9	.98	1.1	.14
5	0	.01	.02	28	14	258	27	15	3.7	1.1	.98	.96
6	0	.01	.02	10	43	101	23	15	3.3	1.1	.98	4.2
7	0	.01	.02	4.5	37	80	48	13	3.0	.86	.86	2.1
8	0	.01	.02	1.7	42	70	35	13	2.7	.74	.80	1.5
9	0	.01	.02	5.2	95	65	33	12	2.4	.60	.75	1.3
10	0	.01	.02	59	110	62	29	12	2.1	.55	.16	1.2
11	0	.01	.02	44	65	72	26	11	2.2	.47	.11	1.1
12	0	.01	.02	20	55	74	25	10	2.0	.37	.10	.98
13	0	.01	.03	14	77	64	23	9.7	1.9	.26	.08	1.1
14	0	.01	.03	14	56	58	23	9.1	1.7	.22	.08	1.1
15	0	.01	.03	117	47	54	28	8.8	1.7	.18	.08	1.2
16	0	.01	.03	69	43	51	49	8.6	1.6	.14	.08	1.2
17	0	.01	.03	90	39	48	31	8.0	1.4	.12	.08	1.2
18	0	.01	1.6	37	35	47	27	7.3	1.4	.11	.10	1.2
19	0	.01	.61	44	32	46	25	7.1	1.2	.11	.22	.92
20	0	.01	.22	31	29	44	24	7.1	1.2	.10	.24	.86
21	0	.01	.17	19	26	45	23	6.8	1.2	.11	.24	.80
22	0	.02	.13	16	22	47	22	6.6	1.1	.12	.26	.74
23	0	.05	.13	14	19	37	20	6.6	1.1	.18	.26	.69
24	0	.05	.13	12	17	31	19	6.8	.98	.29	.26	.60
25	0	.02	.13	9.9	16	28	21	6.8	1.1	.47	.31	.55
26	0	.02	5.5	8.8	15	26	23	6.6	1.1	.60	.31	.44
27	0	.02	26	8.0	26	25	20	6.4	1.2	.64	.34	.34
28	.01	.02	6.4	7.3	88	23	19	5.8	1.2	.69	.34	.29
29	.01	.02	6.1	6.8	---	22	18	4.9	1.2	.74	.31	.26
30	.01	.02	1.8	8.8	---	24	19	4.5	1.2	.74	.22	.20
31	.01	---	1.2	15	---	41	---	4.5	---	.74	.20	---
TOTAL	.04	.44	50.51	729.85	1074.4	2322	791	310.0	61.58	16.61	12.55	27.71
MEAN	.001	.015	1.63	23.5	38.4	74.9	26.4	10.0	2.05	.54	.40	.92
MAX	.01	.05	26	117	110	299	49	27	4.4	1.2	1.1	4.2
MIN	0	0	.02	.50	4.7	22	18	4.5	.98	.10	.08	.14
AC-FT	.08	.9	100	1450	2130	4610	1570	615	122	33	25	55
CAL YR 1977	TOTAL	245.89	MEAN	.67	MAX	26	MIN	0	AC-FT	488		
WTR YR 1978	TOTAL	5396.69	MEAN	14.8	MAX	299	MIN	0	AC-FT	10700		

11037700 PAUMA CREEK NEAR PAUMA VALLEY, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF PAUMA CREEK AND PAUMA VALLEY
WATER CO.'S DIVERSION NEAR PAUMA VALLEY, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.28	.26	1.2	8.9	191	33	27	5.4	2.2	1.1	.63
2	.25	.24	.27	1.0	7.6	299	29	20	5.4	2.1	1.2	.63
3	.24	.24	.26	.86	6.3	97	26	17	5.0	2.0	1.4	.63
4	.22	.23	.27	14	5.6	192	27	16	4.9	2.0	1.4	.58
5	.23	.26	.28	28	15	258	28	16	4.7	2.1	1.3	1.4
6	.27	.35	.28	10	43	101	24	16	4.3	2.1	1.4	4.6
7	.29	.36	.28	4.7	37	80	49	14	4.0	1.8	1.3	2.4
8	.29	.35	.30	1.9	42	70	36	14	3.7	1.7	1.2	1.9
9	.30	.31	.32	5.4	95	65	34	13	3.4	1.6	1.2	1.7
10	.30	.29	.31	59	110	62	30	13	3.1	1.5	.74	1.6
11	.29	.27	.32	44	65	72	27	12	3.2	1.4	.70	1.5
12	.26	.27	.32	20	55	74	26	11	3.0	1.3	.67	1.4
13	.24	.27	.33	14	77	64	24	11	2.9	1.2	.63	1.6
14	.18	.27	.33	15	56	58	24	10	2.7	1.2	.62	1.6
15	.18	.26	.33	117	47	54	29	9.8	2.7	1.1	.61	1.7
16	.17	.25	.33	69	43	51	50	9.6	2.6	1.0	.60	1.7
17	.16	.25	.33	90	39	49	32	9.0	2.4	1.0	.59	1.7
18	.19	.26	2.0	37	35	48	28	8.3	2.4	.96	.61	1.7
19	.22	.26	1.1	44	32	47	25	8.1	2.2	.94	.71	1.4
20	.28	.26	.65	31	29	45	24	8.1	2.2	.89	.72	1.3
21	.30	.26	.60	19	26	46	23	7.8	2.2	.87	.71	1.2
22	.30	.26	.56	17	22	48	22	7.6	2.1	.83	.73	1.2
23	.26	.30	.57	15	19	38	20	7.6	2.1	.79	.73	1.1
24	.23	.29	.58	13	17	32	19	7.8	2.0	.83	.73	1.1
25	.22	.25	.57	10	16	29	21	7.8	2.1	.97	.78	1.0
26	.21	.25	6.0	9.3	16	27	23	7.6	2.1	1.1	.78	.90
27	.23	.25	26	8.5	26	26	20	7.4	2.2	1.1	.81	.81
28	.27	.25	6.9	7.8	88	24	19	6.8	2.2	1.1	.81	.76
29	.27	.26	6.6	7.3	---	23	18	5.9	2.2	1.2	.77	.74
30	.28	.26	2.2	9.3	---	25	19	5.5	2.2	1.1	.68	.69
31	.29	---	1.6	15	---	42	---	5.5	---	1.1	.65	---
TOTAL	7.70	8.16	61.05	738.26	1078.4	2337	809	340.2	91.6	41.08	26.88	41.17
MEAN	.25	.27	1.97	23.8	38.5	75.4	27.0	11.0	3.05	1.33	.87	1.37
MAX	.30	.36	26	117	110	299	50	27	5.4	2.2	1.4	4.6
MIN	.16	.23	.26	.86	5.6	23	18	5.5	2.0	.79	.59	.58
AC-FT	15	16	121	1460	2140	4640	1600	675	182	81	53	82
CAL YR 1977 TOTAL	450.60			MEAN 1.23	MAX 26	MIN .09	AC-FT 894					
WTR YR 1978 TOTAL	5580.50			MEAN 15.3	MAX 299	MIN .16	AC-FT 11070					

11040000 SAN LUIS REY RIVER AT MONSERATE NARROWS, NEAR PALA, CA

LOCATION.--Lat 33°20'14", long 117°08'07", in SW¼SE¼NW¼ sec.6, T.10 S., R.2 W., San Diego County, on left bank 4 mi (6 km) southwest of Pala, 6 mi (10 km) northeast of Bonsall, and 27 mi (43 km) downstream from Lake Henshaw.

DRAINAGE AREA.--373 mi² (966 km²).

PERIOD OF RECORD.--December 1935 to March 1938 (fragmentary), April 1938 to November 1941, October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.82 ft (82.546 m) National Geodetic Vertical Datum of 1929 (levels by State of California). Prior to October 1946, at same site at different datum. Oct. 22, 1946, to Nov. 30, 1954, at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records poor. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft (240 hm³). Several diversions above station.

AVERAGE DISCHARGE.--35 years (water years 1939-41, 1947-78), 8.35 ft³/s (0.236 m³/s), 6,050 acre-ft/yr (7.46 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge since 1946, 7,000 ft³/s (198 m³/s) Dec. 6, 1966, gage height, 6.70 ft (2.042 m); maximum gage height, 8.7 ft (2.65 m) Feb. 7, 1937, datum then in use, discharge not determined; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,340 ft³/s (123 m³/s) Jan. 17, gage height, 8.01 ft (2.441 m); minimum daily, 0.01 ft³/s (<0.001 m³/s) many days in October and November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.03	.51	25	1390	88	31	190	202	1.5	1.7
2	.01	.01	.03	.45	20	986	73	26	190	205	1.7	1.7
3	.01	.01	.03	.55	16	633	67	23	187	205	1.7	1.3
4	.01	.01	.03	6.7	14	862	88	25	187	215	1.3	1.5
5	.01	.01	.03	6.1	13	1000	116	25	187	197	1.0	1.7
6	.02	.02	.03	1.8	12	500	116	25	187	212	1.3	2.2
7	.02	.02	.03	1.3	11	250	185	20	184	197	1.2	1.9
8	.01	.02	.04	1.1	26	200	142	22	182	192	1.2	1.9
9	.01	.02	.04	3.0	170	150	139	20	182	212	1.3	1.7
10	.01	.03	.04	24	1220	220	144	20	190	218	1.0	1.9
11	.01	.04	.04	25	642	350	126	92	190	212	1.2	1.5
12	.01	.04	.04	3.6	430	420	121	150	187	193	1.2	1.7
13	.01	.04	.04	2.8	978	250	116	53	184	38	.88	1.5
14	.02	.03	.04	6.4	367	180	119	79	190	6.1	.77	1.5
15	.01	.03	.04	321	250	130	124	106	199	3.1	.77	2.2
16	.01	.03	.04	205	150	125	185	182	184	2.5	1.0	1.7
17	.01	.03	.03	1330	90	125	132	212	184	2.2	1.0	2.5
18	.01	.03	.05	120	50	120	119	205	187	2.2	.77	2.2
19	.01	.03	.05	160	30	120	109	215	187	1.9	.66	2.2
20	.01	.03	.05	70	22	120	104	215	184	1.9	.88	1.9
21	.02	.03	.05	45	20	90	116	215	182	1.7	1.7	1.7
22	.02	.04	.05	35	19	70	119	218	184	1.5	1.7	1.7
23	.01	.03	.05	30	19	50	109	212	182	1.5	1.7	1.7
24	.01	.03	.05	26	19	40	109	205	182	1.7	1.7	1.5
25	.01	.03	.43	24	18	35	90	196	184	1.3	1.5	1.5
26	.01	.03	3.6	22	22	30	114	199	187	1.3	1.5	1.5
27	.01	.03	1.0	20	35	29	90	202	187	1.5	1.5	1.5
28	.01	.03	.83	19	208	34	84	205	190	1.3	1.5	1.7
29	.02	.03	.77	18	---	28	51	196	193	1.5	1.3	1.5
30	.02	.03	.63	17	---	34	20	199	199	1.7	1.7	1.1
31	.02	---	.51	30	---	146	---	212	---	1.5	1.9	---
TOTAL	.39	.80	8.72	2575.31	4896	8717	3315	4005	5612	2534.4	40.03	51.8
MEAN	.013	.027	.28	83.1	175	281	111	129	187	81.8	1.29	1.73
MAX	.02	.04	3.6	1330	1220	1390	185	218	199	218	1.9	2.5
MIN	.01	.01	.03	.45	11	28	20	20	182	1.3	.66	1.1
AC-FT	.8	1.6	17	5110	9710	17290	6580	7940	11130	5030	79	103

CAL YR 1977 TOTAL 339.94 MEAN .93 MAX 15 MIN .01 AC-FT 674

WTR YR 1978 TOTAL 31756.45 MEAN 87.0 MAX 1390 MIN .01 AC-FT 62990

SAN LUIS REY RIVER BASIN

11040200 KEYS CREEK TRIBUTARY AT VALLEY CENTER, CA

LOCATION.--Lat 33°13'45", long 117°02'09", in NW¼SE¼SE¼ sec.12, T.11 S., R.2 W., San Diego County, on left bank 140 ft (43 m) upstream from bridge on Valley Center Road, 0.3 mi (0.48 km) downstream from unnamed tributary, and 0.8 mi (1.3 km) north of Valley Center.

DRAINAGE AREA.--7.65 mi² (19.81 km²).

PERIOD OF RECORD.--April 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,279.99 ft (390.141 m) San Diego County Special District Services datum.

REMARKS.--Records poor. No regulation above station. Some pumping for irrigation above station.

AVERAGE DISCHARGE.--8 years, 1.17 ft³/s (0.033 m³/s), 848 acre-ft/yr (1.05 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Mar. 4, 1978, gage height, 7.44 ft (2.268 m); no flow for part of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, 990 ft³/s (28 m³/s), by San Diego County Special District Services.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	0745	114 3.23	4.29 1.308	Mar. 4	1730	*1050 29.7	7.44 2.268
Jan. 16	2315	1040 29.5	7.38 2.249	Mar. 11	2245	133 3.77	3.47 1.058
Feb. 12	2400	297 8.41	4.57 1.393	Mar. 31	0400	135 3.82	3.44 1.049
Mar. 1	0630	533 15.1	5.69 1.734	Apr. 7	0245	134 3.79	3.43 1.045

Minimum daily discharge, no flow Aug. 10-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.02	.10	8.0	180	8.2	3.7	.58	.39	.08	.01
2	.04	.03	.02	.09	6.0	128	5.8	2.6	.61	.43	.07	.01
3	.04	.03	.02	.08	4.0	23	4.3	2.5	.64	.31	.03	.01
4	.07	.03	.02	9.5	3.0	216	4.3	2.9	.64	.25	.02	.01
5	.06	.03	.02	3.7	15	138	3.9	3.3	.66	.20	.02	.28
6	.04	.03	.02	.68	28	45	4.1	2.8	.66	.15	.02	.08
7	.03	.04	.02	.27	24	30	26	2.3	.58	.10	.01	.01
8	.02	.04	.02	.20	35	25	6.5	2.2	.58	.08	.01	.01
9	.02	.03	.02	2.6	45	21	4.9	2.3	.58	.07	.01	.01
10	.02	.03	.02	24	70	25	4.1	2.2	.47	.06	0	.01
11	.01	.03	.02	2.9	36	37	3.6	1.7	.49	.05	0	.01
12	.01	.03	.02	.63	48	32	3.4	1.4	.37	.04	0	.02
13	.01	.03	.02	.44	87	25	3.0	1.6	.39	.04	0	.05
14	.01	.05	.02	9.5	32	22	2.8	1.6	.38	.03	0	.03
15	.01	.04	.02	104	23	20	4.7	1.4	.39	.03	0	.03
16	.01	.03	.02	73	17	19	8.3	1.4	.38	.03	0	.12
17	.01	.03	.20	93	13	19	3.2	.84	.38	.03	0	.09
18	.01	.04	1.0	25	10	18	2.9	.74	.38	.03	0	.07
19	.01	.04	.30	30	8.0	18	3.5	.74	.49	.04	0	.05
20	.02	.04	.10	20	6.0	18	3.0	.74	.61	.03	0	.04
21	.02	.04	.09	12	5.0	20	2.7	.74	.46	.02	.01	.04
22	.02	.04	.08	10	4.0	17	2.0	.74	.36	.02	.01	.03
23	.02	.04	.08	9.0	3.5	15	1.8	.66	.32	.02	.01	.03
24	.02	.03	.07	8.0	3.3	14	1.7	.66	.24	.02	.01	.03
25	.02	.02	.50	7.0	3.0	13	2.9	.66	.36	.03	.01	.03
26	.01	.02	3.0	6.0	2.8	12	2.8	.66	.29	.03	.01	.03
27	.01	.02	10	5.4	13	11	2.2	.74	.30	.03	.01	.03
28	.01	.02	2.0	5.0	52	11	2.0	.58	.30	.04	.01	.03
29	.02	.02	.41	4.5	---	15	2.2	.51	.42	.06	.01	.02
30	.03	.02	.15	8.0	---	25	2.6	.51	.40	.07	.01	.03
31	.03	---	.12	12	---	33	---	.51	---	.08	.01	---
TOTAL	.70	.95	18.42	486.59	604.6	1245	133.4	45.93	13.71	2.81	.38	1.25
MEAN	.023	.032	.59	15.7	21.6	40.2	4.45	1.48	.46	.091	.012	.042
MAX	.07	.05	10	104	87	216	26	3.7	.66	.43	.08	.28
MIN	.01	.02	.02	.08	2.8	11	1.7	.51	.24	.02	0	.01
AC-FT	1.4	1.9	37	965	1200	2470	265	91	27	5.6	.8	2.5

CAL YR 1977 TOTAL 122.12 MEAN .33 MAX 30 MIN 0 AC-FT 242
WTR YR 1978 TOTAL 2553.74 MEAN 7.00 MAX 216 MIN 0 AC-FT 5070

11041000 SAN LUIS REY RIVER NEAR BONSALE, CA

LOCATION.--Lat 33°15'13", long 117°14'48", in SW¼NE¼NE¼ sec.1, T.11 S., R.4 W., San Diego County, on left bank 0.7 mi (1.1 km) downstream from bridge on State Highway 76, and 2.8 mi (4.5 km) southwest of Bonsale.

DRAINAGE AREA.--513 mi² (1,330 km²).

PERIOD OF RECORD.--July 1916 to September 1918 (gage heights and discharge measurements only), October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 108.10 ft (32.949 m) National Geodetic Vertical Datum of 1929. See WSP 1315-B, 1735 for history of changes prior to Sept. 16, 1946.

REMARKS.--Records poor. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft (240 hm³). Several diversions above station.

AVERAGE DISCHARGE.--49 years, 20.0 ft³/s (0.566 m³/s), 14,490 acre-ft/yr (17.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft³/s (513 m³/s) Mar. 3, 1938, gage height, 16.04 ft (4.889 m), present datum, from rating curve extended above 2,400 ft³/s (68.0 m³/s); no flow for part of some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,230 ft³/s (233 m³/s) Jan. 17, gage height, 14.97 ft (4.563 m); minimum daily, 2.2 ft³/s (0.06 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.4	5.2	15	60	2410	252	166	190	165	7.8	7.6
2	2.2	3.5	5.2	14	48	2780	245	141	190	170	7.8	7.6
3	2.3	3.5	5.1	13	40	1160	269	102	190	175	7.6	7.6
4	2.5	3.7	5.1	41	39	1200	260	81	185	175	7.6	8.2
5	2.5	4.0	5.1	409	40	3210	428	78	185	175	7.8	10
6	2.7	4.0	5.1	135	100	661	350	71	185	180	8.0	12
7	3.0	4.0	5.1	60	260	600	270	47	185	180	8.2	10
8	2.7	4.0	5.1	41	250	500	240	44	180	185	8.2	9.6
9	2.7	4.0	5.2	32	230	418	210	47	180	190	8.0	9.2
10	2.7	4.0	5.1	356	1340	590	230	49	175	195	7.8	10
11	2.9	4.0	5.2	587	878	594	240	82	175	195	7.6	10
12	2.9	4.0	5.3	146	521	747	195	173	175	195	7.6	9.6
13	3.0	4.1	5.3	74	1300	542	185	168	180	190	7.6	9.4
14	3.0	4.3	5.4	58	477	469	180	110	190	40	7.8	12
15	3.0	4.5	5.3	1360	169	412	200	179	220	20	8.0	13
16	3.0	4.7	5.3	903	100	362	230	200	200	12	8.0	11
17	3.1	5.0	5.3	3740	90	355	270	210	190	9.0	7.8	13
18	3.1	5.0	5.4	781	80	362	200	205	180	8.0	7.6	14
19	3.1	5.1	6.0	401	70	358	190	205	180	7.6	7.4	17
20	3.2	5.1	8.3	529	66	358	221	200	175	7.5	7.2	15
21	3.2	5.2	6.0	314	62	368	239	195	175	7.5	7.0	14
22	3.2	5.2	5.6	140	60	317	284	195	175	7.8	7.0	15
23	3.2	5.3	5.4	100	57	304	289	190	170	8.4	7.0	16
24	3.2	5.1	6.6	70	55	285	272	190	170	10	7.2	14
25	3.2	4.9	8.8	65	53	275	245	195	170	9.0	7.4	13
26	3.3	5.0	12	55	52	264	259	200	170	8.0	7.6	13
27	3.4	5.0	25	50	70	256	229	200	170	7.6	7.4	13
28	3.5	5.1	24	45	300	271	213	200	165	7.6	7.2	15
29	3.5	5.2	20	43	---	511	219	200	165	7.8	7.4	14
30	3.5	5.2	20	41	---	333	174	195	160	8.0	7.6	13
31	3.5	---	18	70	---	293	---	195	---	8.0	7.8	---
TOTAL	92.6	135.1	259.5	10688	6867	21565	7288	4713	5400	2563.8	236.0	355.8
MEAN	2.99	4.50	8.37	345	245	696	243	152	180	82.7	7.61	11.9
MAX	3.5	5.3	25	3740	1340	3210	428	210	220	195	8.2	17
MIN	2.2	3.4	5.1	13	39	256	174	44	160	7.5	7.0	7.6
AC-FT	184	268	515	21200	13620	42770	14460	9350	10710	5090	468	706
CAL YR 1977 TOTAL	3593.35			MEAN 9.84	MAX 142	MIN .14	AC-FT 7130					
WTR YR 1978 TOTAL	60163.80			MEAN 165	MAX 3740	MIN 2.2	AC-FT 119300					

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°12'48", long 117°22'33", in SW¼SE¼SW¼ sec.14, T.11 S., R.5 W., San Diego County, on right bank 0.7 mi (1.1 km) upstream from bridge on Interstate Highway 5, 1.1 mi (1.8 km) upstream from mouth, and 1.2 mi (1.9 km) north of Oceanside.

DRAINAGE AREA.--558 mi² (1,450 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6.1 m), from topographic map. April 1912 to September 1914, nonrecording gage at site 0.8 mi (1.3 km) upstream at different datum. January 1916, nonrecording gage 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records poor. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft (240 hm³). Several diversions for irrigation and domestic use above station. AVERAGE DISCHARGE represents flow to ocean during period of record regardless of upstream development.

AVERAGE DISCHARGE.--46 years (water years 1913-14, 1930-41, 1947-78), 18.7 ft³/s (0.530 m³/s), 13,550 acre-ft/yr (16.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft³/s (2,710 m³/s) Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,780 ft³/s (277 m³/s) Jan. 17, gage height, 15.48 ft (4.718 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Oct. 1-5, 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.0	2.6	16	106	2020	280	120	201	144	3.9	2.4
2	1.2	2.9	2.6	15	91	1010	250	100	200	146	3.8	2.5
3	1.2	2.8	2.1	15	84	495	240	90	200	148	3.7	2.6
4	1.2	2.6	1.8	38	79	290	250	80	197	148	3.5	2.7
5	1.2	2.4	2.0	134	84	2540	350	64	191	152	3.4	2.9
6	1.3	2.4	1.9	281	186	304	490	58	189	160	3.1	3.2
7	1.3	2.4	2.0	133	305	560	300	54	188	156	2.9	3.0
8	1.2	2.4	1.9	95	301	500	250	50	193	150	2.7	2.8
9	1.2	2.0	1.8	81	405	440	220	50	189	144	2.5	2.7
10	1.2	1.9	1.8	137	884	530	210	80	187	144	2.4	2.7
11	1.2	2.0	1.9	630	1060	600	210	130	193	143	2.3	2.8
12	1.3	2.2	1.9	266	516	840	205	200	200	142	2.2	2.8
13	1.3	2.2	2.1	141	807	600	200	170	191	128	2.2	2.9
14	1.4	2.4	2.4	119	556	540	200	140	189	45	2.1	3.0
15	1.8	2.4	2.6	1320	252	450	190	160	185	10	2.1	3.1
16	1.9	2.4	2.4	528	198	430	210	180	180	6.0	2.1	3.3
17	2.0	2.4	2.4	3000	182	400	250	180	176	5.3	2.1	3.4
18	2.0	2.4	3.7	256	169	390	300	190	174	4.9	2.1	3.6
19	2.0	2.7	3.5	183	159	390	190	190	170	4.6	2.1	3.7
20	2.0	2.4	2.8	196	154	380	210	190	168	4.4	2.1	3.8
21	1.8	2.4	2.9	146	149	380	240	190	162	4.3	2.1	3.8
22	1.9	2.4	3.0	128	146	370	280	190	157	4.2	2.2	3.9
23	2.0	2.6	3.2	118	142	350	270	190	154	4.1	2.2	3.9
24	2.1	2.6	3.1	109	139	320	260	190	150	4.0	2.2	4.0
25	2.1	2.4	3.3	103	134	300	250	190	146	4.0	2.3	4.0
26	2.4	2.4	6.9	99	131	290	240	200	140	4.0	2.3	4.0
27	2.4	2.6	8.6	96	131	270	230	191	144	4.0	2.4	4.0
28	2.4	2.6	7.1	94	143	260	220	201	142	4.0	2.4	4.0
29	2.4	2.7	11	91	---	400	190	202	141	3.9	2.4	4.0
30	3.0	2.6	14	90	---	580	150	202	143	3.9	2.4	4.0
31	3.3	---	16	111	---	350	---	202	---	3.9	2.4	---
TOTAL	54.9	73.6	125.3	8769	7693	17579	7335	4624	5240	2029.5	78.6	99.5
MEAN	1.77	2.45	4.04	283	275	567	245	149	175	65.5	2.54	3.32
MAX	3.3	3.0	16	3000	1060	2540	490	202	201	160	3.9	4.0
MIN	1.2	1.9	1.8	15	79	260	150	50	140	3.9	2.1	2.4
AC-FT	109	146	249	17390	15260	34870	14550	9170	10390	4030	156	197

CAL YR 1977 TOTAL 4528.3 MEAN 12.4 MAX 194 MIN 1.2 AC-FT 8980
WTR YR 1978 TOTAL 53701.4 MEAN 147 MAX 3000 MIN 1.2 AC-FT 106500

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

CHEMICAL ANALYSES: January 1978 to September 1978.

BIOLOGICAL DATA: January 1978 to September 1978.

WATER TEMPERATURES: Water years 1971 to current year.

SEDIMENT RECORDS: Water year 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1970 to current year.

SEDIMENT RECORDS: October 1968 to September 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,580 mg/L Jan. 17, 1978; minimum daily, 2 mg/L on several days in 1972 and 1977.

SEDIMENT DISCHARGE: Maximum daily, 59,700 tons (54,200 metric tons) Jan. 17, 1978; minimum daily, 0.01 tons (0.01 metric tons) Nov. 4, 1969.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,580 mg/L Jan. 17; minimum daily, 6 mg/L Oct. 2-4.

SEDIMENT DISCHARGE: Maximum daily, 59,700 tons (54,200 metric tons) Jan. 17; minimum daily, 0.02 tons (0.02 metric tons) Oct. 1-7.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
JAN										
23...	1345	125	2010	8.2	13.5	90	--	7.0	330	2100
FEB										
28...	1345	134	1800	--	16.0	260	--	8.2	>4000	K6300
MAR										
16...	1230	E430	1540	7.3	19.0	140	--	8.4	2500	K6000
APR										
25...	1245	E250	1180	7.9	21.5	75	--	8.6	1000	1700
MAY										
25...	1000	E190	896	8.2	18.0	--	100	9.0	1100	2000
JUN										
29...	1130	148	892	7.3	21.0	--	60	--	--	--
JUL										
24...	1230	15	2470	7.9	25.0	--	2.5	11.0	K160	--
AUG										
22...	1200	E2.2	4660	7.9	22.5	--	4.5	13.2	K150	200
SEP										
07...	1045	E3.0	2310	7.6	19.5	--	32	9.2	3300	K30000

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)
JAN										
23...	740	540	160	83	160	32	2.6	9.4	250	0
FEB										
28...	600	400	130	66	160	37	2.9	7.0	240	--
MAR										
16...	540	360	120	59	130	34	2.4	8.3	220	0
APR										
25...	500	320	110	54	110	32	2.1	7.4	220	0
MAY										
25...	290	150	68	30	72	34	1.8	5.2	--	--
JUN										
29...	290	150	70	29	69	33	1.8	5.5	--	--
JUL										
24...	770	540	170	84	260	42	4.1	11	--	--
AUG										
22...	970	720	190	120	640	58	9.0	31	--	--
SEP										
07...	730	500	160	81	220	39	3.5	13	--	--

E Estimated

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

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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, NO2+NO3 TOTAL (MG/L AS N)
JAN 23...	210	2.5	430	290	.3	30	1360	1290	--
FEB 28...	200	--	300	310	.3	27	1170	1120	3.2
MAR 16...	180	18	270	240	.3	31	990	967	3.8
APR 25...	180	4.4	260	190	.3	27	905	867	1.7
MAY 25...	140	--	160	99	.2	18	558	537	1.0
JUN 29...	140	--	160	100	.7	16	553	534	.48
JUL 24...	230	--	390	480	.4	19	1680	1550	.55
AUG 22...	250	--	510	1200	.5	20	3040	2860	2.9
SEP 07...	230	--	390	390	.4	24	1550	1420	2.3

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
JAN 23...	--	--	--	--	--	--	--	.38	.21
FEB 28...	.05	2.9	2.9	1.9	.97	6.1	27	.58	.22
MAR 16...	.04	1.6	1.6	.94	.66	5.4	24	.64	.30
APR 25...	.21	1.4	1.6	.85	.75	3.3	15	.49	.29
MAY 25...	.01	--	--	--	.81	--	--	.42	.13
JUN 29...	.10	1.1	1.2	.62	.58	1.7	7.4	.37	.17
JUL 24...	.01	1.3	1.3	.62	.68	1.9	8.2	.29	.17
AUG 22...	.34	1.1	1.4	.41	.99	4.3	19	.24	.13
SEP 07...	.14	2.0	2.1	.70	1.4	4.4	19	.41	.23

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)
JAN 23...	1345	125	2010	8.2	13.5	2	1	1	--	--	--
APR 25...	1245	E250	1180	7.9	21.5	1	0	2	100	0	100
JUL 24...	1230	15	2470	7.9	25.0	3	1	2	200	0	200

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)
JAN 23...	8	--	--	0	0	0	0	0	0	16	13
APR 25...	8	5	3	0	0	0	1	1	0	66	54
JUL 24...	4	2	2	10	0	10	0	0	0	10	7

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
JAN 23...	3	7100	7000	110	--	--	--	580	160	420	.0
APR 25...	12	7900	7900	30	--	--	--	310	210	100	.0
JUL 24...	3	770	740	30	21	15	6	700	0	720	.2

DATE	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 23...	.0	.0	1	0	1	0	0	0	30	10	20
APR 25...	.0	.0	1	1	0	0	0	0	140	110	30
JUL 24...	.2	.0	1	0	1	0	0	0	20	10	10

E Estimated

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
FEB 28...	1345	134	1800	--	16.0	22	--	--
MAR 16...	1230	E430	1540	7.3	19.0	16	--	--
APR 25...	1245	E250	1180	7.9	21.5	--	7.4	>5.0
MAY 25...	1000	E190	896	8.2	18.0	13	--	--
JUN 29...	1130	148	892	7.3	21.0	12	--	--
JUL 24...	1230	15	2470	7.9	25.0	--	7.6	2.1
AUG 22...	1200	E2.2	4660	7.9	22.5	8.0	--	--
SEP 07...	1045	E3.0	2310	7.6	19.5	13	--	--

E Estimated

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JAN 23,78 1345		FEB 28,78 1345		MAR 16,78 1230		APR 25,78 1245		MAY 25,78 1000		JUN 29,78 1130	
TOTAL CELLS/ML	340		4000		95		800		1900		9400	
DIVERSITY: DIVISION	1.2		0.8		0.6		0.2		1.0		1.6	
..CLASS	1.2		0.8		0.6		0.2		1.0		1.6	
..ORDER	1.9		1.0		0.6		1.2		1.8		2.5	
...FAMILY	2.5		2.5		1.8		2.1		2.2		3.3	
....GENUS	2.7		2.5		1.8		2.4		3.2		3.5	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
....SCHROEDERIA	--	-	78	2	--	-	--	-	--	-	48	1
...MICRACTINIACEAE												
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-	190	2
...OOCYSTACEAE												
....ANKISTRODESMUS	14	4	39	1	--	-	--	-	--	-	97	1
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-	1000	11
...SCENEDESMACEAE												
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-	390	4
....SCENEDESMUS	--	-	--	-	--	-	--	-	110	6	290	3
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	57	3	--	-
..TETRASPORACEAE												
...SCHIZOCHLAMYS	--	-	--	-	--	-	--	-	--	-	48	1
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CARTERIA	--	-	--	-	--	-	--	-	--	-	48	1
....CHLAMYDOMONAS	--	-	78	2	--	-	14	2	--	-	530	6
..ZYGNEMATALES												
...DESMIDIACEAE												
....STAUSTRUM	--	-	--	-	--	-	--	-	--	-	97	1
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...PENNALES												
...NAVICULACEAE												
...ENTOMONEIS	--	-	--	-	--	-	--	-	--	-	--	-
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA			78	2	--	-	300#	37	540#	28	430	5
....MELOSIRA	68#	20	--	-	--	-	--	-	230	12	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-	260	13	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-	530	6
...COCCONEIS	--	-	--	-	--	-	--	-	29	1	140	2
...RHOICOSPHENIA	--	-	--	-	--	-	14	2	--	-	--	-
...CYMBELLACEAE												
....CYMBELLA	--	-	39	1	--	-	14	2	--	-	--	-
....EPITHEMIA	--	-	--	-	14	14	--	-	--	-	--	-
...DIATOMACEAE												
....DIATOMA	--	-	--	-	--	-	--	-	--	-	48	1
...FRAGILARIACEAE												
....SYNEDRA	--	-	860#	22	41#	43	120#	15	--	-	--	-
...GOMPHONEMACEAE												
....GOMPHONEMA	14	4	--	-	--	-	--	-	--	-	48	1
...MERIDIONACEAE												
....MERIDION	--	-	39	1	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....GYROSIGMA	14	4	--	-	--	-	--	-	--	-	48	1
....NAVICULA	81#	24	550	14	--	-	220#	27	310#	16	430	5
...PINNULARIA	--	-	--	-	--	-	82	10	57	3	48	1
...NITZSCHACEAE												
....DENTICULA	--	-	--	-	--	-	--	-	29	1	--	-
....HANTZSCHIA	--	-	--	-	--	-	--	-	29	1	--	-
...NITZSCHIA	68#	20	1700#	43	27#	29	14	2	57	3	1300	13
...SURIPELLACEAE												
....SURIPELLA	--	-	120	3	--	-	14	2	29	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
...CRYPTOMONODACEAE												
....CRYPTOMONAS	27	8	310	8	--	-	--	-	--	-	--	-

See footnotes at end of table.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JAN 23,78 1345		FEB 28,78 1345		MAR 16,78 1230		APR 25,78 1245		MAY 25,78 1000		JUN 29,78 1130	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROCCOCCALES												
...CHROCCOCCAEAE												
....ANACYSTIS	--	-	--	-	--	-	--	-	140	7	1200	13
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
...OSCILLATORIA	--	-	--	-	--	-	--	-	--	-	2400#	25
...SPIRULINA	--	-	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	14	14	--	-	--	-	48	1
....PHACUS	--	-	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	54#	16	78	2	--	-	14	2	57	3	--	-
DATE TIME	JUL 24,78 1230		AUG 22,78 1200		SEP 7,78 1045		OCT 23,78 1345		NOV 30,78 1100			
TOTAL CELLS/ML	1400		7700		13000		25000		1400			
DIVERSITY: DIVISION	0.6		0.6		1.2		0.3		1.3			
..CLASS	0.6		0.6		1.2		0.3		1.3			
...ORDER	1.5		1.3		1.6		0.7		1.7			
...FAMILY	1.5		1.4		2.5		1.1		3.1			
....GENUS	1.5		1.4		2.6		1.1		3.2			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT		
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
...SCHROEDERIA	--	-	--	-	--	-	--	-	--	-		
...MICRACTINIACEAE												
...MICRACTINIUM	--	-	--	-	--	-	--	-	--	-		
...OOCYSTACEAE												
...ANKISTRODESMUS	--	-	--	-	94	1	--	-	44	3		
...DICTYOSPHAERIUM	55	4	--	-	--	-	--	-	--	-		
...OOCYSTIS	--	-	--	-	--	-	--	-	--	-		
...SCENEDESMACEAE												
...CRUCIGENIA	--	-	--	-	--	-	--	-	--	-		
...SCENEDESMUS	--	-	920	12	190	1	490	2	89	7		
..TETRASPORALES												
...PALMELLACEAE												
...SPHAEROCYSTIS	--	-	--	-	--	-	--	-	--	-		
...TETRASPORACEAE												
...SCHIZOCHLAMYS	--	-	--	-	--	-	--	-	--	-		
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
...CARTERIA	--	-	--	-	--	-	--	-	--	-		
...CHLAMYDOMONAS	55	4	--	-	190	1	240	1	89	7		
..ZYGNEMATALES												
...DESMIDIACEAE												
...STAUSTRUM	--	-	--	-	--	-	--	-	--	-		
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...PENNALES												
...NAVICULACEAE												
...ENTOMONEIS	--	-	--	-	94	1	--	-	22	2		
...CENTRALES												
...COSCINODISCACEAE												
...CYCLOTELLA	910#	63	5000#	66	1100	9	1900	8	44	3		
...MELOSIRA	--	-	--	-	--	-	--	-	--	-		
...STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-		
...PENNALES												
...ACHNANTHACEAE												
...ACHNANTHES	--	-	--	-	94	1	--	-	--	-		
...COCCONEIS	--	-	--	-	--	-	--	-	--	-		
...RHOICOSPHENIA	--	-	--	-	--	-	--	-	--	-		

See footnotes at end of table.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 24,78 1230		AUG 22,78 1200		SEP 7,78 1045		OCT 23,78 1345		NOV 30,78 1100	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..PENNALES										
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	94	1	--	-	44	3
....EPITHEMIA	--	-	--	-	--	-	--	-	--	-
....DIATOMACEAE										
....DIATOMA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIACEAE										
....SYNEDRA	14	1	--	-	--	-	--	-	22	2
....GOMPHONEMACEAE										
....GOMPHONEMA	--	-	--	-	--	-	--	-	44	3
....MERIDIONACEAE										
....MERIDION	--	-	--	-	--	-	--	-	--	-
....NAVICULACEAE										
....GYROSIGMA	--	-	92	1	--	-	--	-	--	-
....NAVICULA	--	-	92	1	2600#	21	20000#	81	180	13
....PINNULARIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA										
....DENTICULA	--	-	--	-	--	-	--	-	--	-
....HANTZSCHIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	360#	25	1400#	19	4200#	33	1500	6	440#	33
....SURIRELLACEAE										
....SURIRELLA	--	-	--	-	--	-	240	1	130	10
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCOCCALES										
...CHROCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-
...HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	570	4	--	-	130	10
...OSCILLATORIACEAE										
...OSCILLATORIA	--	-	--	-	3000#	24	--	-	--	-
...SPIRULINA	--	-	--	-	190	1	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....EUGLENA	55	4	92	1	190	1	490	2	22	2
....PHACUS	--	-	--	-	--	-	--	-	22	2
....TRACHELOMONAS	--	-	--	-	94	1	--	-	22	2

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

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

PERIPHYTON

DATE	TIME	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
SEP 07...	1045	16.0	.630	40.7	30.9	16

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
JAN				
16...	1515	--	809	14.0
17...	0700	--	735	--
18...	1140	--	1060	17.5
23...	1345	125	2010	13.5
FEB				
28...	1345	134	1800	16.0
MAR				
16...	1230	E430	1540	19.0
APR				
20...	0630	--	1410	17.5
24...	0620	--	1380	16.0
25...	1245	E250	1180	21.5
MAY				
03...	1145	--	1650	18.0
05...	1430	--	1710	22.0
09...	1000	--	2050	17.5
13...	1510	--	865	29.0
16...	1030	--	1380	18.5
17...	1015	--	1080	18.0
25...	1000	E190	896	18.0
JUN				
05...	1400	--	888	25.0
05...	1500	--	877	23.5
06...	1100	--	886	24.0
07...	1445	--	883	27.0
08...	1230	--	870	25.0
09...	1205	--	888	24.5
09...	1400	--	961	26.0
10...	1600	--	894	27.0
12...	1030	--	862	33.0
14...	1530	--	867	30.0
15...	1300	--	853	26.0
16...	1815	--	887	29.0
17...	1800	--	884	30.0
19...	1400	--	855	27.0
20...	1230	--	849	26.0
21...	1630	--	870	30.0
22...	1330	--	850	26.0
23...	1600	--	860	29.0
24...	1500	--	865	29.0
27...	1700	--	890	28.0
28...	1530	--	881	28.0
29...	1130	148	892	21.0
29...	1745	--	880	27.0
30...	1615	--	873	30.0
JUL				
01...	1345	--	860	27.0
04...	1215	--	863	24.0
05...	0945	--	875	20.0
06...	1310	--	834	24.0
07...	1245	--	853	26.0
08...	1230	--	879	25.0
10...	1445	--	905	26.0
11...	1445	--	920	27.0
12...	1630	--	932	--
13...	1600	--	1500	28.0
14...	1415	--	1495	28.0
16...	1800	--	1758	28.0
19...	1700	--	1874	28.0
22...	1345	--	1995	27.0
24...	1030	--	2420	23.0
24...	1230	15	2470	25.0
26...	1645	--	2590	28.0
27...	1530	--	2730	30.0
28...	1500	--	2650	--
29...	1330	--	2720	28.0
31...	1130	--	2810	23.0
AUG				
03...	1600	--	2860	23.0
07...	1600	--	2950	--
09...	1345	--	2950	--
11...	1330	--	3040	--
13...	1530	--	3430	--
15...	1430	--	2910	--
19...	1230	--	3540	--
21...	1500	--	2350	25.0
22...	1200	E2,2	4660	22.5
23...	1730	--	2470	25.0
26...	1300	--	2630	28.0
28...	1200	--	2400	25.0

E Estimated

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
30...	1400	--	2610	28.0
31...	1600	--	2770	26.0
SEP				
02...	1130	--	2700	--
04...	1600	--	2600	24.0
06...	1715	--	1815	24.0
07...	1045	E3.0	2310	19.5
09...	1700	--	2240	25.0
11...	1400	--	2400	25.0
13...	1630	--	2280	26.0
17...	1800	--	2290	23.0
18...	1700	--	2380	23.0
20...	1900	--	2760	21.0
24...	1600	--	2500	30.0
26...	1000	--	2420	23.0
27...	1700	--	2390	26.0
29...	1730	--	2370	25.0

E Estimated

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

OCTOBER				NOVEMBER				DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	1.2	7	.02	3.0	9	.07	2.6	14	.10	
2	1.2	6	.02	2.9	9	.07	2.6	15	.11	
3	1.2	6	.02	2.8	10	.08	2.1	16	.09	
4	1.2	6	.02	2.6	11	.08	1.8	15	.07	
5	1.2	7	.02	2.4	11	.07	2.0	12	.06	
6	1.3	7	.02	2.4	12	.08	1.9	10	.05	
7	1.3	7	.02	2.4	12	.08	2.0	10	.05	
8	1.2	8	.03	2.4	12	.08	1.9	10	.05	
9	1.2	9	.03	2.0	13	.07	1.8	10	.05	
10	1.2	10	.03	1.9	13	.07	1.8	10	.05	
11	1.2	11	.04	2.0	13	.07	1.9	10	.05	
12	1.3	12	.04	2.2	14	.08	1.9	10	.05	
13	1.3	13	.05	2.2	16	.10	2.1	9	.05	
14	1.4	14	.05	2.4	16	.10	2.4	9	.06	
15	1.8	15	.07	2.4	17	.11	2.6	9	.06	
16	1.9	12	.06	2.4	15	.10	2.4	8	.05	
17	2.0	10	.05	2.4	12	.08	2.4	8	.05	
18	2.0	9	.05	2.4	10	.06	3.7	8	.08	
19	2.0	8	.04	2.7	9	.07	3.5	8	.08	
20	2.0	9	.05	2.4	9	.06	2.8	8	.06	
21	1.8	10	.05	2.4	10	.06	2.9	8	.06	
22	1.9	11	.06	2.4	12	.08	3.0	7	.06	
23	2.0	12	.06	2.6	15	.11	3.2	7	.06	
24	2.1	15	.09	2.6	15	.11	3.1	7	.06	
25	2.1	16	.09	2.4	10	.06	3.3	10	.09	
26	2.4	17	.11	2.4	9	.06	6.9	21	.39	
27	2.4	15	.10	2.6	10	.07	8.6	40	.93	
28	2.4	14	.09	2.6	11	.08	7.1	8	.15	
29	2.4	12	.08	2.7	12	.09	11	15	.45	
30	3.0	10	.08	2.6	13	.09	16	9	.34	
31	3.3	10	.09	---	---	---	16	12	.52	
TOTAL	54.9	---	1.63	73.6	---	2.39	125.3	---	4.38	

JANUARY				FEBRUARY				MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	16	15	.65	106	211	60	2020	3660	30700	
2	15	18	.73	91	117	29	1010	3430	9620	
3	15	25	1.0	84	73	17	495	1530	2580	
4	38	75	7.7	79	51	11	290	485	490	
5	134	136	55	84	97	24	2540	3620	27700	
6	281	291	227	186	849	520	304	1800	1480	
7	133	99	38	305	1340	1150	560	950	1440	
8	95	60	15	301	1230	1010	500	750	1010	
9	81	50	11	405	1130	1250	440	700	832	
10	137	70	26	884	1260	3170	530	900	1290	
11	630	877	1600	1060	1080	3170	600	1300	2110	
12	266	308	253	516	796	1120	840	1800	4080	
13	141	60	23	807	1100	2490	600	1200	1940	
14	119	25	8.0	556	820	1230	540	800	1170	
15	1320	1290	10100	252	510	347	450	720	875	
16	528	1730	3090	198	400	214	430	648	752	
17	3000	5580	59700	182	380	187	400	620	670	
18	256	2290	1720	169	375	171	390	580	611	
19	183	340	168	159	370	159	390	550	579	
20	196	570	302	154	365	152	380	510	523	
21	146	180	71	149	360	145	380	475	487	
22	128	160	55	146	355	140	370	450	450	
23	118	148	47	142	350	134	350	435	411	
24	109	118	35	139	340	128	320	405	350	
25	103	98	27	134	320	116	300	385	312	
26	99	84	22	131	310	110	290	365	286	
27	96	77	20	131	300	106	270	350	255	
28	94	75	19	143	635	245	260	490	344	
29	91	78	19	---	---	---	400	700	756	
30	90	76	18	---	---	---	580	620	971	
31	111	237	76	---	---	---	350	430	406	
TOTAL	8769	---	77755.08	7693	---	17605	17579	---	95488	

11042000 'SAN LUIS REY RIVER' AT OCEANSIDE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	280	380	287	120	240	78	201	395	214
2	250	350	236	100	241	65	200	395	213
3	240	335	217	90	243	59	200	394	213
4	250	320	216	80	235	51	197	370	197
5	350	310	293	64	230	40	191	320	165
6	490	380	503	58	220	34	189	360	184
7	300	590	478	54	210	31	188	310	157
8	250	440	297	50	200	27	193	320	167
9	220	365	217	50	197	27	189	290	148
10	210	325	184	80	230	50	187	291	147
11	210	300	170	130	300	105	193	280	146
12	205	285	158	200	600	324	200	267	144
13	200	250	135	170	540	248	191	258	133
14	200	240	130	140	460	174	189	241	123
15	190	230	118	160	390	168	185	228	114
16	210	360	204	180	361	175	180	200	97
17	250	500	337	180	360	175	176	174	83
18	300	310	251	190	375	192	174	178	84
19	190	260	133	190	380	195	170	183	84
20	210	250	142	190	380	195	168	170	77
21	240	280	181	190	380	195	162	138	60
22	280	390	295	190	378	194	157	135	57
23	270	360	262	190	360	185	154	142	59
24	260	270	190	190	342	175	150	154	62
25	250	255	172	190	418	214	146	135	53
26	240	245	159	200	405	219	140	98	37
27	230	235	146	191	400	206	144	89	35
28	220	230	137	201	380	206	142	179	69
29	190	235	121	202	362	197	141	289	110
30	150	238	96	202	378	206	143	280	108
31	---	---	---	202	396	216	---	---	---
TOTAL	7335	---	6465	4624	---	4626	5240	---	3540
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	144	218	85	3.9	172	1.8	2.4	37	.24
2	146	190	75	3.8	95	.97	2.5	38	.26
3	148	195	78	3.7	38	.38	2.6	41	.29
4	148	205	82	3.5	36	.34	2.7	44	.32
5	152	230	94	3.4	32	.29	2.9	42	.33
6	160	238	103	3.1	30	.25	3.2	45	.39
7	156	228	96	2.9	25	.20	3.0	110	.89
8	150	220	89	2.7	30	.22	2.8	80	.60
9	144	205	80	2.5	37	.25	2.7	65	.47
10	144	194	75	2.4	38	.25	2.7	62	.45
11	143	200	77	2.3	40	.25	2.8	59	.45
12	142	228	87	2.2	45	.27	2.8	50	.38
13	128	218	75	2.2	61	.36	2.9	42	.33
14	45	138	17	2.1	40	.23	3.0	60	.49
15	10	95	2.6	2.1	27	.15	3.1	68	.57
16	6.0	53	.86	2.1	22	.12	3.3	45	.40
17	5.3	31	.44	2.1	20	.11	3.4	20	.18
18	4.9	29	.38	2.1	20	.11	3.6	79	.77
19	4.6	27	.34	2.1	19	.11	3.7	60	.60
20	4.4	30	.36	2.1	22	.12	3.8	53	.54
21	4.3	35	.41	2.1	25	.14	3.8	48	.49
22	4.2	40	.45	2.2	30	.18	3.9	41	.43
23	4.1	50	.55	2.2	23	.14	3.9	38	.40
24	4.0	60	.65	2.2	23	.14	4.0	23	.25
25	4.0	90	.97	2.3	23	.14	4.0	30	.32
26	4.0	136	1.5	2.3	22	.14	4.0	40	.43
27	4.0	130	1.4	2.4	22	.14	4.0	44	.48
28	4.0	125	1.4	2.4	22	.14	4.0	62	.67
29	3.9	120	1.3	2.4	28	.18	4.0	32	.35
30	3.9	135	1.4	2.4	32	.21	4.0	15	.16
31	3.9	157	1.7	2.4	36	.23	---	---	---
TOTAL	2029.5	---	1129.71	78.6	---	8.56	99.5	---	12.93
YEAR	53701.4		206638.7						

SAN LUIS REY RIVER BASIN
11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN							
04...	1400	13.0	106	84	24	--	--
16...	1500	14.0	353	1100	1050	86	96
23...	1345	13.5	125	148	50	--	--
FEB							
28...	1345	16.0	134	635	230	--	--
MAR							
16...	1230	19.0	E430	648	--	--	--
APR							
25...	1245	21.5	E250	232	--	--	--
MAY							
25...	1000	18.0	E190	418	--	--	--
JUN							
29...	1130	21.0	148	289	115	--	--
JUL							
24...	1230	25.0	15	42	1.7	--	--
AUG							
22...	1200	22.5	E2.2	46	--	--	--
SEP							
07...	1045	19.5	E3.0	102	--	--	--

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
JAN						
04...	--	--	95	98	99	100
16...	97	99	100	--	--	--
23...	--	--	94	--	--	--
FEB						
28...	--	--	--	--	--	--
MAR						
16...	--	--	72	--	--	--
APR						
25...	--	--	86	--	--	--
MAY						
25...	--	--	66	--	--	--
JUN						
29...	--	--	74	--	--	--
JUL						
24...	--	--	76	--	--	--
AUG						
22...	--	--	62	--	--	--
SEP						
07...	--	--	95	--	--	--

11042400 TEMECULA CREEK NEAR AGUANGA, CA

LOCATION.--Lat 33°27'33", long 116°55'22", in NE¼SW¼SW¼ sec.19, T.8 S., R.1 E., Riverside County, on right bank 1.6 mi (2.6 km) downstream from Long Canyon, and 3.5 mi (5.6 km) northwest of Aguanga.

DRAINAGE AREA.--131 mi² (339 km²).

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,590 ft (485 m), from topographic map.

REMARKS.--Records good. No regulation above station. Pumping for irrigation above station.

AVERAGE DISCHARGE.--21 years, 4.56 ft³/s (0.129 m³/s), 3,300 acre-ft/yr (4.07 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,540 ft³/s (100 m³/s) Apr. 3, 1958, gage height, 6.57 ft (2.003 m), from rating curve extended above 1,200 ft³/s (34 m³/s); maximum gage height, 10.6 ft (3.23 m) Feb. 25, 1969; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) revised, and maximum (*), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurements at gage heights 10.6 ft (3.20 m) and 9.1 ft (2.77 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 10	1115	101 2.86	2.37 0.722	Mar. 2	1130	574 16.3	4.53 1.381
Jan. 15	0500	551 15.6	4.45 1.356	Mar. 4	1815	*980 27.8	5.80 1.768
Feb. 10	1200	344 9.74	3.65 1.113	Mar. 12	Unknown	†150 4.25	Unknown
Feb. 13	0115	337 9.54	3.62 1.103				

† Estimated.

Minimum daily discharge, no flow Oct. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.24	.40	.75	6.8	257	39	26	5.7	.96	.01	.18
2	0	.21	.40	.85	6.0	343	31	15	6.0	.85	.01	.08
3	0	.18	.37	.96	5.2	149	26	14	5.4	.75	.05	.08
4	.02	.18	.40	2.1	4.7	332	27	14	5.2	.75	.11	.08
5	.05	.20	.40	17	9.1	440	29	14	4.9	.75	.06	.31
6	.07	.28	.40	7.1	16	161	25	13	4.2	.75	.03	1.2
7	.07	.31	.40	4.0	20	110	54	12	3.3	.75	.05	.85
8	.06	.31	.51	2.7	26	86	40	11	3.1	.65	.11	.65
9	.01	.30	.51	2.6	105	73	31	11	2.6	.51	.11	.51
10	.01	.24	.51	49	235	70	28	10	2.4	.51	.24	.65
11	.07	.24	.51	39	125	70	26	10	2.6	.51	.40	.65
12	.08	.24	.51	16	86	115	23	9.7	2.6	.51	.51	.75
13	.08	.24	.51	10	172	51	21	9.1	2.4	.51	.14	.85
14	.07	.24	.51	9.1	88	46	21	8.4	2.2	.31	.11	.75
15	.05	.23	.51	221	63	43	35	8.4	2.1	.31	.14	.65
16	.01	.24	.51	75	50	40	64	8.4	2.1	.31	.14	.65
17	.01	.24	.51	136	41	38	34	7.8	2.1	.40	.14	.75
18	.04	.24	.75	51	35	35	26	7.1	1.9	.40	.14	.75
19	.07	.31	.65	48	30	34	24	6.8	1.9	.24	.06	.65
20	.08	.44	.51	38	26	32	22	6.5	1.8	.14	.06	.40
21	.14	.51	.51	24	23	32	21	6.5	1.5	.12	.11	.40
22	.13	.49	.51	18	21	41	20	6.8	1.3	.10	.14	.40
23	.14	.36	.65	15	19	36	19	7.1	1.3	.09	.14	.31
24	.14	.24	.65	12	17	31	18	7.1	1.1	.08	.14	.31
25	.13	.22	.65	9.7	16	28	19	7.1	1.1	.07	.14	.40
26	.10	.25	.96	8.7	15	26	21	7.1	1.2	.06	.14	.40
27	.11	.28	.96	7.4	16	24	19	6.8	1.4	.05	.18	.31
28	.11	.37	1.1	6.5	80	23	17	6.2	1.5	.04	.18	.40
29	.14	.37	1.1	6.0	---	22	16	6.0	1.4	.04	.18	.51
30	.18	.36	.85	6.8	---	24	15	5.7	1.3	.03	.18	.31
31	.21	---	.75	11	---	46	---	5.7	---	.02	.18	---
TOTAL	2.38	8.56	18.47	855.26	1356.8	2858	811	294.3	77.6	11.57	4.33	15.19
MEAN	.077	.29	.60	27.6	48.5	92.2	27.0	9.49	2.59	.37	.14	.51
MAX	.21	.51	1.1	221	235	440	64	26	6.0	.96	.51	1.2
MIN	0	.18	.37	.75	4.7	22	15	5.7	1.1	.02	.01	.08
AC-FT	4.7	17	37	1700	2690	5670	1610	584	154	23	8.6	30

CAL YR 1977 TOTAL 392.88 MEAN 1.08 MAX 47 MIN 0 AC-FT 779
WTR YR 1978 TOTAL 6313.46 MEAN 17.3 MAX 440 MIN 0 AC-FT 12520

SANTA MARGARITA RIVER BASIN
11042510 VAIL LAKE NEAR TEMECULA, CA

LOCATION.--Lat 33°29'44", long 116°58'33", in Pauba Grant, Riverside County, near center of Vail Dam, 0.2 mi (0.3 km) downstream from Arroyo Seco, and 10 mi (16 km) east of Temecula.

DRAINAGE AREA.--320 mi² (829 km²).

PERIOD OF RECORD.--October 1960 to current year. October 1960 to September 1977 published with Temecula Creek at Vail Dam.

GAGE.--Water-stage recorder. Datum of gage is 1,350.0 ft (411.48 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation); gage readings have been reduced to elevations above NGVD.

REMARKS.--Reservoir is formed by a concrete arch-type dam with spillway on left end, completed in June 1929. Capacity of reservoir at spillway level, 49,370 acre-ft (60.9 hm³), elevation, 1,470 ft (448.056 m). Dead storage, 2.4 acre-ft (2,960 m³) below lowest outlet at elevation 1,352.5 ft (412.24 m). Area-capacity tables for reservoir are based on a survey made in 1947. There has been no spill since November 13, 1948, date of closure. Water is released as required down Temecula Creek for diversion about 1 mi (1.6 km) below dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 34,310 acre-ft (42.304 hm³) Apr. 30, May 1, 1978, elevation, 1,454.56 ft (443.350 m); minimum, 1,038 acre-ft (1.280 hm³) Oct. 31, 1960, elevation, 1,379.44 ft (420.453 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 34,310 acre-ft (42.304 hm³) Apr. 30, May 1, elevation, 1,454.56 ft (443.350 m); minimum, 15,930 acre-ft (19.642 hm³) Dec. 16-19, elevation 1,429.18 ft (435.614 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1429.88	16320	--
Oct. 31.....	1429.50	16110	-210
Nov. 30.....	1429.23	15950	-160
Dec. 31.....	1429.32	16010	+60
CAL YR 1977.....	--	--	-1380
Jan. 31.....	1433.30	18360	+2350
Feb. 28.....	1439.53	22450	+4090
Mar. 31.....	1452.58	32590	+10140
Apr. 30.....	1454.56	34310	+1720
May 31.....	1454.42	34190	-120
June 30.....	1453.67	33530	-660
July 31.....	1452.38	32420	-1110
Aug. 31.....	1450.80	31080	-1340
Sept. 30.....	1450.22	30600	-480
WTR YR 1978.....	--	--	+14280

SANTA MARGARITA RIVER BASIN

279

11042600 TEMECULA CREEK BELOW VAIL DAM, CA

LOCATION.--Lat 33°29'42"; long 116°58'42", in Pauba Grant, Riverside County, 500 ft (150 m) below Vail Dam, 0.3 mi (0.4 km) downstream from Arroyo Seco, and 10 mi (16 km) east of Temecula.

DRAINAGE AREA.--320 mi² (829 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 1,340 ft (408 m), from topographic map.

REMARKS.--Records good. All flow past gage controlled by Vail Lake, capacity, 49,370 acre-ft (60.9 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24 ft³/s (0.68 m³/s) July 21, 1978, gage height, 1.60 ft (0.488 m); no flow much of year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s (0.68 m³/s) July 21, gage height, 1.60 ft (0.488 m); no flow much of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0	2.8	4.7	16	4.5
2								0	2.6	5.0	15	4.2
3								0	2.8	5.0	15	4.2
4								0	2.5	4.7	14	4.0
5								0	.87	5.0	14	3.8
6								0	0	5.0	14	3.8
7								0	0	5.0	13	3.8
8								0	0	4.7	13	3.6
9								0	0	4.7	13	3.6
10								0	0	4.7	13	3.6
11								0	0	4.7	13	3.6
12								0	1.7	4.7	13	3.6
13								0	2.5	4.7	13	1.4
14								0	2.2	4.7	13	0
15								0	2.0	5.3	13	0
16								0	2.0	5.3	13	0
17								0	2.0	5.3	13	0
18								0	2.5	5.3	13	0
19								0	2.8	6.0	14	0
20								0	3.0	6.5	14	0
21								0	3.3	15	13	0
22								0	4.4	20	8.8	0
23								0	4.4	16	6.6	0
24								0	4.4	15	6.6	0
25								0	4.4	15	6.6	0
26								.08	4.3	15	4.6	0
27								.14	4.3	15	2.7	0
28								.12	4.3	15	4.3	0
29					---			.12	4.2	16	5.4	0
30					---			.14	4.7	17	5.1	0
31		---			---		---	2.0	---	17	4.7	---
TOTAL	0	0	0	0	0	0	0	2.60	74.97	277.0	340.4	47.7
MEAN	0	0	0	0	0	0	0	.084	2.50	8.94	11.0	1.59
MAX	0	0	0	0	0	0	0	2.0	4.7	20	16	4.5
MIN	0	0	0	0	0	0	0	0	0	4.7	2.7	0
AC-FT	0	0	0	0	0	0	0	5.2	149	549	675	95
WTR YR 1978	TOTAL	742.67	MEAN	2.03	MAX	20	MIN	0	AC-FT	1470		

11043000 MURRIETA CREEK AT TEMECULA, CA

LOCATION.--Lat 33°28'47", long 117°08'35", in Temecula Grant, Riverside County, on right bank 0.4 mi (0.6 km) upstream from mouth, and 1.0 mi (1.6 km) south of Temecula.

DRAINAGE AREA.--222 mi² (575 km²)

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only October 1924 to September 1930, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 970 ft (296 m), from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.--Records fair above 100 ft³/s (2.83 m³/s) and poor below. No regulation above station. Pumping above station for irrigation of about 2,500 acres (10.1 km²).

AVERAGE DISCHARGE.--54 years, 9.54 ft³/s (0.270 m³/s), 6,910 acre-ft/yr (8.52 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s (496 m³/s) Jan. 23, 1943, gage height, 13.82 ft (4.212 m); minimum daily, 0.02 ft³/s (0.001 m³/s) at times in 1969, no flow Dec. 11, 1976 because of upstream channel work.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	2130	7840 222	9.66 2.944	Feb. 13	0400	3220 91.2	6.76 2.060
Jan. 10	0700	7920 224	9.70 2.957	Mar. 1	0730	*14800 419	12.53 3.819
Jan. 16	2200	6610 187	9.03 2.752	Mar. 4	1600	10600 300	10.90 3.322
Jan. 19	1330	6630 188	9.04 2.755	Mar. 12	0300	262 7.42	2.75 0.838
Feb. 10	0600	11800 334	11.67 3.557	Mar. 31	0800	392 11.1	3.13 0.954

Minimum daily discharge, 0.28 ft³/s (0.008 m³/s) Oct. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.47	.42	.67	5.0	4840	40	1.8	8.9	4.5	.59	.60
2	.28	.47	.42	.60	4.5	1350	29	1.5	8.9	4.5	.46	.40
3	.28	.47	.40	.83	4.0	339	25	1.8	8.9	4.5	.40	.40
4	.28	.44	.42	1360	3.0	2510	23	2.5	8.5	4.5	.40	.35
5	.28	.47	.42	523	6.0	2340	22	2.5	6.8	4.2	.40	7.0
6	.31	.49	.42	115	9.0	291	21	2.5	7.1	2.7	.40	11
7	.31	.49	.44	10	15	162	61	2.4	5.3	1.3	.40	2.0
8	.29	.49	.44	4.0	45	113	25	2.7	3.1	1.1	.40	1.5
9	.29	.47	.42	10	616	97	20	3.1	2.4	1.1	.50	1.4
10	.29	.47	.42	1640	2530	87	17	6.8	2.0	1.1	.50	1.0
11	.31	.47	.42	107	247	80	15	9.6	1.7	1.1	.50	.80
12	.31	.47	.42	12	216	148	15	8.9	1.5	1.1	.50	.70
13	.31	.49	.42	7.0	1180	65	16	8.5	1.3	1.1	.50	.65
14	.31	.52	.42	133	152	50	19	7.8	1.3	1.0	.50	.66
15	.31	.54	.44	1540	50	40	24	7.8	5.9	1.0	.50	.66
16	.32	.54	.42	889	40	35	40	8.9	7.8	.89	.50	.66
17	.32	.44	.44	341	30	30	15	8.5	7.1	1.0	.50	.77
18	.34	.44	.74	31	20	25	14	8.2	6.4	1.0	.55	.77
19	.36	.44	.70	1020	15	20	14	7.8	6.4	1.5	.30	.66
20	.36	1.3	.47	150	11	20	12	8.5	5.6	1.0	.30	.59
21	.38	1.6	.47	35	8.0	25	10	8.2	4.8	.77	.40	.59
22	.38	.40	.49	15	6.0	50	8.0	7.8	4.8	.77	1.0	.59
23	.40	.40	.54	10	5.0	30	5.0	8.2	4.8	.66	.50	.59
24	.40	.42	.54	7.0	3.5	20	4.0	8.5	3.9	.66	.40	.53
25	.40	.42	.57	6.5	3.0	19	5.0	9.2	3.3	.59	.50	.45
26	.42	.44	17	6.0	2.5	16	3.5	9.2	3.7	.77	.60	.45
27	.42	.42	6.4	5.0	7.0	14	2.0	8.5	3.9	.66	.40	.45
28	.44	.42	37	4.5	227	11	1.0	8.9	3.9	1.1	.40	.45
29	.44	.40	8.0	4.0	---	10	1.5	8.2	3.9	.89	.40	.45
30	.47	.42	1.2	6.0	---	15	2.0	8.2	4.8	.77	.40	.60
31	.47	---	.82	9.0	---	158	---	8.2	---	.66	.45	---
TOTAL	10.77	15.72	82.14	8102.10	5460.5	13010	509.0	205.2	148.7	48.49	14.55	37.72
MEAN	.35	.32	2.65	261	195	420	17.0	6.62	4.96	1.56	.47	1.26
MAX	.47	1.6	37	1640	2530	4840	61	9.6	8.9	4.5	1.0	11
MIN	.28	.40	.40	.60	2.5	10	1.0	1.5	1.3	.59	.30	.35
AC-FT	21	31	163	16070	10830	25810	1010	407	295	96	29	75

CAL YR 1977 TOTAL 432.88 MEAN 1.19 MAX 102 MIN .10 AC-FT 859
WTR YR 1978 TOTAL 27644.89 MEAN 75.7 MAX 4840 MIN .28 AC-FT 54830

LOCATION.--Lat 33°28'26", long 117°08'29", in Temecula Grant, Riverside County, on left bank at upper end of Temecula Canyon, 0.1 mi (0.2 km) downstream from Murrieta Creek, 1.4 mi (2.3 km) south of Temecula, and 10 mi (16 km) downstream from Vail Lake.

PERIOD OF RECORD.--January 1923 to current year. Prior to October 1952, published as Temecula Creek at Railroad Canyon, near Temecula.

REMARKS.--Records fair. Flow partly regulated since November 1948 by Vail Lake (station 11042500). Pumping above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Feb. 16, 1927, gage height, 14.6 ft (4.45 m), at site then in use, from rating curve extended above 10,000 ft³/s (283 m³/s); minimum daily, 0.30 ft³/s (0.008 m³/s) Aug. 18-22, 1965, regulation by construction work above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft³/s (396 m³/s), estimated, Mar. 1; maximum gage height, 13.88 ft (4.231 m) Feb. 10; minimum daily discharge, 0.71 ft³/s (0.020 m³/s) Aug. 19, 20.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.0	2.5	3.2	6.8	4400	46	6.0	9.0	7.1	1.8	1.7
2	1.6	2.0	2.4	3.0	5.6	1740	31	5.6	11	7.6	2.0	1.3
3	1.5	2.0	2.4	3.4	5.3	621	26	5.7	11	9.0	1.6	1.3
4	1.5	2.0	2.1	1130	4.5	2510	26	8.0	11	7.6	1.8	1.2
5	1.5	2.0	2.2	659	7.1	2290	26	7.6	11	7.1	1.8	9.5
6	1.7	2.0	2.2	141	11	372	22	7.1	10	5.6	1.8	14
7	1.7	2.1	2.2	11	19	210	74	6.7	6.7	3.2	1.8	2.8
8	1.5	1.6	2.2	5.0	53	146	27	4.9	3.4	3.4	1.8	2.3
9	1.6	2.0	2.2	14	728	128	26	4.9	3.7	3.7	2.0	2.3
10	1.5	1.8	2.2	1580	2230	110	20	7.1	4.6	3.7	2.0	1.8
11	1.5	1.8	2.4	99	246	103	18	12	3.7	3.4	2.1	1.6
12	1.5	1.8	2.4	16	220	167	18	10	4.6	3.0	2.0	1.8
13	1.5	2.0	2.4	8.9	1270	74	20	11	4.0	2.5	2.1	1.8
14	1.5	2.0	4.0	146	159	58	21	10	4.9	2.1	1.8	1.8
15	1.5	2.1	1.5	1600	64	50	26	11	7.1	2.1	2.0	1.6
16	1.5	2.1	2.2	924	48	40	42	10	8.0	2.1	2.0	1.8
17	1.6	2.0	2.4	637	35	39	16	5.6	6.7	2.3	2.0	1.8
18	1.7	2.0	3.6	38	25	28	16	6.0	6.0	1.5	2.3	1.8
19	1.8	2.0	2.7	1140	19	25	16	5.6	6.0	1.8	.71	1.6
20	1.9	2.7	2.1	198	14	24	14	5.6	6.3	2.1	.71	1.5
21	1.9	3.4	2.1	43	10	30	13	6.0	6.3	1.8	.89	1.6
22	2.0	2.1	2.1	18	8.0	64	12	6.0	6.0	1.8	2.5	1.5
23	1.9	2.0	2.4	13	6.0	39	8.5	6.3	6.3	1.6	1.1	1.5
24	1.8	2.0	2.2	10	4.6	26	8.0	6.3	6.3	1.6	1.1	1.5
25	1.8	2.2	2.4	8.2	4.0	23	9.0	7.1	6.0	1.6	1.2	1.5
26	1.9	2.5	19	7.5	3.7	20	6.7	8.5	6.7	3.0	1.8	1.5
27	1.9	2.4	8.0	6.8	12	17	6.0	8.5	7.1	1.5	1.3	1.5
28	2.0	2.4	40	6.2	186	14	5.2	8.5	7.1	1.2	1.3	1.5
29	2.0	2.4	11	5.9	---	12	5.6	8.0	7.6	1.3	1.3	1.5
30	2.0	2.4	4.2	8.5	---	17	5.6	9.0	8.5	2.3	1.3	2.0
31	2.0	---	3.4	11	---	170	---	9.5	---	1.6	1.5	---
TOTAL	52.7	63.7	145.1	8494.6	5404.6	13567	610.6	234.1	206.0	100.2	51.41	70.9
MEAN	1.70	2.12	4.68	274	193	438	20.4	7.55	6.87	3.83	1.66	2.36
MAX	2.0	3.4	40	1600	2230	4400	74	12	11	9.0	2.5	14
MIN	1.5	1.6	1.5	3.0	3.7	12	5.2	4.9	3.4	1.2	.71	1.2
AC-FT	105	126	288	16850	10720	26910	1210	464	409	199	102	141
CAL YR 1977	TOTAL	1156.04	MEAN	3.17	MAX	138	MIN	.97	AC-FT	2290		
WTR YR 1978	TOTAL	29000.91	MEAN	79.5	MAX	4400	MIN	.71	AC-FT	57520		

SANTA MARGARITA RIVER BASIN

11044500 SANTA MARGARITA RIVER NEAR FALLBROOK, CA

LOCATION.--Lat 33°23'54", long 117°15'44", in NE¼SE¼NE¼ sec.14, T.9 S., R.4 W., San Diego County, on right bank 180 ft (55 m) upstream from De Luz Road, 1.3 mi (2.1 km) northwest of Fallbrook, and 1.9 mi (3.1 km) downstream from Sandia Canyon.

DRAINAGE AREA.--644 mi² (1,668 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for October and November 1924, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-72-1: 1971.

GAGE.--Water-stage recorder. Concrete-road control since October 1955. Datum of gage is 267.96 ft (81.674 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Oct. 1, 1955, at site 1.7 mi (2.7 km) upstream at different datum. Records equivalent except for extreme low flows.

REMARKS.--Records good except those for periods Oct. 1 to Nov. 14 and Mar. 2 to Sept. 30, which are poor. Flow partly regulated since November 1948 by Vail Lake (station 11042500). Several small diversions above station for irrigation. The Fallbrook Public Utility District reports no water pumped during the current year from a well in the streambed 2.1 mi (3.4 km) upstream from the station.

AVERAGE DISCHARGE.--24 years (water years 1925-48), unregulated, 35.4 ft³/s (1.003 m³/s), 25,630 acre-ft/yr (31.6 hm³/yr); 30 years (water years 1949-78), 15.2 ft³/s (0.430 m³/s), 11,010 acre-ft/yr (13.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s (937 m³/s) Feb. 16, 1927, gage height, 15.6 ft (4.75 m), site and datum then in use, from rating curve extended above 8,800 ft³/s (249 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in recent years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,000 ft³/s (623 m³/s) Mar. 1, gage height, 14.55 ft (4.435 m) from floodmark; minimum daily, 0.40 ft³/s (0.011 m³/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	1.2	1.5	6.6	44	5400	200	39	25	14	5.5	6.5
2	.40	1.2	1.5	6.2	37	2000	100	37	24	13	5.5	6.5
3	.40	1.2	1.7	6.2	33	930	85	36	24	13	5.5	6.5
4	.40	1.2	1.7	332	30	3000	80	35	23	13	5.5	6.0
5	.42	1.2	1.8	1440	33	2500	75	36	23	12	5.5	10
6	.45	1.3	2.0	304	63	400	70	35	22	9.5	10	20
7	.45	1.4	2.0	49	95	330	180	33	22	9.0	13	16
8	.45	1.3	2.2	27	196	280	100	31	17	8.5	5.0	13
9	.48	1.2	2.2	31	804	260	80	30	11	8.5	5.5	11
10	.48	1.3	2.3	2000	3600	220	75	29	11	8.5	5.7	10
11	.50	1.2	2.2	281	681	180	60	30	11	8.5	6.0	9.0
12	.55	1.2	2.4	73	377	280	55	31	11	8.5	6.0	10
13	.55	1.3	2.3	60	1990	200	69	30	12	7.0	6.0	10
14	.65	1.3	2.5	87	508	125	68	30	12	7.0	5.5	10
15	.70	1.3	3.0	1970	295	95	69	29	12	7.0	5.5	10
16	.80	1.1	2.5	716	220	85	125	29	14	7.0	5.5	10
17	.90	1.1	2.1	1710	208	70	102	29	12	7.0	5.5	10
18	1.0	1.5	3.3	198	171	65	86	28	11	6.0	5.5	9.5
19	1.1	1.7	3.7	1170	137	55	78	27	11	6.0	4.5	9.0
20	1.2	1.6	2.8	596	118	50	70	27	11	6.0	3.5	8.5
21	1.4	1.8	2.5	178	107	70	67	27	11	5.5	5.5	8.5
22	1.6	2.5	2.5	114	99	130	63	27	11	5.5	5.0	8.5
23	1.4	1.7	3.1	87	91	100	60	27	11	5.0	5.0	8.5
24	1.3	1.7	3.2	67	84	80	50	28	11	5.0	5.0	8.5
25	1.2	2.0	3.3	58	78	70	45	28	11	5.0	5.5	8.5
26	1.2	2.6	9.9	54	73	60	44	28	12	5.5	5.5	8.5
27	1.3	3.1	26	47	71	50	40	28	12	5.5	5.5	8.5
28	1.2	2.6	25	42	232	45	39	28	13	5.0	5.5	8.5
29	1.2	1.5	31	38	---	40	39	28	13	5.0	6.0	8.5
30	1.3	1.4	13	36	---	45	39	27	14	6.0	6.5	9.0
31	1.3	---	8.1	40	---	250	---	26	---	7.0	6.5	---
TOTAL	26.68	46.7	173.3	11824.0	10475	17465	2313	933	438	239.0	181.7	287.0
MEAN	.86	1.56	5.59	381	374	563	77.1	30.1	14.6	7.71	5.86	9.57
MAX	1.6	3.1	31	2000	3600	5400	200	39	25	14	13	20
MIN	.40	1.1	1.5	6.2	30	40	39	26	11	5.0	3.5	6.0
AC-FT	53	93	344	23450	20780	34640	4590	1850	869	474	360	569
CAL YR 1977	TOTAL	1577.38	MEAN	4.32	MAX	211	MIN	0	AC-FT	3130		
WTR YR 1978	TOTAL	44402.38	MEAN	122	MAX	5400	MIN	.40	AC-FT	88070		

11044500 SANTA MARGARITA RIVER NEAR FALLBROOK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Water years 1967 to current year.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
JAN 12...	1520	62	970	8.1	14.0	120	9.5	310	140	77	29	88
MAR 20...	1520	50	800	8.3	18.0	70	8.9	280	110	67	27	74
JUN 30...	1445	14	1200	8.4	27.0	5	7.5	420	180	99	43	120
SEP 29...	1405	8.5	1290	8.3	26.5	3	7.1	470	--	110	48	120

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
JAN 12...	38	2.0	5.0	210	0	172	2.7	140	120	.4	621
MAR 20...	36	2.0	4.0	210	0	172	1.7	110	100	.5	555
JUN 30...	38	2.0	4.0	290	4	245	1.9	200	160	.6	788
SEP 29...	35	2.4	3.0	--	--	--	--	180	180	.4	893

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
JAN 12...	579	3.4	15	.00	.03	.00	1.2	1.2	.36	--	.20
MAR 20...	499	2.1	9.3	--	--	--	--	--	--	--	--
JUN 30...	771	.68	3.0	--	<.01	.00	.35	.35	.11	--	.10
SEP 29...	--	.54	1.8	<.01	--	.00	--	.48	.31	.20	.61

SANTA MARGARITA RIVER BASIN

11044500 SANTA MARGARITA RIVER NEAR FALLBROOK, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT 24...	1645	1.2	--	--	17.5	--	--	--	--
NOV 03...	1520	2.1	--	--	15.0	0	0	--	10
JAN 12...	1520	62	970	8.1	14.0	--	--	90	--
MAR 20...	1520	50	800	8.3	18.0	--	--	0	--
MAY 23...	1110	27	--	--	23.0	0	200	--	0
25...	1100	28	--	--	22.2	--	--	--	--
JUN 30...	1445	14	1200	8.4	27.0	--	--	100	--
SEP 29...	1405	8.5	1290	8.3	26.5	--	--	100	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, SUS- PENDE- D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
OCT 24...	--	--	--	--	--	--	--	--
NOV 03...	0	0	30	0	--	280	2.0	0
JAN 12...	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--
MAY 23...	0	0	0	--	0	30	.0	20
25...	--	--	--	--	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	--
SEP 29...	--	--	--	--	--	--	--	--

11046000 SANTA MARGARITA RIVER AT YSIDORA, CA

LOCATION.--Lat 33°14'13", long 117°23'14", in NE¼SW¼NE¼ sec.10, T.11 S., R.5 W., San Diego County, on Camp Joseph H. Pendleton Naval Reservation, on left bank 1.7 mi (2.7 km) upstream from mouth at Pacific Ocean, and 2.0 mi (3.2 km) southwest of Ysidora.

DRAINAGE AREA.--740 mi² (1,917 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1923 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5.00 ft (1.524 m) below National Geodetic Vertical Datum of 1929 (U.S. Navy reference mark). See WSP 1735 for history of changes prior to Nov. 27, 1935. Nov. 27, 1935, to Feb. 25, 1970, at site 0.8 mi (1.3 km) upstream at different datum.

REMARKS.--Records poor except those for January through March, which are fair. Flow partly regulated by Vail Lake since November 1948 (station 11042500). Diversions for irrigation on Rancho California (formerly Santa Margarita Ranch and Pauba Ranch). Large conservation pools, starting 0.5 mi (0.8 km) upstream can detain flow. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development.

AVERAGE DISCHARGE.--55 years, 29.0 ft³/s (0.821 m³/s), 21,010 acre-ft/yr (25.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,600 ft³/s (952 m³/s) Feb. 16, 1927, gage height, 18.00 ft (5.486 m), site and datum then in use, on basis of slope-area measurement of maximum flow; maximum gage height, 18.12 (5.523 m) Mar. 1, 1978; no flow for all or part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,200 ft³/s (600 m³/s) Mar. 1, gage height, 18.12 ft (5.523 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	80	9060	100	20	15	.20		
2				0	70	6730	70	20	15	.15		
3				0	60	3730	60	20	15	.05		
4				81	55	3380	55	19	15	.03		
5				668	55	6270	50	19	15	.02		
6				933	120	1790	50	18	15	.01		
7				217	150	433	90	18	14	.01		
8				80	400	200	60	18	10	0		
9				44	1300	125	50	17	7.0	0		
10				1040	5350	104	45	17	5.0	0		
11				1830	3060	94	40	16	1.0	0		
12				387	1420	123	35	16	.50	0		
13				188	3840	104	32	16	.45	0		
14				762	1980	80	35	16	.40	0		
15				3940	579	65	35	16	.40	0		
16				2270	400	60	70	16	.40	0		
17				4110	300	55	60	16	.40	0		
18				1530	230	50	50	16	.40	0		
19				1080	190	48	45	16	.40	0		
20				2220	170	46	40	16	.40	0		
21				628	150	50	35	15	.40	0		
22				293	140	80	35	15	.40	0		
23				193	130	65	30	15	.40	0		
24				133	120	55	30	15	.40	0		
25				106	115	48	25	15	.40	0		
26				95	110	45	23	15	.40	0		
27				85	105	40	22	15	.40	0		
28				75	164	38	22	15	.40	0		
29				70	---	36	21	15	.35	0		
30				70	---	36	21	15	.30	0		
31		---		85	---	150	---	15	---	0		---
TOTAL	0	0	0	23213	20843	33190	1336	511	134.60	.47	0	0
MEAN	0	0	0	749	744	1071	44.5	16.5	4.49	.015	0	0
MAX	0	0	0	4110	5350	9060	100	20	15	.20	0	0
MIN	0	0	0	0	55	36	21	15	.30	0	0	0
AC-FT	0	0	0	46040	41340	65830	2650	1010	267	.9	0	0
CAL YR 1977 TOTAL	0.00			MEAN .00	MAX .00	MIN 0	AC-FT 0					
WTR YR 1978 TOTAL	79228.07			MEAN 217	MAX 9060	MIN 0	AC-FT 157100					

11046000 SANTA MARGARITA RIVER AT YSIDORA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	80	60	13	9060	6360	206000
2	0	0	0	70	50	9.5	6730	4220	78100
3	0	0	0	60	40	6.5	3730	2610	29400
4	81	38	20	55	30	4.5	3380	2850	43700
5	668	1160	3910	55	30	4.5	6270	3930	69700
6	933	2790	7280	120	28	9.1	1790	900	4350
7	217	1260	815	150	80	32	433	300	351
8	80	460	99	400	100	108	200	250	135
9	44	90	11	1300	633	4630	125	200	67
10	1040	1810	17900	5350	5520	97600	104	180	51
11	1830	3570	18100	3060	3980	35600	94	150	38
12	387	950	993	1420	900	3450	123	200	66
13	188	250	127	3840	3280	37600	104	180	51
14	762	1870	3850	1980	940	5030	80	170	37
15	3940	4400	68200	579	300	469	65	160	28
16	2270	1540	10400	400	250	270	60	150	24
17	4110	4240	54800	300	200	162	55	150	22
18	1530	1050	4340	230	190	118	50	140	19
19	1080	800	3510	190	180	92	48	140	18
20	2220	3240	22400	170	150	69	46	140	17
21	628	900	1530	150	130	53	50	130	18
22	293	340	269	140	110	42	80	130	28
23	193	200	104	130	90	32	65	130	23
24	133	120	43	120	70	23	55	120	18
25	106	95	27	115	60	19	48	120	16
26	95	90	23	110	50	15	45	120	15
27	85	80	18	105	60	17	40	110	12
28	75	70	14	164	455	458	38	110	11
29	70	60	11	---	---	---	36	100	9.7
30	70	60	11	---	---	---	36	100	9.7
31	85	70	16	---	---	---	150	300	121
TOTAL	23213.00	---	218821.0	20843	---	185936.1	33190	---	432455.4
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	100	200	54	20	30	1.6	15	35	1.4
2	70	150	28	20	30	1.6	15	35	1.4
3	60	150	24	20	30	1.6	15	35	1.4
4	55	150	22	19	32	1.6	15	35	1.4
5	50	140	19	19	30	1.5	15	35	1.4
6	50	140	19	18	30	1.5	15	35	1.4
7	90	140	34	18	30	1.5	14	34	1.3
8	60	140	23	18	30	1.5	10	32	.86
9	50	130	18	17	30	1.4	7.0	30	.57
10	45	130	16	17	30	1.4	5.0	28	.38
11	40	120	13	16	30	1.3	1.0	27	.07
12	35	120	11	16	30	1.3	.50	26	.04
13	32	110	9.5	16	30	1.3	.45	25	.03
14	35	110	10	16	30	1.3	.40	24	.03
15	35	100	9.5	16	30	1.3	.40	24	.03
16	70	100	19	16	30	1.3	.40	24	.03
17	60	100	16	16	32	1.4	.40	24	.03
18	50	105	14	16	32	1.4	.40	23	.02
19	45	100	12	16	32	1.4	.40	23	.02
20	40	80	8.6	16	32	1.4	.40	23	.02
21	35	60	5.7	15	32	1.3	.40	23	.02
22	35	40	3.8	15	32	1.3	.40	23	.02
23	30	30	2.4	15	33	1.3	.40	22	.02
24	30	30	2.4	15	33	1.3	.40	22	.02
25	25	29	2.0	15	33	1.3	.40	22	.02
26	23	30	1.9	15	33	1.3	.40	22	.02
27	22	30	1.8	15	33	1.3	.40	22	.02
28	22	30	1.8	15	34	1.4	.40	22	.02
29	21	30	1.7	15	34	1.4	.35	22	.02
30	21	30	1.7	15	34	1.4	.30	22	.02
31	---	---	---	15	34	1.4	---	---	---
TOTAL	1336	---	404.8	511	---	43.3	134.60	---	12.03

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	.20	20	.01						
2	.15	18	.01						
3	.05	15	0						
4	.03	14	0						
5	.02	12	0						
6	.01	11	0						
7	.01	10	0						
8	0	0	0						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	0	0	0						
TOTAL	.47	---	.02	0	0	0	0	0	0
YEAR 79228.07			837672.7						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
JAN									
09...	1350	14.5	37	54	5.4	--	--	--	--
16...	1615	14.0	1730	940	4390	--	82	91	96
17...	1115	16.0	5430	5700	83600	--	61	77	87
17...	1705	16.0	4100	3450	38200	--	71	81	90
19...	1145	15.5	794	345	740	63	75	84	91
DATE						SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM
JAN									
09...	--	--	95	--	96	--	98	--	100
16...	99	--	99	--	100	--	--	--	--
17...	91	92	--	94	--	98	--	100	--
17...	93	--	94	--	95	--	98	--	100
19...	93	--	94	--	96	--	99	--	100

11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA

LOCATION.--Lat 33°17'32", long 117°27'21", in NW¼SE¼ sec.24, T.10 S., R.6 W., San Diego County, Camp Joseph H. Pendleton Naval Reservation, on upstream side and at center of bridge on Atchison, Topeka, and Santa Fe Railway, 0.5 mi (0.8 km) upstream from mouth, and 8.5 mi (13.7 km) northwest of Oceanside.

DRAINAGE AREA.--26.6 mi² (68.9 km²).

PERIOD OF RECORD.--May 1951 to September 1967, October 1969 to current year.

REVISED RECORDS.--WDR CA-72: 1971.

GAGE.--Water-stage recorder and multiple concrete culvert control. Altitude of gage is 35 ft (11 m), from topographic map.

REMARKS.--Records fair. No gage-height record Mar. 1-29, May 4 to July 11, and Aug. 2 to Sept. 30. No regulation above station. Some pumping above station for irrigation.

AVERAGE DISCHARGE.--25 years, 1.20 ft³/s (0.034 m³/s), 869 acre-ft/yr (1.071 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 1, 1978, gage height, 13.5 ft (4.110 m), estimated, from floodmarks, based on culvert computation of peak flow; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, reached a stage of 7.25 ft (2.210 m), from floodmarks, discharge, 4,200 ft³/s (119 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 1, gage height, 13.5 ft (4.110 m), estimated, from floodmark, based on culvert computation of peak flow; no flow several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.01	.06	927	11	3.0	.07			
2			0	.01	.05	640	11	3.0	.05			
3			0	.01	.06	300	7.4	2.2	.03			
4			0	.04	.06	900	8.3	2.3	.02			
5			0	.02	.50	540	6.6	2.5	.02			
6			0	.01	7.1	300	6.5	2.1	.01			
7			0	.01	20	200	14	1.9	.01			
8			0	.01	16	100	8.0	1.5	.01			
9			0	.02	173	62	5.4	1.3	0			
10			0	.41	377	50	5.3	1.1	0			
11			0	.02	59	40	4.9	.90	0			
12			0	.01	91	36	4.8	.80	0			
13			0	.01	183	32	4.7	.70	0			
14			0	1.5	13	29	4.7	.60	0			
15			.01	186	6.9	26	5.7	.54	0			
16			0	382	6.3	23	6.5	.48	0			
17			0	289	6.3	21	4.2	.44	0			
18			.01	4.7	6.6	20	3.7	.40	0			
19			0	43	6.3	19	3.9	.36	0			
20			.01	4.1	5.9	18	3.9	.34	0			
21			.01	.23	5.2	17	3.9	.31	0			
22			.01	.17	4.6	16	3.7	.29	0			
23			.01	.12	4.0	15	3.0	.27	0			
24			.01	.10	3.4	14	2.8	.24	0			
25			.01	.09	2.8	13	3.2	.23	0			
26			.01	.09	2.8	12	2.9	.21	0			
27			.01	.08	2.9	11	2.8	.18	0			
28			.01	.08	12	10	2.5	.15	0			
29			.01	.07	---	11	2.5	.12	0			
30			.01	.18	---	11	2.6	.10	0			
31		---	.01	.07	---	16	---	.08	---			---
TOTAL	0	0	.14	912.17	1015.83	4429	160.4	28.64	.22	0	0	0
MEAN	0	0	.005	29.4	36.3	143	5.35	.92	.007	0	0	0
MAX	0	0	.01	382	377	927	14	3.0	.07	0	0	0
MIN	0	0	0	.01	.05	10	2.5	.08	0	0	0	0
AC-FT	0	0	.3	1810	2010	8780	318	57	.4	0	0	0
CAL YR 1977 TOTAL	7.05		MEAN .019		MAX 4.2	MIN 0	AC-FT 14					
WTR YR 1978 TOTAL	6546.40		MEAN 17.9		MAX 927	MIN 0	AC-FT 12980					

SAN JUAN CREEK BASIN

11046550 SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CA

LOCATION.--Lat 33°29'30", long 117°39'44", in SW¼SE¼NE¼ sec.12, T.8 S., R.8 W., Orange County, on left bank at Camino Capistrano bridge, 0.2 mi (0.3 km) upstream from Arroyo Trabuco, and 0.6 mi (1.0 km) south of San Juan Capistrano.

DRAINAGE AREA.--117 mi² (303 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 67 ft (20 m), from topographic map.

REMARKS.--Records poor. No regulation above station. Capistrano Water Co. diverts 3.0 mi (4.8 km) upstream. Various amounts of diverted water reach station as irrigation return flow and rising ground water. Data for San Juan Creek near San Juan Capistrano (station 11046500) previously collected at site 2.8 mi (4.5 km) upstream was published as creek only and combined.

COOPERATION.--Thirty-two discharge measurements were furnished by Orange County Environmental Management Agency.

AVERAGE DISCHARGE.--9 years, 13.5 ft³/s (0.382 m³/s), 9,780 acre-ft/yr (12.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s), estimated, Mar. 4, 1978, gage height, 7.0 ft (2.13 m), from floodmarks, on basis of slope-conveyance study; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, 22,400 ft³/s (634 m³/s), at site 2.8 mi (4.5 km) upstream, as station 11046500.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*), from floodmarks, on basis of slope-conveyance study:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 10	1200	2290 64.9	3.40 1.036	Mar. 7	1800	983 27.8	2.81 0.856
Feb. 13	0300	2320 65.7	3.41 1.039	Mar. 12	2300	1090 30.9	2.63 0.802
Mar. 1	1400	3750 106	3.67 1.119	Sept. 5	1900	375 10.6	2.05 0.625
Mar. 4	1700	*14700 416 †	7.0 2.13				

† Estimated.

Minimum daily discharge, 0.51 ft³/s (0.014 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	.80	.92	2.6	1.3	3320	102	57	19	4.6	5.9	3.6
2	.65	.89	.94	2.3	1.1	2840	86	55	18	5.2	5.5	3.6
3	.65	.78	.96	2.0	.95	2690	73	53	16	5.2	5.2	4.1
4	.58	.78	.98	4.4	10	5150	63	51	15	5.5	4.6	4.6
5	.51	.78	1.0	13	14	2800	95	50	14	6.6	4.3	52
6	.58	.78	1.0	5.5	24	1920	74	48	14	6.6	3.8	28
7	.58	.78	1.0	5.2	39	1120	79	46	13	4.6	3.6	14
8	.58	.78	1.0	4.9	65	586	95	44	14	3.6	3.1	10
9	.58	.78	1.0	8.8	93	498	74	43	13	3.3	4.1	8.7
10	.58	.76	1.0	13	1400	294	63	42	13	3.8	5.9	7.8
11	.58	.76	1.0	3.0	466	390	71	41	13	4.1	5.9	7.4
12	.58	.75	1.0	1.6	304	413	79	38	12	4.1	5.5	7.4
13	.58	.75	1.0	1.3	1340	287	93	35	11	4.1	5.5	7.0
14	.64	.74	1.0	21	353	224	90	33	11	4.1	5.2	7.0
15	.58	.74	1.0	86	149	190	87	32	11	4.1	5.2	6.6
16	.64	.73	1.0	83	110	180	120	31	11	4.3	4.9	5.5
17	.64	.72	1.6	100	90	149	108	30	9.7	4.6	4.9	4.9
18	.64	.72	1.4	54	78	145	97	30	9.2	4.6	4.9	4.9
19	.64	.71	1.2	102	72	140	91	29	8.7	4.6	4.6	4.6
20	.72	.71	1.0	89	66	135	86	29	7.8	4.6	4.3	4.1
21	.80	.70	1.0	16	61	122	82	29	6.6	4.6	4.1	3.8
22	.80	.70	1.0	9.2	57	122	78	28	6.2	4.6	4.1	3.6
23	.72	.70	1.2	6.4	54	110	75	28	4.9	5.2	4.1	3.3
24	.72	.70	1.0	4.8	51	114	72	27	4.6	5.9	4.1	3.3
25	.72	.70	1.0	3.9	49	110	70	26	5.2	5.9	4.9	3.3
26	.72	.70	2.0	3.3	47	109	66	25	5.5	5.9	4.3	3.6
27	.72	.72	1.8	2.9	46	105	64	24	4.9	6.6	4.3	3.3
28	.72	.78	3.5	2.5	100	104	61	23	4.9	6.2	4.1	3.6
29	.80	.84	4.8	2.2	---	103	60	22	4.9	6.2	3.8	3.6
30	.72	.90	3.7	2.0	---	102	59	21	4.6	6.2	3.6	3.6
31	.80	---	3.1	1.6	---	130	---	20	---	6.2	3.6	---
TOTAL	20.49	22.68	45.10	657.4	5141.35	24702	2413	1090	305.7	155.7	141.9	230.8
MEAN	.66	.76	1.45	21.2	184	797	80.4	35.2	10.2	5.02	4.58	7.69
MAX	.80	.90	4.8	102	1400	5150	120	57	19	6.6	5.9	52
MIN	.51	.70	.92	1.3	.95	102	59	20	4.6	3.3	3.1	3.3
AC-FT	41	45	89	1300	10200	49000	4790	2160	606	309	281	458

CAL YR 1977	TOTAL	476.15	MEAN	1.30	MAX	30	MIN	.20	AC-FT	944
WTR YR 1978	TOTAL	34926.12	MEAN	95.7	MAX	5150	MIN	.51	AC-FT	69280

WATER-QUALITY RECORDS

WATER TEMPERATURES: October 1970 to current year.
SEDIMENT RECORDS: October 1970 to current year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 13,300 mg/L Mar. 4, 1978; minimum daily mean, no flow for many days in 1970-72.

SEDIMENT DISCHARGE: Maximum daily, 331,000 tons (272,000 metric tons) Mar. 4, 1978; minimum daily, 0 tons on many days during most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 13,300 mg/L Mar. 4; minimum daily mean, 41 mg/L Oct. 12.
SEDIMENT DISCHARGE: Maximum daily, 331,000 tons (272,000 metric tons), Mar. 4; minimum daily, 0.06 tons
(0.05 metric tons) Oct. 12.

[illegible]

SAN JUAN CREEK BASIN

11046550 SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.72	61	.12	.80	58	.13	.92	45	.11
2	.65	63	.11	.89	59	.14	.94	43	.11
3	.65	66	.12	.78	59	.12	.96	43	.11
4	.58	66	.10	.78	60	.13	.98	51	.13
5	.51	67	.09	.78	62	.13	1.0	58	.16
6	.58	65	.10	.78	66	.14	1.0	62	.17
7	.58	60	.09	.78	68	.14	1.0	64	.17
8	.58	51	.08	.78	72	.15	1.0	66	.18
9	.58	48	.08	.78	75	.16	1.0	68	.18
10	.58	45	.07	.76	75	.15	1.0	68	.18
11	.58	43	.07	.76	75	.15	1.0	67	.18
12	.58	41	.06	.75	74	.15	1.0	66	.18
13	.58	42	.07	.75	74	.15	1.0	66	.18
14	.64	42	.07	.74	74	.15	1.0	65	.18
15	.58	44	.07	.74	73	.15	1.0	65	.18
16	.64	45	.08	.73	74	.15	1.0	64	.17
17	.64	48	.08	.72	74	.14	1.6	98	.42
18	.64	52	.09	.72	75	.15	1.4	76	.29
19	.64	68	.12	.71	75	.14	1.2	68	.22
20	.72	82	.16	.71	75	.14	1.0	52	.14
21	.80	100	.22	.70	76	.14	1.0	51	.14
22	.80	109	.24	.70	76	.14	1.0	51	.14
23	.72	105	.20	.70	76	.14	1.2	52	.17
24	.72	98	.19	.70	76	.14	1.0	52	.14
25	.72	92	.18	.70	76	.14	1.0	60	.16
26	.72	85	.17	.70	76	.14	2.0	84	.45
27	.72	80	.16	.72	72	.14	1.8	45	.22
28	.72	70	.14	.78	62	.13	3.5	410	3.9
29	.80	60	.13	.84	54	.12	4.8	250	3.2
30	.72	58	.11	.90	47	.11	3.7	64	.64
31	.80	57	.12	---	---	---	3.1	72	.60
TOTAL	20.49	---	3.69	22.68	---	4.20	45.10	---	13.40

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	2.6	70	.49	1.3	80	.28	3320	13000	117000
2	2.3	70	.43	1.1	90	.27	2840	5000	38300
3	2.0	113	.61	.95	100	.26	2690	5600	40700
4	4.4	807	25	10	300	8.1	5150	13300	331000
5	13	1080	108	14	1200	45	2800	9100	68800
6	5.5	58	.86	24	140	9.1	1920	4300	22300
7	5.2	36	.51	39	150	16	1120	4050	12200
8	4.9	80	1.1	65	1070	188	586	2300	3640
9	8.8	567	23	93	2750	762	498	1050	1410
10	13	1230	72	1400	10400	41500	294	790	627
11	3.0	80	.65	466	4430	6570	390	800	842
12	1.6	70	.30	304	1750	2040	413	4700	5240
13	1.3	65	.23	1340	4440	19600	287	1200	930
14	21	2300	266	393	860	820	224	740	448
15	86	6410	1620	149	610	245	190	580	298
16	83	3480	1120	110	480	143	180	440	214
17	100	8000	2160	90	480	117	149	330	133
18	54	550	80	78	450	95	145	280	110
19	102	1690	632	72	430	84	140	240	91
20	89	635	215	66	410	73	135	220	80
21	16	280	11	61	390	64	122	200	66
22	9.2	120	3.0	57	380	58	122	184	61
23	6.4	91	1.6	54	370	54	110	170	50
24	4.8	80	1.0	51	365	50	114	162	50
25	3.9	70	.74	49	360	48	110	154	46
26	3.3	80	.71	47	360	46	109	146	43
27	2.9	90	.70	46	1400	174	105	139	39
28	2.5	100	.68	100	3000	810	104	132	37
29	2.2	92	.55	---	---	---	103	126	35
30	2.0	86	.46	---	---	---	102	122	34
31	1.6	82	.35	---	---	---	130	400	140
TOTAL	657.4	---	6346.97	5141.35	---	73620.01	24702	---	644964

SAN JUAN CREEK BASIN

11046550 SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	102	270	74	57	325	50	19	49	2.5
2	86	230	53	55	360	53	18	47	2.3
3	73	205	40	53	380	54	16	45	1.9
4	63	195	33	51	385	53	15	43	1.7
5	95	330	85	50	385	52	14	43	1.6
6	74	280	56	48	380	49	14	42	1.6
7	79	265	57	46	375	47	13	42	1.5
8	95	590	151	44	365	43	14	42	1.6
9	74	300	60	43	336	39	13	42	1.5
10	63	230	39	42	338	38	13	43	1.5
11	71	290	56	41	275	30	13	43	1.5
12	79	350	75	38	74	7.6	12	44	1.4
13	93	400	100	35	59	5.6	11	45	1.3
14	90	330	80	33	51	4.5	11	47	1.4
15	87	290	68	32	49	4.2	11	48	1.4
16	120	570	185	31	47	3.9	11	50	1.5
17	108	510	149	30	49	4.0	9.7	53	1.4
18	97	390	102	30	53	4.3	9.2	56	1.4
19	91	330	81	29	57	4.5	8.7	59	1.4
20	86	280	65	29	62	4.9	7.8	67	1.4
21	82	250	55	29	66	5.2	6.6	72	1.3
22	78	210	44	28	72	5.4	6.2	80	1.3
23	75	195	39	28	75	5.7	4.9	92	1.2
24	72	190	37	27	78	5.7	4.6	105	1.3
25	70	195	37	26	80	5.6	5.2	119	1.7
26	66	198	35	25	73	4.9	5.5	136	2.0
27	64	210	36	24	69	4.5	4.9	143	1.9
28	61	235	39	23	66	4.1	4.9	150	2.0
29	60	255	41	22	64	3.8	4.9	152	2.0
30	59	295	47	21	51	2.9	4.6	150	1.9
31	---	---	---	20	53	2.9	---	---	---
TOTAL	2413	---	2019	1090	---	602.2	305.7	---	48.4

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	4.6	144	1.8	5.9	89	1.4	3.6	62	.60
2	5.2	131	1.8	5.5	91	1.4	3.6	61	.59
3	5.2	115	1.6	5.2	93	1.3	4.1	60	.66
4	5.5	106	1.6	4.6	96	1.2	4.6	60	.75
5	6.6	84	1.5	4.3	98	1.1	92	2730	1300
6	6.6	73	1.3	3.8	99	1.0	28	376	40
7	4.6	67	.83	3.6	99	.96	14	210	7.9
8	3.6	68	.66	3.1	97	.81	10	80	2.2
9	3.3	69	.61	4.1	94	1.0	8.7	78	1.8
10	3.8	71	.73	5.9	90	1.4	7.8	77	1.6
11	4.1	77	.85	5.9	85	1.4	7.4	76	1.5
12	4.1	84	.93	5.5	81	1.2	7.4	76	1.5
13	4.1	93	1.0	5.5	78	1.2	7.0	77	1.5
14	4.1	103	1.1	5.2	75	1.1	7.0	78	1.5
15	4.1	112	1.2	5.2	73	1.0	6.6	79	1.4
16	4.3	110	1.3	4.9	71	.94	5.5	81	1.2
17	4.6	109	1.4	4.9	69	.91	4.9	82	1.1
18	4.6	107	1.3	4.9	68	.90	4.9	80	1.1
19	4.6	102	1.3	4.6	67	.83	4.6	74	.98
20	4.6	99	1.2	4.3	65	.73	4.1	66	.7
21	4.6	97	1.2	4.1	65	.72	3.8	59	.61
22	4.6	95	1.2	4.1	64	.71	3.6	55	.53
23	5.2	93	1.3	4.1	64	.71	3.3	52	.46
24	5.9	92	1.5	4.1	64	.71	3.3	50	.45
25	5.9	92	1.5	4.9	64	.89	3.3	43	.38
26	5.9	88	1.4	4.3	63	.71	3.6	38	.37
27	6.6	87	1.6	4.3	63	.73	3.3	34	.30
28	6.2	86	1.4	4.1	63	.70	3.6	31	.30
29	6.2	86	1.4	3.8	62	.64	3.6	28	.27
30	6.2	87	1.5	3.6	62	.60	3.6	28	.28
31	6.2	88	1.5	3.6	62	.60	---	---	---
TOTAL	155.7	---	39.51	141.9	---	29.50	230.8	---	1372.47

YEAR 34926.12

729063.35

SAN JUAN CREEK BASIN

11046550 SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	20.49	3.69	0	4
NOVEMBER ...	22.68	4.20	0	4
DECEMBER ...	45.10	13.40	2	15
JANUARY 1978	657.40	6346.97	404	6750
FEBRUARY ...	5141.35	73620.01	41900	116000
MARCH	24702.00	644964.00	221000	866000
APRIL	2413.00	2019.00	1620	3640
MAY	1090.00	602.20	255	857
JUNE	305.70	48.40	43	91
JULY	155.70	39.51	15	55
AUGUST	141.90	29.50	13	42
SEPTEMBER ..	230.80	1372.47	36	1410
TOTAL	34926.12	729063.35	265288	994868

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW (CFS)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC											
26...	1035	17.5	2.0	2.0	107	.58	--	--	--	--	--
28...	1240	19.0	--	4.8	174	2.3	--	--	--	--	--
28...	1310	19.0	--	4.8	699	9.1	35	42	51	62	77
JAN											
14...	1730	14.0	--	49	6310	835	--	--	--	--	--
16...	1120	15.5	--	54	1600	233	--	65	69	79	84
18...	1545	16.5	--	58	606	95	48	57	63	67	70
FEB											
13...	0720	--	--	1910	1420	7320	--	--	--	--	--
MAR											
02...	1715	15.0	--	1920	3550	18400	--	27	35	46	60
04...	1520	15.0	--	5000	29200	394000	--	33	41	49	62
04...	1805	14.5	--	14700	37800	1500000	--	--	--	--	--
MAY											
02...	1450	24.0	--	56	589	89	--	--	--	--	--
09...	1415	25.0	--	44	336	40	--	--	--	--	--
31...	1400	27.5	--	16	53	2.3	--	--	--	--	--
JUN											
06...	1515	27.0	--	15	42	1.7	--	--	--	--	--
07...	1215	27.0	--	13	379	13	--	--	--	--	--
15...	1000	24.5	--	11	213	6.3	--	--	--	--	--
23...	1330	27.5	--	5.5	116	1.7	--	--	--	--	--
JUL											
07...	1115	23.5	--	4.9	67	.89	--	--	--	--	--
AUG											
08...	1355	25.0	--	3.1	83	.69	--	--	--	--	--
30...	1225	23.0	--	3.8	62	.64	--	--	--	--	--
SEP											
06...	1405	24.5	--	28	274	21	--	--	--	--	--
15...	1130	15.0	--	5.9	3280	52	--	--	--	--	--

11046550 SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC										
26...	--	97	--	99	--	100	--	--	--	--
28...	--	86	--	--	--	--	--	--	--	--
28...	--	90	--	94	--	95	--	95	97	100
JAN										
14...	--	90	--	--	--	--	--	--	--	--
16...	--	89	--	92	--	97	--	100	--	--
18...	--	73	--	79	--	94	--	100	--	--
FEB										
13...	--	89	--	--	--	--	--	--	--	--
MAR										
02...	74	--	90	--	98	--	100	--	--	--
04...	77	--	93	--	99	--	100	--	--	--
04...	--	76	--	--	--	--	--	--	--	--
MAY										
02...	--	80	--	--	--	--	--	--	--	--
09...	--	79	--	--	--	--	--	--	--	--
31...	--	97	--	--	--	--	--	--	--	--
JUN										
06...	--	92	--	--	--	--	--	--	--	--
07...	--	98	--	--	--	--	--	--	--	--
15...	--	95	--	--	--	--	--	--	--	--
23...	--	88	--	--	--	--	--	--	--	--
JUL										
07...	--	74	--	--	--	--	--	--	--	--
AUG										
08...	--	77	--	--	--	--	--	--	--	--
30...	--	89	--	--	--	--	--	--	--	--
SEP										
06...	--	71	--	--	--	--	--	--	--	--
15...	--	88	--	--	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
JUL								
07...	1245	27.0	1	4.8	3	6	12	27
07...	1250	27.0	1	4.8	1	2	5	18
07...	1255	27.0	1	4.8	--	1	2	10
07...	1300	27.0	1	4.8	--	2	6	19
07...	1305	27.0	1	4.8	1	4	13	29
07...	1310	27.0	1	4.8	--	1	2	7

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JUL							
07...	55	72	80	86	96	100	--
07...	39	54	65	77	96	100	--
07...	24	32	38	43	60	85	100
07...	41	59	70	80	100	--	--
07...	44	51	56	65	86	100	--
07...	15	22	29	38	57	85	100

LOCATION.--Lat 33°31'36", long 117°40'08", in NE¼NE¼NW¼ sec.36, T.7 S., R.8 W., Orange County, on downstream side of center pier of Camino Capistrano Road, 1.8 mi (2.9 km) north of San Juan Capistrano.

WATER-DISCHARGE RECORDS

REMARKS.--Records for current year will not be published due to indeterminate stage-discharge relation.

WATER-QUALITY RECORDS

SEDIMENT RECORDS: October 1977 to September 1978.

WATER TEMPERATURES: October 1977 to September 1978.

[illegible]

11047000 ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	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
DEC									
26...	1145	17.0	.20	19	.01	--	--	--	--
28...	1330	18.5	.84	40	.09	--	--	--	--
JAN									
05...	1340	16.5	16	933	40	41	44	51	60
10...	0730	12.0	.64	146	.25	--	--	--	--
10...	1030	15.0	.40	44	.05	--	--	--	--
15...	0845	13.0	189	114	58	--	--	--	--
15...	1200	15.0	161	3280	1430	--	--	--	--
15...	1645	14.0	100	1440	389	--	--	--	--
16...	0715	12.0	56	296	45	--	--	--	--
16...	1650	14.0	60	212	34	--	--	--	--
17...	0730	13.0	134	2200	796	62	72	82	89
17...	1145	13.0	97	1410	369	--	--	--	--
17...	1700	14.0	97	882	231	--	--	--	--
18...	1400	16.0	21	379	21	--	--	--	--
19...	0715	13.0	38	140	14	--	--	--	--
19...	1200	15.0	58	558	87	--	--	--	--
19...	1645	14.0	141	1930	735	--	--	--	--
20...	0700	11.0	56	193	29	--	--	--	--
20...	1645	15.0	36	94	9.1	--	--	--	--
21...	0800	10.0	20	58	3.1	--	--	--	--
21...	1645	15.0	18	61	3.0	--	--	--	--
FEB									
09...	0700	14.0	93	1350	339	--	--	--	--
09...	1145	15.0	108	6040	1760	--	--	--	--
09...	1650	15.0	189	3130	1600	--	--	--	--
10...	0815	13.0	640	15700	27100	--	--	--	--
10...	1230	14.0	510	10400	14300	--	--	--	--
10...	1740	13.0	376	8060	8180	--	--	--	--
11...	0700	10.5	306	4280	3540	32	38	52	65
11...	1200	13.0	266	2020	1450	--	--	--	--
11...	1650	14.0	204	2770	1530	--	--	--	--
12...	0815	9.5	134	1280	463	--	--	--	--
12...	1140	13.5	128	1330	460	--	--	--	--
12...	1700	12.0	134	2080	753	--	--	--	--
13...	0705	11.0	356	7800	7500	--	--	--	--
13...	1145	12.5	330	4770	4250	--	--	--	--
13...	1725	13.5	266	4340	3120	--	--	--	--
26...	0640	12.0	18	30	1.5	--	--	--	--
28...	1600	16.0	30	273	22	--	--	--	--

SAN JUAN CREEK BASIN

11047000 ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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
DEC								
26...	--	89	--	--	--	--	--	--
28...	--	89	--	--	--	--	--	--
JAN								
05...	--	72	--	83	--	95	--	100
10...	--	99	--	--	--	--	--	--
10...	--	95	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	93	--	--	--	--	--	--
17...	--	92	--	97	--	99	--	100
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	--	94	--	98	--	100	--	--
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
FEB								
09...	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
11...	78	--	88	--	97	--	100	--
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--

11047000 ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
MAR								
01...	0715	14.0	2050	40100	222000	--	--	--
01...	1100	15.0	680	14300	26300	--	--	--
01...	1700	15.0	740	15400	30800	--	--	--
02...	0700	14.0	376	5660	5750	--	--	--
02...	1400	14.5	1050	22400	63500	--	--	--
02...	1700	15.0	820	17600	39000	--	--	--
03...	0700	13.0	485	9960	13000	--	--	--
03...	1145	16.0	366	7480	7390	--	--	--
03...	1545	16.5	1080	10900	31800	15	18	24
03...	1730	15.0	356	7280	7000	--	--	--
04...	0245	13.0	290	6580	5150	--	--	--
04...	1600	14.0	1620	32800	143000	--	--	--
05...	0900	13.0	600	12500	20300	--	--	--
05...	1400	14.0	540	11100	16200	--	--	--
05...	1730	15.0	510	10300	14200	--	--	--
07...	1530	20.5	--	4190	--	--	--	--
APR								
25...	1530	19.5	--	30	--	--	--	--
MAY								
11...	1440	25.5	--	28	--	--	--	--
31...	1315	26.0	--	3	--	--	--	--
JUN								
06...	1410	28.0	--	3	--	--	--	--
15...	1230	--	--	2	--	--	--	--
19...	1600	28.0	--	18	--	--	--	--
23...	1445	29.5	--	6	--	--	--	--
JUL								
07...	0945	--	--	3	--	--	--	--
SEP								
06...	1440	23.5	--	14	--	--	--	--
06...	1900	22.0	--	19	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
MAR							
01...	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--
03...	32	41	--	55	78	94	100
03...	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--
07...	--	--	57	--	--	--	--
APR							
25...	--	--	70	--	--	--	--
MAY							
11...	--	--	57	--	--	--	--
31...	--	--	49	--	--	--	--
JUN							
06...	--	--	58	--	--	--	--
15...	--	--	65	--	--	--	--
19...	--	--	48	--	--	--	--
23...	--	--	33	--	--	--	--
JUL							
07...	--	--	44	--	--	--	--
SEP							
06...	--	--	51	--	--	--	--
06...	--	--	57	--	--	--	--

11047200 OSO CREEK AT CROWN VALLEY PARKWAY, NEAR MISSION VIEJO, CA

LOCATION.--Lat 33°33'29", long 117°40'33", in SE¼ sec.14, T.7 S., R.8 W., Orange County, on right upstream side of Crown Valley Parkway bridge, 2.7 mi (4.3 km) south of Mission Viejo, and 4.0 mi (6.4 km) north of San Juan Capistrano.

DRAINAGE AREA.--14.0 mi² (36.3 km²).

PERIOD OF RECORD.--December 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (76 m), from topographic map.

REMARKS.--Records good except those above 200 cfs (5.66 m³/s), which are poor. No regulation or diversion above station.

COOPERATION.--Records were furnished by Orange County Environmental Management Agency.

AVERAGE DISCHARGE.--8 years (water years 1971-78), 3.53 ft³/s (0.100 m³/s), 2,560 acre-ft/yr (3.16 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,360 ft³/s (66.8 m³/s) Jan. 16, 1978, gage height, 6.50 ft (1.981 m); maximum gage height, 7.67 ft (2.338 m) Feb. 11, 1973 (backwater from channel growth); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,360 ft³/s (66.8 m³/s) Jan. 16, gage height, 6.50 ft (1.981 m); minimum daily, 1.3 ft³/s (0.037 m³/s) Feb. 24, Sept. 8-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.8	1.5	1.6	2.2	416	3.1	1.4	2.4	2.2	3.1	1.7
2	1.5	1.8	1.4	1.5	3.4	169	6.4	1.4	2.3	1.7	3.1	1.7
3	1.5	1.8	1.4	11	2.1	16	1.6	1.4	2.4	2.0	2.8	1.6
4	1.6	2.0	1.4	79	1.8	323	3.1	1.4	2.4	2.2	2.4	1.7
5	1.6	2.2	1.4	118	27	71	1.6	1.5	2.7	2.3	2.4	17
6	1.5	2.1	1.4	13	20	9.2	2.3	1.6	3.4	2.3	2.1	38
7	1.6	1.8	1.4	2.4	29	5.4	18	1.6	2.6	2.3	2.1	2.2
8	1.7	2.2	1.4	1.8	15	3.8	3.1	1.7	2.6	2.8	2.3	1.3
9	1.5	1.8	1.4	72	67	7.7	2.3	1.8	2.4	2.4	2.7	1.3
10	1.4	2.0	1.4	98	146	3.4	1.7	1.7	2.6	2.4	2.2	1.3
11	1.4	1.7	1.4	4.7	22	43	1.8	1.8	2.4	2.4	2.3	1.4
12	1.4	2.0	1.4	2.3	158	33	1.8	1.9	2.4	2.7	2.3	1.4
13	1.4	1.7	1.4	1.7	71	6.0	1.5	1.9	2.3	2.6	2.2	1.5
14	1.4	1.8	1.4	174	6.4	3.4	1.5	1.9	2.2	2.6	1.7	2.1
15	1.4	1.8	1.4	135	4.1	2.8	23	2.2	2.2	2.7	2.7	1.6
16	1.4	1.8	1.4	284	2.7	2.0	6.0	2.2	2.2	2.7	2.2	1.5
17	1.4	2.1	3.0	20	2.4	2.0	1.6	2.2	2.6	2.8	2.2	1.5
18	1.4	2.0	1.4	6.4	2.4	2.1	2.0	2.2	2.3	3.1	2.1	1.6
19	1.4	1.7	1.4	140	2.0	2.1	1.6	2.4	2.3	3.1	2.2	1.7
20	1.4	1.5	1.4	6.8	3.8	2.4	1.6	2.4	2.7	3.1	2.0	1.6
21	1.4	1.6	1.4	3.4	2.6	2.2	1.4	2.2	2.6	3.4	1.7	2.3
22	1.4	1.6	1.4	2.7	2.0	12	1.4	2.6	2.3	3.4	2.1	2.3
23	1.4	1.6	2.0	2.4	1.7	3.8	1.4	3.8	2.2	2.7	2.1	2.4
24	1.4	1.7	1.4	2.7	1.3	2.0	1.5	3.1	2.2	2.7	2.6	2.6
25	1.8	1.5	4.5	2.4	1.7	1.7	1.8	2.2	2.2	3.4	2.4	2.8
26	1.6	1.7	55	2.3	1.8	1.6	1.4	2.2	2.4	3.4	2.2	2.7
27	1.4	1.6	6.4	2.4	5.9	1.6	1.4	2.3	2.6	3.8	2.2	2.7
28	1.4	1.7	43	2.0	86	1.6	1.4	2.2	2.6	4.1	2.7	2.2
29	2.1	1.6	60	2.0	---	1.6	1.4	2.2	2.4	3.1	1.7	2.2
30	1.4	1.4	4.4	5.3	---	5.4	1.4	2.3	2.2	2.4	1.6	2.3
31	1.6	---	1.6	3.5	---	81	---	2.4	---	2.4	1.6	---
TOTAL	46.4	53.6	210.8	1204.3	691.3	1237.8	100.1	64.1	73.1	85.2	70.0	108.2
MEAN	1.50	1.79	6.80	38.8	24.7	39.9	3.34	2.07	2.44	2.75	2.26	3.61
MAX	2.1	2.2	60	284	158	416	23	3.8	3.4	4.1	3.1	38
MIN	1.4	1.4	1.4	1.5	1.3	1.6	1.4	1.4	2.2	1.7	1.6	1.3
AC-FT	92	106	418	2390	1370	2460	199	127	145	169	139	215
CAL YR 1977	TOTAL	1336.6	MEAN	3.66	MAX	131	MIN	1.1	AC-FT	2650		
WTR YR 1978	TOTAL	3944.9	MEAN	10.8	MAX	416	MIN	1.3	AC-FT	7820		

11047500 ALISO CREEK AT EL TORO, CA

LOCATION.--Lat 33°37'33", long 117°41'08", in Canada de los Alisos Grant, Orange County, on right bank 500 ft (150 m) downstream from Second Street Bridge at El Toro. Prior to Nov. 18, 1975 at site 500 ft (150 m) upstream.

DRAINAGE AREA.--7.91 mi² (20.5 km²).

PERIOD OF RECORD.--October 1930 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 425 ft (130 m), from topographic map. Prior to July 1962, at different datum. July 1962 to Nov. 18, 1975, water-stage recorder at site 500 ft (150 m) upstream at different datum.

REMARKS.--Records poor. No regulation or diversion above station; some pumping from wells along stream. At times since 1964, Metropolitan Water District has wasted water to creek.

COOPERATION.--Records were furnished by Orange County Environmental Management Agency.

AVERAGE DISCHARGE.--48 years, 0.72 ft³/s (0.020 m³/s), 522 acre-ft/yr (644,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft³/s (70.8 m³/s) Feb. 24, 1969, gage height, 11.00 ft (3.353 m) from floodmark, site and datum then in use, from rating curve extended above 220 ft³/s (6.23 m³/s) on basis of slope-area measurement of maximum flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 360 ft³/s (10.2 m³/s) Feb. 10, gage height, 1.63 ft (0.497 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.20	0	0	32	3.4	.10	.10	.10	.10	.10
2		0	.20	0	0	10	3.8	.10	.10	.10	.10	.10
3		0	.20	.20	0	4.8	3.4	.10	.10	.10	.10	.10
4		0	.20	16	0	15	3.8	.10	.10	.10	.10	.10
5		0	.20	9.8	4.0	4.8	2.5	.10	.10	.10	.10	.10
6		.40	.40	.10	1.0	4.8	5.6	.10	.10	.10	.10	.10
7		.40	.40	0	13	4.8	15	.10	.10	.10	.10	.10
8		.20	.30	0	12	4.8	15	.10	.10	.10	.10	.10
9		.20	.30	3.3	68	4.8	1.5	.10	.10	.10	.10	.10
10		.30	.40	15	84	3.8	3.0	.10	.10	.10	.10	.10
11		.40	.30	0	2.0	3.8	1.0	.10	.10	.10	.10	.10
12		.40	.30	0	23	3.8	.50	.10	.10	.10	.10	.10
13		.10	.30	0	6.8	3.8	.50	.10	.10	.10	.10	.10
14		1.8	.30	3.3	.50	3.8	.50	.10	.10	.10	.10	.10
15		.20	.30	11	.50	3.8	31	.10	.10	.10	.10	.10
16		.30	.30	14	.50	3.8	1.9	.10	.10	.10	.10	.10
17		.20	.40	2.0	.50	3.8	.80	.10	.10	.10	.10	.10
18		.20	2.7	0	.20	3.8	.80	.10	.10	.10	.10	.10
19		.20	0	.80	.20	3.8	.70	.10	.10	.10	.10	.10
20		.20	0	.10	0	3.8	.60	.10	.10	.10	.10	.10
21		.40	0	.10	0	3.4	.10	.10	.10	.10	.10	.10
22		.40	0	.10	0	7.4	.10	.10	.10	.10	.10	.10
23		.30	.10	.10	0	3.4	.10	.10	.10	.10	.10	.10
24		.30	0	0	0	2.9	.10	.10	.10	.10	.10	.10
25		.30	1.0	0	0	3.8	.10	.10	.10	.10	.10	.10
26		.40	6.3	0	0	2.9	.10	.10	.10	.10	.10	.10
27		.30	.70	0	0	3.4	.10	.10	.10	.10	.10	.10
28		2.9	3.8	0	11	3.4	.10	.10	.10	.10	.10	.10
29		.40	4.9	0	---	3.4	.10	.10	.10	.10	.10	.10
30		.40	0	.90	---	4.8	.10	.10	.10	.10	.10	.10
31		---	0	0	---	20	---	.10	---	.10	.10	---
TOTAL	0	11.60	24.50	76.80	227.20	186.4	96.30	3.10	3.00	3.10	3.10	3.00
MEAN	0	.39	.79	2.48	8.11	6.01	3.21	.10	.10	.10	.10	.10
MAX	0	2.9	6.3	16	84	32	31	.10	.10	.10	.10	.10
MIN	0	0	0	0	0	2.9	.10	.10	.10	.10	.10	.10
AC-FT	0	23	49	152	451	370	191	6.1	6.0	6.1	6.1	6.0
CAL YR 1977	TOTAL	115.10	MEAN	.32	MAX	13	MIN	0	AC-FT	228		
WTR YR 1978	TOTAL	638.10	MEAN	1.75	MAX	84	MIN	0	AC-FT	1270		

SAN DIEGO CREEK BASIN

11048500 SAN DIEGO CREEK AT SAND CANYON AVENUE, NEAR IRVINE, CA
(Formerly published as San Diego Creek near Irvine)

LOCATION.--Lat 33°39'50", long 117°46'16", in San Joaquin Grant, Orange County, on downstream side of Sand Canyon Avenue bridge, 1.0 mi (1.6 km) southwest of East Irvine, and 2.8 mi (4.5 km) east of Irvine.

DRAINAGE AREA.--40.5 mi² (104.9 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1976 published as "near Irvine".

GAGE.--Water-stage recorder. Altitude of gage is 140 ft (42.7 m), from topographic map. Prior to Oct. 1, 1976, at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Records fair above 10 ft³/s (0.28 m³/s) and poor below. Sewage inflow and irrigation runoff cause low-flow fluctuations in discharge.

COOPERATION.--Twenty-two discharge measurements were furnished by Orange County Environmental Management Agency.

AVERAGE DISCHARGE.--29 years, 4.32 ft³/s (0.123 m³/s), 3,130 acre-ft/yr (3.86 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,700 ft³/s (190 m³/s) Feb. 24, 1969, gage height, 11.46 ft (3.493 m) site and datum then in use, from rating curve extended above 510 ft³/s (14.4 m³/s) on basis of slope-area measurements at gage heights 9.20 ft (2.804 m), and 11.46 ft (3.493 m); maximum gage height, 18.41 ft (5.611 m) Jan. 16, 1978; no flow for long periods in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	1430	1890 53.5	16.73 5.099	Feb. 12	2230	2890 81.8	17.30 5.273
Jan. 16	2030	*6300 178	18.41 5.611	Mar. 1	0600	3950 112	17.75 5.410
Jan. 19	1100	2310 65.4	17.00 5.182	Mar. 4	0900	2230 63.2	16.95 5.166
Feb. 10	0400	6100 173	18.35 5.593	Apr. 15	1700	2190 62.0	16.93 5.160

Minimum daily discharge, 0.38 ft²/s (0.011 m³/s) Apr. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.5	2.3	10	6.0	549	3.9	1.1	2.9	3.9	2.7	2.4
2	3.0	3.0	1.9	8.7	4.8	311	6.4	1.2	4.9	3.9	2.2	2.9
3	2.8	3.4	1.6	33	5.2	21	2.7	1.3	4.2	3.9	1.1	1.6
4	1.9	3.6	1.3	230	4.6	728	4.2	1.2	4.6	3.9	1.3	2.7
5	2.0	5.2	1.1	221	31	119	2.7	1.1	2.0	2.7	1.8	152
6	1.5	4.3	2.2	60	13	13	11	.98	2.4	3.9	2.4	60
7	2.3	3.9	2.0	25	63	12	66	.90	1.8	3.2	2.0	3.2
8	1.9	4.3	1.2	15	82	8.6	17	.72	1.6	2.9	2.2	5.7
9	1.7	4.4	1.4	92	282	12	2.2	.68	2.0	4.2	2.0	8.1
10	1.6	4.6	1.8	126	864	10	2.2	.65	2.7	2.9	1.6	8.0
11	2.9	5.2	1.1	11	60	72	2.2	1.1	2.7	2.2	1.3	7.1
12	4.4	5.6	.84	7.9	364	53	2.2	1.4	2.0	3.5	2.0	7.6
13	5.0	5.4	.66	8.2	173	6.6	1.1	2.0	2.2	2.9	1.6	7.6
14	4.4	5.2	.91	145	43	8.1	.38	2.2	1.4	2.4	1.6	13
15	6.7	5.8	.78	318	31	8.6	281	2.7	1.6	2.2	1.8	6.6
16	5.8	5.8	.84	810	22	8.1	20	2.2	1.6	2.7	1.6	9.7
17	4.3	5.0	1.3	45	18	9.7	1.1	1.8	2.2	3.2	.98	7.1
18	4.4	6.0	9.3	16	17	9.1	1.4	2.0	2.4	2.9	1.1	6.1
19	5.2	6.9	1.5	300	13	10	1.2	2.4	2.0	3.5	1.6	6.6
20	5.6	6.0	1.5	29	12	9.1	1.1	2.9	2.4	2.2	1.1	6.1
21	5.0	5.0	2.6	21	11	9.1	1.0	3.2	2.7	2.7	.98	6.6
22	2.7	6.5	2.6	14	9.0	23	1.1	2.2	2.9	2.4	1.6	7.1
23	2.2	7.4	3.6	13	7.2	9.7	1.0	2.7	2.9	3.5	1.5	7.1
24	2.9	7.2	3.4	11	6.5	9.7	1.1	3.5	3.2	2.4	1.4	6.6
25	4.1	5.0	7.7	9.0	6.9	8.1	1.4	3.2	3.9	2.4	1.3	5.7
26	4.3	5.4	67	11	6.5	8.1	1.3	4.9	2.9	2.0	1.5	6.6
27	4.4	4.4	19	9.9	7.2	7.1	1.2	4.9	2.7	1.6	1.6	6.1
28	4.3	4.0	51	11	230	7.1	1.1	4.6	2.2	2.2	1.5	7.1
29	4.8	3.2	52	9.9	---	8.6	1.1	4.6	3.5	2.9	1.3	6.6
30	3.9	2.7	18	9.0	---	11	1.0	2.2	3.9	2.7	1.7	6.6
31	3.1	---	8.7	7.2	---	72	---	2.4	---	2.9	2.4	---
TOTAL	112.3	146.9	271.13	2636.8	2392.9	2151.4	441.28	68.93	80.4	90.8	50.76	390.2
MEAN	3.62	4.90	8.75	85.1	85.5	69.4	14.7	2.22	2.68	2.93	1.64	13.0
MAX	6.7	7.4	67	810	864	728	281	4.9	4.9	4.2	2.7	152
MIN	1.5	2.5	.66	7.2	4.6	6.6	.38	.65	1.4	1.6	.98	1.6
AC-FT	223	291	538	5230	4750	4270	875	137	159	180	101	774
CAL YR 1977 TOTAL	1919.20			MEAN 5.26	MAX 151	MIN .17	AC-FT 3810					
WTR YR 1978 TOTAL	8833.80			MEAN 24.2	MAX 864	MIN .38	AC-FT 17520					

WATER-QUALITY RECORDS

SEDIMENT CONCENTRATIONS: Maximum daily mean, 15,900 mg/L Mar. 1; minimum daily mean, 20 mg/L Sept. 4.
SEDIMENT DISCHARGE: Maximum daily, 60,200 tons (54,600 metric tons) Feb. 10; minimum daily, 0.09 tons
(0.08 metric tons) Apr. 14.

[illegible]

11048500 SAN DIEGO CREEK AT SAND CANYON AVENUE, NEAR IRVINE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER				NOVEMBER				DECEMBER			
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.2	95	.82	2.5	75	.51	2.3	90	.56			
2	3.0	120	.97	3.0	70	.57	1.9	100	.51			
3	2.8	160	1.2	3.4	70	.64	1.6	110	.48			
4	1.9	200	1.0	3.6	125	1.2	1.3	120	.42			
5	2.0	230	1.2	5.2	225	3.2	1.1	65	.19			
6	1.5	235	.95	4.3	280	3.3	2.2	125	.74			
7	2.3	180	1.1	3.9	240	2.5	2.0	240	1.3			
8	1.9	90	.46	4.3	190	2.2	1.2	190	.62			
9	1.7	35	.16	4.4	150	1.8	1.4	160	.60			
10	1.6	30	.13	4.6	120	1.5	1.8	130	.63			
11	2.9	30	.23	5.2	110	1.5	1.1	100	.30			
12	4.4	25	.30	5.6	110	1.7	.84	75	.17			
13	5.0	25	.34	5.4	110	1.6	.66	55	.10			
14	4.4	25	.30	5.2	120	1.7	.91	50	.12			
15	6.7	110	2.0	5.8	140	2.2	.78	50	.11			
16	5.8	305	4.8	5.8	178	2.8	.84	50	.11			
17	4.3	180	2.1	5.0	180	2.4	1.3	360	1.1			
18	4.4	75	.89	6.0	160	2.6	9.3	1430	63			
19	5.2	60	.84	6.9	140	2.6	1.5	220	.89			
20	5.6	90	1.4	6.0	130	2.1	1.5	140	.57			
21	5.0	130	1.8	5.0	120	1.6	2.6	170	1.2			
22	2.7	155	1.1	6.5	120	2.1	2.6	280	2.0			
23	2.2	160	.95	7.4	120	2.4	3.6	300	2.9			
24	2.9	160	1.3	7.2	110	2.1	3.4	300	2.8			
25	4.1	170	1.9	5.0	110	1.5	7.7	554	29			
26	4.3	195	2.3	5.4	105	1.5	67	2440	518			
27	4.4	205	2.4	4.4	100	1.2	19	500	26			
28	4.3	190	2.2	4.0	100	1.1	51	1920	344			
29	4.8	150	1.9	3.2	93	.80	52	2060	417			
30	3.9	115	1.2	2.7	90	.66	18	450	30			
31	3.1	90	.75	---	---	---	8.7	250	9.9			
TOTAL	112.3	---	38.99	146.9	---	53.58	271.13	---	1451.32			

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)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	10	230	6.2	6.0	180	2.9	549	15900	37000			
2	8.7	210	4.9	4.8	260	2.6	311	11200	17000			
3	33	1580	240	5.2	185	2.6	21	3000	170			
4	230	5290	10600	4.6	170	2.1	728	12700	40200			
5	221	6300	9660	31	1670	335	119	5050	4870			
6	60	1600	259	13	1100	39	13	800	28			
7	25	700	47	63	3040	1440	12	600	19			
8	15	400	16	82	4110	2120	8.6	400	9.3			
9	92	3300	2000	282	8270	7810	12	350	11			
10	126	5840	2960	864	11500	60200	10	290	7.8			
11	11	1200	36	60	2100	340	72	2830	993			
12	7.9	600	13	364	4880	14600	53	2850	624			
13	8.2	500	11	173	6020	3510	6.6	1120	20			
14	145	5260	5480	43	1000	116	8.1	700	15			
15	318	9520	17500	31	900	75	8.6	480	11			
16	810	8820	53100	22	800	48	8.1	330	7.2			
17	45	5110	1040	18	700	34	9.7	190	5.0			
18	16	1700	73	17	600	28	9.1	100	2.5			
19	300	5240	10600	13	500	18	10	90	2.4			
20	29	700	95	12	400	13	9.1	120	2.9			
21	21	225	13	11	350	10	9.1	155	3.8			
22	14	275	10	9.0	330	8.0	23	234	15			
23	13	330	12	7.2	320	6.2	9.7	190	5.0			
24	11	360	11	6.5	310	5.4	9.7	155	4.1			
25	9.0	315	7.7	6.9	300	5.6	8.1	140	3.1			
26	11	300	8.9	6.5	300	5.3	8.1	135	3.0			
27	9.9	310	8.3	7.2	300	5.8	7.1	130	2.5			
28	11	330	9.8	230	5680	13000	7.1	130	2.5			
29	9.9	300	8.0	---	---	---	8.6	130	3.0			
30	9.0	140	3.4	---	---	---	11	191	11			
31	7.2	140	2.7	---	---	---	72	2390	1090			
TOTAL	2636.8	---	113795.9	2392.9	---	103782.5	2151.4	---	102141.1			

11048500 SAN DIEGO CREEK AT SAND CANYON AVENUE, NEAR IRVINE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CON- CENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.9	295	3.1	1.1	180	.53	2.9	3450	27
2	6.4	318	6.0	1.2	180	.58	4.9	3650	48
3	2.7	270	2.0	1.3	170	.60	4.2	3500	40
4	4.2	255	2.9	1.2	170	.55	4.6	2950	37
5	2.7	250	1.8	1.1	170	.50	2.0	2000	11
6	11	294	42	.98	160	.42	2.4	970	6.3
7	66	2650	1160	.90	160	.39	1.8	350	1.7
8	17	1530	136	.72	150	.29	1.6	280	1.2
9	2.2	600	3.6	.68	150	.28	2.0	350	1.9
10	2.2	250	1.5	.65	150	.26	2.7	800	5.8
11	2.2	200	1.2	1.1	160	.48	2.7	1000	7.3
12	2.2	150	.89	1.4	170	.64	2.0	910	4.9
13	1.1	100	.30	2.0	180	.97	2.2	680	4.0
14	.38	90	.09	2.2	190	1.1	1.4	590	2.2
15	281	3670	9690	2.7	210	1.5	1.6	700	3.0
16	20	1900	103	2.2	180	1.1	1.6	950	4.1
17	1.1	865	2.6	1.8	150	.73	2.2	1300	7.7
18	1.4	590	2.2	2.0	130	.70	2.4	1620	10
19	1.2	430	1.4	2.4	120	.78	2.0	1400	7.6
20	1.1	330	.98	2.9	110	.86	2.4	1000	6.5
21	1.0	260	.70	3.2	105	.91	2.7	320	2.3
22	1.1	210	.62	2.2	120	.71	2.9	100	.70
23	1.0	210	.57	2.7	155	1.1	2.9	810	6.3
24	1.1	500	1.5	3.5	160	1.5	3.2	1400	12
25	1.4	510	1.9	3.2	160	1.4	3.9	700	7.4
26	1.3	330	1.2	4.9	2750	36	2.9	350	2.7
27	1.2	250	.81	4.9	3900	52	2.7	260	1.9
28	1.1	210	.62	4.6	2700	34	2.2	140	.83
29	1.1	190	.56	4.6	1800	22	3.5	140	1.3
30	1.0	190	.51	2.2	1600	9.5	3.9	130	1.4
31	---	---	---	2.4	2550	17	---	---	---
TOTAL	441.28	---	11170.55	68.93	---	189.38	80.4	---	274.11
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CON- CENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.9	300	3.2	2.7	800	5.8	2.4	30	.19
2	3.9	550	5.8	2.2	390	2.3	2.9	25	.20
3	3.9	550	5.8	1.1	300	.89	1.6	25	.11
4	3.9	550	5.8	1.3	300	1.1	2.7	20	.15
5	2.7	500	3.6	1.8	300	1.5	152	1600	2220
6	3.9	550	5.8	2.4	390	2.5	60	1400	348
7	3.2	510	4.4	2.0	430	2.3	3.2	190	1.6
8	2.9	500	3.9	2.2	470	2.8	5.7	160	2.5
9	4.2	500	5.7	2.0	510	2.8	8.1	135	3.0
10	2.9	500	3.9	1.6	650	2.8	8.0	120	2.6
11	2.2	500	3.0	1.3	900	3.2	7.1	115	2.2
12	3.5	500	4.7	2.0	1400	7.6	7.6	110	2.3
13	2.9	500	3.9	1.6	2000	8.6	7.6	130	2.7
14	2.4	510	3.3	1.6	1500	6.5	13	200	7.0
15	2.2	500	3.0	1.8	1050	5.1	6.6	180	3.2
16	2.7	500	3.6	1.6	650	2.6	9.7	180	4.7
17	3.2	500	4.3	.98	400	1.1	7.7	200	3.4
18	2.9	500	3.9	1.1	250	.74	6.1	200	3.3
19	3.5	500	4.7	1.6	200	.86	6.1	200	3.6
20	2.2	500	3.0	1.1	200	.59	6.1	200	3.3
21	2.7	680	5.0	.98	210	.56	6.6	200	3.6
22	2.4	920	6.0	1.6	380	1.6	7.1	200	3.8
23	3.5	1080	10	1.5	300	1.2	7.1	200	3.8
24	2.4	3250	21	1.4	200	.76	6.6	200	3.6
25	2.4	1850	12	1.3	200	.70	5.7	200	3.1
26	2.0	500	2.7	1.5	100	.41	6.6	200	3.6
27	1.6	350	1.5	1.6	70	.30	6.1	200	3.3
28	2.2	500	3.0	1.5	90	.20	7.1	200	3.8
29	2.9	750	5.9	1.3	40	.14	6.6	200	3.6
30	2.7	1200	8.7	1.7	32	.15	6.6	200	3.6
31	2.9	1220	9.6	2.4	30	.19	---	---	---
TOTAL	90.8	---	170.7	50.76	---	68.04	390.2	---	2886.25
YEAR	8833.80		335786.5						

SAN DIEGO CREEK BASIN

11048500 SAN DIEGO CREEK AT SAND CANYON AVENUE, NEAR IRVINE, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	112.30	38.99	62	101
NOVEMBER ...	146.90	53.58	107	161
DECEMBER ...	271.13	1451.32	1210	2660
JANUARY 1978	2636.80	113795.90	19800	134000
FEBRUARY ...	2392.90	103782.50	17600	121000
MARCH	2151.40	102141.10	15300	117000
APRIL	441.28	11170.55	3160	14300
MAY	68.93	189.38	25	214
JUNE	80.40	274.11	29	303
JULY	90.80	170.70	35	206
AUGUST	50.76	68.09	9	77
SEPTEMBER ..	390.20	2650.25	1930	4580
TOTAL	8833.80	335786.47	59267	394602

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT	06...	1055	22.0	1.2	239	.77	--	--
NOV	03...	1345	20.5	2.3	64	.40	--	--
DEC	05...	1450	18.0	1.0	50	.13	--	--
	26...	1230	17.0	143	3460	1340	38	39
	26...	1325	17.0	122	3200	1050	--	--
	27...	0900	17.0	10	563	15	--	--
	28...	0900	17.0	30	1440	117	--	--
	28...	0945	17.0	31	1280	107	55	61
JAN	04...	1630	15.0	31	1280	107	--	--
	05...	1605	16.5	532	13100	18800	29	31
	05...	1650	16.5	390	13700	14400	28	30
	19...	1310	14.5	572	9190	14200	28	28
	19...	1410	15.0	286	7570	5850	28	30
MAR	04...	1020	15.0	821	15900	35200	--	--
	10...	1245	18.5	5.5	288	4.3	--	--
	14...	1535	22.0	8.1	658	14	--	--
APR	24...	1425	22.0	1.1	565	1.7	38	42
MAY	31...	1145	29.5	1.3	2530	8.9	--	--
JUN	23...	1150	31.0	3.2	689	6.0	--	--
JUL	14...	1000	--	2.9	513	4.0	--	--
AUG	22...	1200	27.0	.56	80	.12	--	--
SEP	06...	1115	21.5	45	1890	230	--	--

SAN DIEGO CREEK BASIN

11048500 SAN DIEGO CREEK AT SAND CANYON AVENUE, NEAR IRVINE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
OCT 06...	--	--	94	--	--	--	--
NOV 03...	--	--	78	--	--	--	--
DEC 05...	--	--	90	--	--	--	--
26...	51	58	65	74	85	98	100
26...	--	--	57	--	--	--	--
27...	--	--	71	--	--	--	--
28...	--	--	75	--	--	--	--
28...	66	70	74	83	96	100	--
JAN 04...	--	--	58	--	--	--	--
05...	40	47	55	69	88	98	100
05...	37	43	50	68	89	98	100
19...	38	45	53	67	88	98	100
19...	37	45	53	66	89	99	100
MAR 04...	--	--	62	--	--	--	--
10...	--	--	93	--	--	--	--
14...	--	--	85	--	--	--	--
APR 24...	56	66	77	96	100	--	--
MAY 31...	--	--	98	--	--	--	--
JUN 23...	--	--	87	--	--	--	--
JUL 14...	--	--	94	--	--	--	--
AUG 22...	--	--	91	--	--	--	--
SEP 06...	--	--	69	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	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	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
JUL 14...	1030	6	2.7	2	8	24	64	92	99	100

11048530 EL MODENA-IRVINE CHANNEL NEAR IRVINE, CA

LOCATION.--Lat 33°42'49", long 117°48'01", in Lomas Santiago Grant, Orange County, on downstream side of county road bridge, 50 ft (30 m) west of intersection of Myford Road and Walnut Avenue, and 0.5 mi (0.8 km) southwest of Interstate 5.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 60 ft (18 m), from topographic map.

REMARKS.--Records good.

COOPERATION.--Records of discharge were furnished by Orange County Environmental Management Agency and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft³/s (67.4 m³/s) Mar. 4, 1978; gage height, 8.20 ft (2.499 m), maximum gage height, 8.40 ft (2.560 m) Dec. 4, 1974 (channel aggradation); minimum daily discharge, 0.10 ft³/s (0.003 m³/s) for several days in 1975 and 1976 water years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,380 ft³/s (67.4 m³/s) Mar 4, gage height, 8.20 ft (2.499 m); minimum daily, 0.13 ft³/s (0.004 m³/s) Apr. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.0	.41	.20	3.1	137	.75	.40	1.4	1.9	3.1	.44
2	1.5	.70	.38	.20	3.5	89	3.8	.20	1.3	.86	3.2	.68
3	1.6	.70	.44	17	3.1	5.9	.29	.59	1.0	2.0	2.5	.92
4	1.7	.90	.38	41	2.5	283	9.3	.26	1.1	4.9	1.8	.92
5	1.3	1.0	.38	60	31	89	.32	.35	1.4	3.7	2.1	41
6	.90	1.0	.35	24	21	4.7	30	.38	2.4	4.1	2.0	5.9
7	1.1	.80	.58	.20	57	3.7	20	.38	2.5	5.5	1.9	.28
8	1.0	.80	.41	.20	45	2.1	1.8	.38	1.9	6.6	2.8	.20
9	1.1	.70	.38	28	129	3.4	.32	.38	1.7	5.9	1.7	.20
10	.90	.90	.32	21	221	2.7	.29	.41	1.7	5.3	1.4	.20
11	.90	.90	.32	2.4	2.7	26	.29	.38	.98	3.4	1.8	.23
12	1.1	.90	.32	2.2	98	2.1	.32	.38	1.1	2.9	1.6	.38
13	.90	1.0	.32	2.2	24	.68	.29	.38	1.5	3.4	1.8	.38
14	.90	.80	.26	54	3.1	.58	.18	.41	1.1	5.1	1.8	.62
15	1.0	.60	.32	41	2.4	.62	13	.41	1.7	4.2	1.6	.32
16	1.0	.60	.32	120	1.8	.50	.70	.41	1.7	2.9	1.5	.26
17	1.0	.50	.40	4.5	2.0	.44	.18	.35	2.1	3.2	1.3	.47
18	.80	.40	15	1.0	1.7	.38	.20	.38	3.1	2.8	1.1	.74
19	.80	.50	.30	82	1.6	.40	.18	.62	2.0	3.1	1.5	.92
20	.80	.50	.20	20	1.5	.30	.13	.68	1.0	2.4	1.6	1.4
21	.80	.50	.40	1.6	1.5	.40	.20	.58	1.3	2.5	2.2	3.2
22	1.0	.60	.20	1.3	1.4	12	.16	.50	1.2	2.4	1.5	2.2
23	1.2	.50	.20	1.7	1.2	.23	.14	.68	1.2	3.1	1.3	.86
24	.70	.41	.20	1.8	1.3	.26	.16	.50	1.3	2.2	1.2	.86
25	.70	.43	6.4	1.8	1.4	.23	.16	.50	1.6	3.2	1.4	1.1
26	.70	.44	39	1.8	1.4	.23	.16	.58	1.8	2.4	1.2	1.3
27	.80	.44	.50	2.0	1.7	.23	.18	.58	.98	1.9	1.4	1.8
28	.90	.41	19	2.2	82	.23	.18	.50	.92	2.9	1.3	1.7
29	.80	.44	140	3.7	---	.23	.20	.47	1.4	4.3	.74	1.5
30	.70	.41	.20	5.5	---	.83	.23	.47	1.4	3.4	.80	.68
31	.70	---	.20	3.2	---	30	---	.50	---	3.4	.47	---
TOTAL	30.70	19.78	228.09	547.70	746.9	697.37	84.11	13.99	45.78	105.96	51.61	71.66
MEAN	.99	.66	7.36	17.7	26.7	22.5	2.80	.45	1.53	3.42	1.66	2.39
MAX	1.7	1.0	140	120	221	283	30	.68	3.1	6.6	3.2	41
MIN	.70	.40	.20	.20	1.2	.23	.13	.20	.92	.86	.47	.20
AC-FT	61	39	492	1090	1480	1380	167	28	91	210	102	142
CAL YR 1977 TOTAL	977.67			MEAN 2.68	MAX 140	MIN .10	AC-FT 1940					
WTR YR 1978 TOTAL	2643.65			MEAN 7.24	MAX 283	MIN .13	AC-FT 5240					

WATER-QUALITY RECORDS

WATER TEMPERATURES: October 1974 to current year.
SEDIMENT RECORDS: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD. --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,230 mg/L Dec. 4, 1974; minimum daily mean, 1 mg/L Feb. 18, 1976.
SEDIMENT DISCHARGE: Maximum daily, 5,080 tons (4,610 metric tons) Feb. 10, 1978; minimum daily, 0 tons
Feb. 12-18, 1976.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,010 mg/L Feb. 10; minimum daily mean, 6 mg/L June 4.
SEDIMENT DISCHARGE: Maximum daily, 5,080 tons (4,610 metric tons) Feb. 10; minimum daily, 0.01 tons (0.01 metric tons) April 17, 26, 27.

[illegible]

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.4	130	.49	1.0	80	.22	.41	76	.08
2	1.5	118	.48	.70	85	.16	.38	80	.08
3	1.6	145	.63	.70	90	.17	.44	85	.10
4	1.7	170	.78	.90	96	.23	.38	90	.09
5	1.3	190	.67	1.0	95	.26	.38	70	.07
6	.90	191	.46	1.0	96	.26	.35	48	.05
7	1.1	156	.46	.80	110	.24	.58	70	.11
8	1.0	155	.42	.80	120	.26	.41	70	.08
9	1.1	154	.46	.70	130	.25	.38	70	.07
10	.90	138	.34	.90	146	.35	.32	71	.06
11	.90	122	.30	.90	130	.32	.32	71	.06
12	1.1	107	.32	.90	113	.27	.32	75	.06
13	.90	91	.22	1.0	97	.26	.32	80	.07
14	.90	75	.18	.80	81	.17	.26	87	.06
15	1.0	85	.23	.60	64	.10	.32	90	.08
16	1.0	101	.27	.60	48	.08	.32	95	.08
17	1.0	85	.23	.50	76	.10	.40	100	.11
18	.80	78	.17	.40	104	.11	15	516	71
19	.80	84	.18	.50	132	.18	.30	26	.02
20	.80	91	.20	.50	159	.21	.20	50	.03
21	.80	97	.21	.50	100	.14	.40	50	.05
22	1.0	103	.28	.60	54	.09	.20	75	.04
23	1.2	110	.36	.50	57	.08	.20	75	.04
24	.70	116	.22	.41	60	.07	.20	100	.05
25	.70	122	.23	.43	63	.07	6.4	389	32
26	.70	129	.24	.44	66	.08	39	1110	233
27	.80	135	.29	.44	69	.08	.50	60	.08
28	.90	112	.27	.41	72	.08	19	576	104
29	.80	90	.19	.44	75	.09	140	1530	1930
30	.70	68	.13	.41	75	.08	.20	50	.03
31	.70	72	.14	---	---	---	.20	75	.04
TOTAL	30.70	---	10.05	19.78	---	5.06	228.09	---	2371.69

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	.20	75	.04	3.1	50	.42	137	1650	1290
2	.20	75	.04	3.5	50	.47	89	1330	1060
3	17	493	72	3.1	50	.42	5.9	75	1.2
4	41	1080	317	2.5	50	.34	283	1850	4340
5	60	992	645	31	575	195	89	1170	89
6	24	590	174	21	311	46	4.7	60	.76
7	.20	60	.03	57	594	386	3.7	50	.50
8	.20	50	.03	45	473	229	2.1	50	.28
9	28	707	157	129	1290	1210	3.4	75	.69
10	21	753	129	221	2010	5080	2.7	60	.44
11	2.4	75	.49	2.7	75	.55	26	452	26
12	2.2	50	.30	98	928	1000	2.1	140	.79
13	2.2	50	.30	24	414	44	.68	50	.09
14	54	988	515	3.1	75	.63	.58	50	.08
15	41	771	415	2.4	50	.32	.62	50	.08
16	120	1130	1680	1.8	50	.24	.50	50	.07
17	4.5	110	1.3	2.0	50	.27	.44	50	.06
18	1.0	50	.14	1.7	50	.23	.38	50	.05
19	82	941	866	1.6	50	.22	.40	50	.05
20	20	100	5.4	1.5	50	.20	.30	50	.04
21	1.6	50	.22	1.5	50	.20	.40	50	.05
22	1.3	50	.18	1.4	50	.19	12	440	12
23	1.7	50	.23	1.2	50	.16	.23	60	.04
24	1.8	50	.24	1.3	50	.18	.26	50	.04
25	1.8	50	.24	1.4	50	.19	.23	50	.03
26	1.8	50	.24	1.4	50	.19	.23	50	.03
27	2.0	50	.27	1.7	50	.23	.23	50	.03
28	2.2	50	.30	82	1060	1110	.23	50	.03
29	3.7	50	.50	---	---	---	.23	50	.03
30	5.5	50	.74	---	---	---	.83	50	.11
31	3.2	50	.43	---	---	---	30	595	98
TOTAL	547.70	---	4981.66	746.9	---	9305.65	697.37	---	6920.57

11048530 EL MODENA-IRVINE CHANNEL NEAR IRVINE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.75	60	.12	.40	57	.06	1.4	20	.08
2	3.8	173	4.1	.20	55	.03	1.3	16	.06
3	.29	75	.06	.59	53	.08	1.0	11	.03
4	9.3	358	38	.26	52	.04	1.1	6	.02
5	.32	75	.06	.35	50	.05	1.4	35	.13
6	30	312	365	.38	48	.05	2.4	62	.40
7	20	644	153	.38	47	.05	2.5	64	.43
8	1.8	111	2.0	.38	45	.05	1.9	60	.31
9	.32	60	.05	.38	44	.05	1.7	58	.27
10	.29	50	.04	.41	42	.05	1.7	55	.25
11	.29	50	.04	.38	40	.04	.98	51	.13
12	.32	50	.04	.38	39	.04	1.1	70	.21
13	.29	50	.04	.38	37	.04	1.5	90	.36
14	.18	50	.02	.41	45	.05	1.1	111	.33
15	13	386	42	.41	53	.06	1.7	150	.69
16	.70	120	.23	.41	61	.07	1.7	190	.87
17	.18	28	.01	.35	68	.06	2.1	225	1.3
18	.20	40	.02	.38	76	.08	3.1	263	2.2
19	.18	52	.03	.62	84	.14	2.0	240	1.3
20	.13	64	.02	.68	92	.17	1.0	225	.61
21	.20	77	.04	.58	100	.16	1.3	210	.74
22	.16	89	.04	.50	75	.10	1.2	250	.81
23	.14	101	.04	.68	49	.09	1.2	1360	4.4
24	.16	45	.02	.50	45	.06	1.3	1070	3.8
25	.16	35	.02	.50	42	.06	1.6	780	3.4
26	.16	25	.01	.58	39	.06	1.8	500	2.4
27	.18	14	.01	.58	34	.05	.98	200	.53
28	.18	35	.02	.50	30	.04	.92	210	.52
29	.20	60	.03	.47	25	.03	1.4	220	.83
30	.23	58	.04	.47	18	.02	1.4	232	.88
31	---	---	---	.50	28	.04	---	---	---
TOTAL	84.11	---	605.15	13.99	---	1.97	45.78	---	28.29
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	1.9	235	1.2	3.1	315	2.6	.44	51	.06
2	.86	240	.56	3.2	310	2.7	.68	53	.10
3	2.0	370	2.0	2.5	298	2.0	.92	54	.13
4	4.9	500	6.6	1.8	286	1.4	.92	56	.14
5	3.7	640	6.4	2.1	274	1.6	.41	596	184
6	4.1	770	8.5	2.0	262	1.4	5.9	151	6.2
7	5.5	900	13	1.9	250	1.3	.28	61	.05
8	6.6	1030	18	2.8	238	1.8	.20	63	.03
9	5.9	1160	18	1.7	230	1.1	.20	66	.04
10	5.3	1290	18	1.4	220	.83	.20	67	.04
11	3.4	1420	13	1.8	210	1.0	.23	68	.04
12	2.9	1560	12	1.6	200	.86	.38	72	.07
13	3.4	1690	16	1.8	190	.92	.38	113	.12
14	5.1	1820	25	1.8	187	.91	.62	102	.17
15	4.3	1590	18	1.6	185	.80	.32	91	.08
16	2.9	1360	11	1.5	183	.74	.26	80	.06
17	3.2	1130	9.8	1.3	188	.66	.47	68	.09
18	2.8	900	6.8	1.1	193	.57	.74	57	.11
19	3.1	670	5.6	1.5	200	.81	.92	46	.11
20	2.4	440	2.9	1.6	201	.87	1.4	31	.12
21	2.5	208	1.4	2.2	202	1.2	3.2	40	.35
22	2.4	220	1.4	1.5	203	.82	2.2	49	.29
23	3.1	235	2.0	1.3	175	.61	.86	58	.13
24	2.2	174	1.0	1.2	150	.49	.86	67	.16
25	3.2	200	1.7	1.4	125	.47	1.1	76	.23
26	2.4	846	5.5	1.2	100	.32	1.3	85	.30
27	1.9	710	3.6	1.4	70	.26	1.8	94	.46
28	2.9	580	4.5	1.3	44	.15	1.7	103	.47
29	4.3	450	5.2	.74	46	.09	1.5	112	.45
30	3.4	320	2.9	.80	47	.10	.68	121	.22
31	3.4	315	2.9	.47	49	.06	---	---	---
TOTAL	105.96	---	244.46	51.61	---	29.44	71.66	---	194.82
YEAR	2643.65		24698.81						

SAN DIEGO CREEK BASIN

11048530 EL MODENA-IRVINE CHANNEL NEAR IRVINE, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	30.70	10.05	0	10
NOVEMBER ...	19.78	5.06	0	5
DECEMBER ...	228.09	2371.69	203	2580
JANUARY 1978	547.70	4981.66	240	5220
FEBRUARY ...	746.90	9305.65	904	10200
MARCH	697.37	6920.57	1270	8190
APRIL	84.11	605.15	5	610
MAY	13.99	1.97	0	2
JUNE	45.78	28.29	0	28
JULY	105.96	244.46	0	244
AUGUST	51.61	29.44	0	29
SEPTEMBER ..	71.66	194.82	9	204
TOTAL	2643.65	24698.81	2631	27322

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC											
26...	1540	17.0	12	333	11	--	--	--	--	--	--
27...	0740	17.0	.30	74	.06	--	--	--	--	--	--
28...	1120	18.0	2.9	124	.97	--	--	--	--	--	--
29...	0810	16.0	88	2490	592	--	--	--	--	--	--
JAN											
05...	0825	11.5	.40	148	.16	--	--	--	--	--	--
19...	0910	13.5	206	2670	1490	--	--	--	--	--	--
19...	0940	13.5	286	3770	2910	--	26	29	32	37	--
FEB											
05...	1010	15.0	168	3510	1590	--	25	28	33	41	51
09...	1010	15.5	37	417	42	68	73	84	90	95	--
MAR											
04...	1135	15.0	70	899	171	--	64	71	78	82	--
JUN											
07...	1455	29.5	1.1	64	.19	--	--	--	--	--	--
23...	1100	28.5	1.3	1780	6.2	--	--	--	--	--	--
JUL											
14...	1240	--	3.9	1820	19	--	--	--	--	--	--
AUG											
30...	1415	28.5	.40	55	.06	--	--	--	--	--	--
SEP											
06...	1015	21.0	6.4	62	1.1	--	--	--	--	--	--

11048530 EL MODENA-IRVINE CHANNEL NEAR IRVINE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC										
26...	98	--	--	--	--	--	--	--	--	--
27...	95	--	--	--	--	--	--	--	--	--
28...	96	--	--	--	--	--	--	--	--	--
29...	80	--	--	--	--	--	--	--	--	--
JAN										
05...	84	--	87	--	93	--	100	--	--	--
19...	60	--	--	--	--	--	--	--	--	--
19...	42	--	51	--	63	--	77	--	96	100
FEB										
05...	--	65	--	73	--	92	--	100	--	--
09...	97	--	99	--	100	--	--	--	--	--
MAR										
04...	89	--	93	--	98	--	100	--	--	--
JUN										
07...	90	--	--	--	--	--	--	--	--	--
23...	98	--	--	--	--	--	--	--	--	--
JUL										
14...	99	--	--	--	--	--	--	--	--	--
AUG										
30...	80	--	--	--	--	--	--	--	--	--
SEP										
06...	97	--	--	--	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	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
JUL							
14...	1250	1	3.1	4	24	75	91
14...	1255	1	3.1	3	8	45	89
14...	1300	1	3.1	20	28	37	55
14...	1305	1	3.1	20	32	42	54
14...	1310	1	3.1	5	11	20	30

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
JUL						
14...	94	98	100	--	--	--
14...	99	100	--	--	--	--
14...	80	99	100	--	--	--
14...	76	99	100	--	--	--
14...	37	43	53	74	95	100

SAN DIEGO CREEK BASIN

11048555 SAN DIEGO CREEK AT CAMPUS DRIVE, NEAR IRVINE, CA

LOCATION.--Lat 33°39'20", long 117°50'41", in SE¼NE¼SE¼ sec.58, T.6 S., R.9 W., in San Joaquin Grant, Orange County, on right bank downstream abutment of Campus Drive bridge, 450 ft (140 m) northwest of University Drive, and 1 mi (1.6 km) east of McArthur Boulevard.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Records good except for period of no gage-height record Oct. 1 to Dec. 17, which is fair.

COOPERATION.--Records were furnished by Orange County Environmental Management Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft³/s (257 m³/s) Feb. 10, 1978, gage height, 12.47 ft (3.801 m); minimum daily, 10 ft³/s (0.28 m³/s) Dec. 31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,080 ft³/s (257 m³/s) Feb. 10, gage height, 12.47 ft (3.801 m); minimum daily, 10 ft³/s (0.28 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	15	14	19	1370	28	22	22	31	24	22
2	17	17	15	14	19	879	40	16	24	26	18	22
3	18	18	15	145	20	127	18	18	22	28	16	22
4	18	18	15	788	21	2340	31	18	23	30	16	22
5	17	17	15	1040	283	1130	23	18	23	28	20	569
6	17	13	15	226	59	226	34	16	24	26	22	228
7	17	13	14	41	385	135	329	16	26	30	23	20
8	17	13	15	27	319	91	42	15	23	24	26	12
9	17	13	14	482	940	126	25	17	23	26	24	14
10	17	14	14	581	1870	77	19	17	23	24	20	14
11	17	14	14	68	121	318	19	17	23	23	26	14
12	17	14	14	23	585	211	18	18	20	28	26	16
13	18	14	14	15	738	62	16	18	23	26	26	16
14	18	14	13	554	119	62	14	16	20	26	24	26
15	18	14	14	940	87	59	354	16	16	26	24	19
16	19	13	15	1120	53	59	66	17	18	26	27	20
17	20	14	20	322	41	42	24	17	21	26	27	20
18	20	14	132	55	36	31	26	17	25	28	25	20
19	20	13	13	930	33	35	18	18	24	28	29	21
20	20	13	13	66	30	39	18	19	24	26	23	22
21	19	13	19	45	29	43	16	18	26	24	24	24
22	18	13	19	38	27	82	16	18	27	24	24	22
23	18	16	16	34	26	25	14	20	26	24	24	24
24	17	16	14	35	25	20	16	20	24	23	23	22
25	16	16	42	35	23	20	18	20	24	22	21	24
26	16	16	256	35	21	20	17	22	28	21	24	22
27	16	17	72	30	25	18	16	22	26	20	24	22
28	16	16	153	30	480	20	16	20	26	25	20	26
29	16	16	480	28	---	20	16	20	29	30	20	26
30	16	15	63	30	---	19	15	20	28	26	22	24
31	16	---	10	25	---	302	---	20	---	22	22	---
TOTAL	543	443	1553	7816	6434	8008	1322	566	711	797	714	1375
MEAN	17.5	14.8	50.1	252	230	258	44.1	18.3	23.7	25.7	23.0	45.8
MAX	20	18	480	1120	1870	2340	354	22	29	31	29	569
MIN	16	13	10	14	19	18	14	15	16	20	16	12
AC-FT	1080	879	3080	15500	12760	15880	2620	1120	1410	1580	1420	2730

WTR YR 1978 TOTAL 30282 MEAN 83.0 MAX 2340 MIN 10 AC-FT 60060

WATER-QUALITY RECORDS

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,070 mg/L Feb. 10; minimum daily mean, 70 mg/L Apr. 21.
SEDIMENT DISCHARGE: Maximum daily, 55,100 tons (50,000 metric tons) Mar. 4; minimum daily, 3 tons (2.7 metric tons) Apr. 21.

[illegible]

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	17	220	10	16	180	7.8	15	260	11
2	17	220	10	17	190	8.7	15	302	12
3	18	220	11	18	200	9.7	15	300	12
4	18	220	11	18	209	10	15	260	11
5	17	220	10	17	180	8.3	15	230	9.3
6	17	217	10	13	156	5.5	15	208	8.4
7	17	220	10	13	160	5.6	14	195	7.4
8	17	220	10	13	170	6.0	15	190	7.7
9	17	220	10	13	180	6.3	14	180	6.8
10	17	220	10	14	181	6.8	14	170	6.4
11	17	220	10	14	190	7.2	14	170	6.4
12	17	230	11	14	190	7.2	14	180	6.8
13	18	230	11	14	200	7.6	14	180	6.8
14	18	240	12	14	200	7.6	13	190	6.7
15	18	240	12	14	210	7.9	14	190	7.2
16	19	250	13	13	223	7.8	15	190	7.7
17	20	250	13	14	230	8.7	20	224	16
18	20	260	14	14	230	8.7	132	1830	1000
19	20	260	14	13	240	8.4	13	295	10
20	20	270	15	13	242	8.5	13	300	11
21	19	278	14	13	250	8.8	19	300	15
22	18	300	15	13	250	8.8	19	285	15
23	18	310	15	16	240	10	16	230	9.9
24	17	320	15	16	230	9.9	14	210	7.9
25	16	330	14	16	220	9.5	42	324	84
26	16	350	15	16	210	9.1	256	1740	1450
27	16	374	16	17	210	9.6	72	700	136
28	16	300	13	16	208	9.0	153	1630	857
29	16	200	8.6	16	204	8.8	480	2420	6550
30	16	176	7.6	15	230	9.3	63	595	159
31	16	180	7.8	---	---	---	10	300	8.1
TOTAL	543	---	368.0	443	---	247.1	1553	---	10462.5

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	14	260	9.8	19	270	14	1370	5100	24200
2	14	220	8.3	19	240	12	879	4370	15500
3	145	1350	1400	20	280	15	127	1500	514
4	788	2880	15600	21	300	17	2340	6010	55100
5	1040	4630	22900	283	2190	3890	1130	5590	21800
6	226	1930	1600	59	1160	219	226	2600	1590
7	41	570	63	385	2010	5690	135	1800	656
8	27	300	22	319	2490	4730	91	1500	369
9	482	1800	6180	940	3690	12800	126	1740	689
10	581	3230	6690	1870	6070	46400	77	1240	318
11	68	1100	278	121	2700	882	318	2420	4070
12	23	400	25	585	2750	10600	211	2610	1900
13	15	360	15	738	4990	11700	62	710	119
14	554	2380	8780	119	1550	498	62	370	62
15	940	3480	15700	87	850	200	59	350	56
16	1120	3250	25200	53	500	72	59	350	56
17	322	3530	4610	41	470	52	42	350	40
18	55	1700	252	36	440	43	31	340	28
19	930	3990	15500	33	410	37	35	390	37
20	66	1350	241	30	380	31	39	410	43
21	45	700	85	29	350	27	43	420	49
22	38	650	67	27	320	23	82	1300	553
23	34	620	57	26	290	20	25	750	51
24	35	550	52	25	260	18	20	520	28
25	35	500	47	23	230	14	20	470	25
26	35	470	44	21	200	11	20	430	23
27	30	430	35	25	400	27	18	400	19
28	30	400	32	480	2610	8680	20	360	19
29	28	350	26	---	---	---	20	330	18
30	30	410	33	---	---	---	19	359	22
31	25	410	28	---	---	---	302	2630	3940
TOTAL	7816	---	125580.1	6434	---	106722	8088	---	131894

11048555 SAN DIEGO CREEK AT CAMPUS DRIVE, NEAR IRVINE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	28	550	42	22	300	18	22	1110	66
2	40	885	114	16	280	12	24	1090	71
3	18	450	22	18	300	15	22	1070	64
4	31	700	59	18	300	15	23	1050	65
5	23	450	28	18	300	15	23	900	56
6	34	458	187	16	320	14	24	733	47
7	329	2670	4600	16	320	14	26	600	42
8	42	1070	175	15	340	14	23	585	36
9	25	880	59	17	360	17	23	1100	68
10	19	550	28	17	360	17	23	1000	62
11	19	400	21	17	380	17	23	923	57
12	18	280	14	18	370	18	20	930	50
13	16	260	11	18	360	17	23	930	58
14	14	220	8.3	16	350	15	20	940	51
15	354	1920	5140	16	340	15	16	900	39
16	66	1450	528	17	330	15	18	800	39
17	24	900	32	17	320	15	21	750	43
18	26	550	39	17	310	14	25	737	50
19	18	235	11	18	300	15	24	800	52
20	18	120	5.8	19	300	15	24	900	58
21	16	70	3.0	18	291	14	26	995	70
22	16	100	4.3	18	350	17	27	1050	77
23	14	145	5.5	20	485	26	26	1120	79
24	16	155	6.7	20	400	22	24	805	52
25	18	180	8.7	20	300	16	24	810	52
26	17	230	11	22	284	17	28	820	62
27	16	265	11	22	500	30	26	840	59
28	16	275	12	20	700	38	26	846	59
29	16	275	12	20	900	49	29	900	70
30	15	270	11	20	1010	55	28	963	73
31	----	----	----	20	1130	61	----	----	----
TOTAL	1322	----	11209.3	566	----	652	711	----	1727
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	31	800	67	24	900	58	22	240	14
2	26	833	58	18	869	42	22	220	13
3	28	800	60	16	600	26	22	200	12
4	30	760	62	16	400	17	22	180	11
5	28	720	54	20	349	19	569	2180	10400
6	26	680	48	22	400	24	228	1860	2420
7	30	640	52	23	500	31	20	260	14
8	24	600	39	26	653	46	12	250	8.1
9	26	590	41	24	700	45	14	260	9.8
10	24	580	38	20	800	43	14	268	10
11	23	570	35	26	900	63	14	241	9.1
12	28	560	42	26	1000	70	16	300	13
13	26	550	39	26	1090	77	16	324	14
14	26	521	37	24	750	49	26	500	35
15	26	530	37	24	500	32	19	617	32
16	26	650	46	27	287	21	20	600	32
17	26	680	48	27	285	21	20	580	31
18	28	600	45	25	285	19	20	540	29
19	28	620	47	29	288	23	21	520	29
20	26	650	46	23	300	19	22	500	30
21	24	668	43	24	400	26	24	460	30
22	24	750	49	24	589	38	22	430	26
23	24	954	62	24	500	32	24	400	26
24	23	900	56	23	400	25	22	360	21
25	22	750	45	21	300	17	24	330	21
26	21	619	35	24	200	13	22	300	16
27	20	650	35	24	150	9.7	22	250	15
28	25	750	51	20	146	7.9	26	200	14
29	30	900	73	20	200	11	26	150	11
30	26	1070	75	22	259	15	24	130	8.4
31	22	1000	59	22	260	15	----	----	----
TOTAL	797	----	1524	714	----	954.6	1375	----	13356.4
YEAR	30282.0		403897.0						

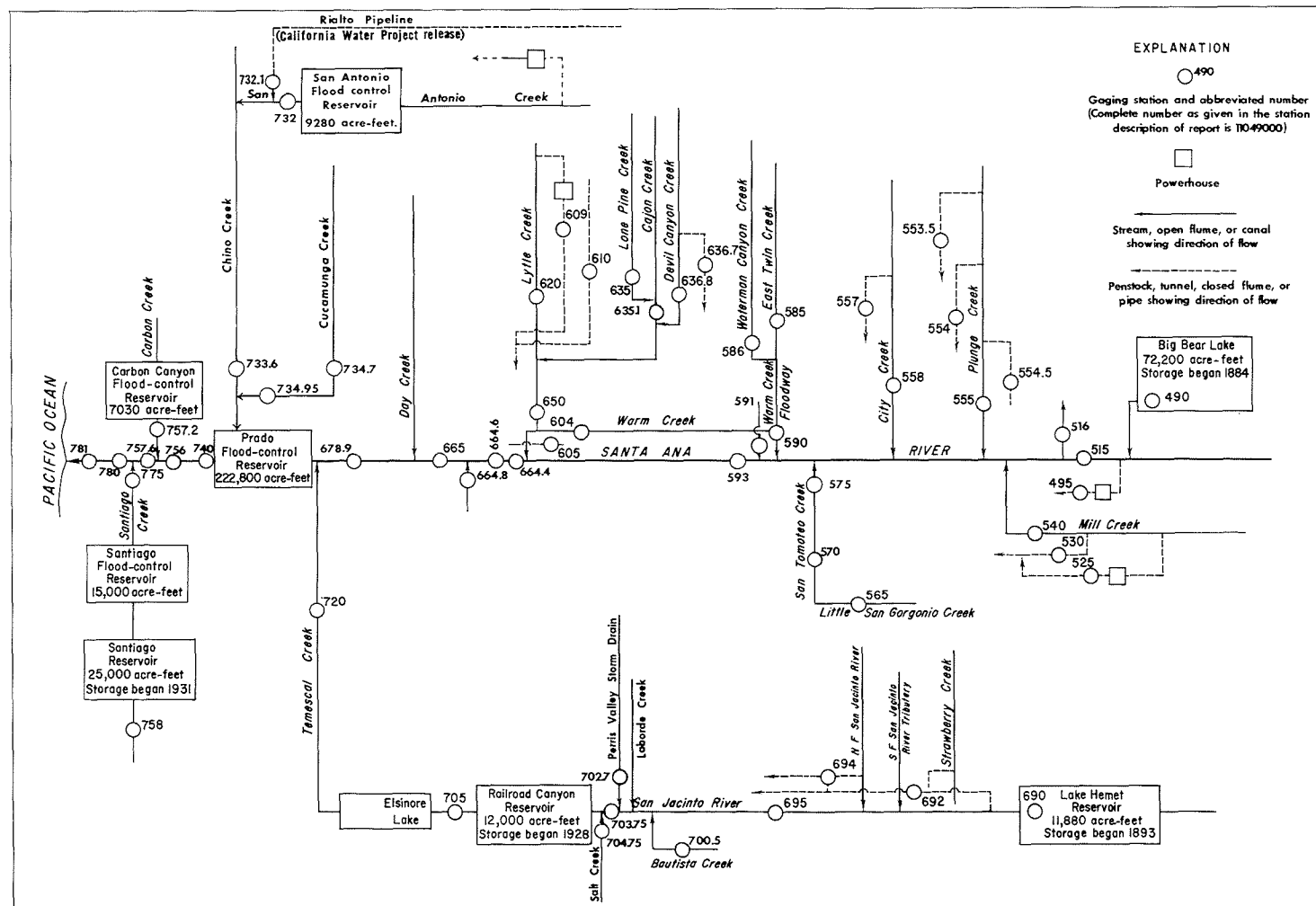
PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW (CFS)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
OCT											
06...	0830	18.5	17	--	217	10	--	--	--	--	--
21...	1000	16.0	19	--	278	14	51	58	64	69	73
NOV											
04...	0925	15.5	18	--	209	10	66	74	81	88	92
DEC											
22...	1350	17.5	--	14	275	10	63	71	77	83	87
28...	1040	17.0	--	110	1340	398	--	61	66	71	74
JAN											
11...	0805	13.5	--	62	1090	182	--	40	42	47	54
19...	1120	13.5	--	2850	7470	57500	38	42	44	54	67
FEB											
06...	1135	16.0	--	133	2310	830	--	48	55	61	66
MAR											
04...	1245	16.0	--	2300	8780	54500	--	33	34	43	53
SEP											
06...	0920	21.0	--	111	2200	659	48	56	63	69	73

DATE	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 2.00 MM
OCT										
06...	--	85	--	90	--	98	--	100	--	--
21...	--	77	--	83	--	96	--	100	--	--
NOV										
04...	--	96	--	98	--	100	--	--	--	--
DEC										
22...	--	91	--	95	--	98	--	100	--	--
28...	--	78	--	83	--	92	--	98	99	100
JAN										
11...	--	66	--	87	--	99	--	100	--	--
19...	--	81	--	96	--	100	--	--	--	--
FEB										
06...	72	--	91	--	99	--	100	--	--	--
MAR										
04...	--	69	--	92	--	99	--	100	--	--
SEP										
06...	--	76	--	85	--	97	--	100	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	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
JUN												
08...	1410	32.5	1	28	25	69	88	91	94	96	98	100
08...	1415	32.5	1	28	46	84	96	98	100	--	--	--
08...	1420	32.5	1	28	2	13	85	100	--	--	--	--
08...	1425	32.5	1	28	2	24	78	99	100	--	--	--
08...	1430	32.5	1	28	7	25	78	99	100	--	--	--
08...	1435	32.5	1	28	45	88	98	100	--	--	--	--



SANTA ANA RIVER BASIN

11049000 BIG BEAR LAKE NEAR BIG BEAR LAKE, CA

LOCATION.--Lat 34°14'33", long 116°58'33", in SW¼ sec.22, T.2 N., R.1 W., San Bernardino County, at Big Bear Lake Dam on Bear Creek, 4 mi (6 km) west of town of Big Bear Lake, and 7.5 mi (12.1 km) upstream from mouth.

DRAINAGE AREA.--72.2 mi² (187.0 km²), including Baldwin Lake drainage.

PERIOD OF RECORD.--October 1950 to current year in reports of Geological Survey. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

GAGE.--Nonrecording gage. Datum of gage is 6,670.9 ft (2,033.29 m) National Geodetic Vertical Datum of 1929 (levels by Bear Valley Mutual Water Co.). Prior to 1912 at old dam 200 ft (61 m) upstream at same datum; spillway at gage height 52.4 ft (15.97 m).

REMARKS.--Lake is formed by multiple-arch concrete dam, completed in 1912, replacing existing lower dam built in 1884; storage began in spring of 1884. Capacity (based on July 1977 resurvey, new capacity table put into use August, 1977) 73,320 acre-ft (90.4 hm³) at elevation 6,743.3 ft (2,055.36 m), top of dam. No dead storage. Water used for irrigation only. See schematic diagram of Santa Ana River basin.

COOPERATION.--Record of contents were furnished by Big Bear Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939, 1969, 1970; lake dry October, November 1898, August to November 1899, October, November 1904.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 66,540 acre-ft (82.0 hm³) May 31, June 4; minimum contents observed, 31,020 acre-ft (38.2 hm³) Nov. 28, 30, Dec. 12.

MONTHEND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	32360	--
Oct. 31.....	31680	-680
Nov. 30.....	31020	-660
Dec. 31.....	33380	+2360
CAL YR 1977.....	--	+2630
Jan. 31.....	37290	+3910
Feb. 28.....	44220	+6930
Mar. 31.....	57040	+12820
Apr. 30.....	63240	+6200
May 31.....	66540	+3300
June 30.....	65130	-1410
July 31.....	63710	-1420
Aug. 31.....	61850	-1860
Sept. 30.....	61380	-470
WTR YR 1978.....	--	+29020

11051500 SANTA ANA RIVER NEAR MENTONE, CA

LOCATION.--Lat 34°06'30", long 117°05'59", in NE¼SW¼SW¼ sec.4, T.1 S., R.2 W., San Bernardino County, on right bank at spreading ground diversion near mouth of canyon, 1.6 mi (2.6 km) upstream from Mill Creek, 3.2 mi (5.1 km) northeast of Mentone, and 16 mi (26 km) downstream from Big Bear Lake.

DRAINAGE AREA.--210 mi² (544 km²), including area tributary to Baldwin Lake at head of Bear Valley.

PERIOD OF RECORD.--July 1896 to current year. Prior to October 1914, records for river only not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January and February 1916 published in WSP 1315-B.

GAGE.--Three water-stage recorders. Main gage on right bank of river, canal gage on powerhouse diversion, and since 1970 supplementary gage on left bank of river. Altitude of main and supplementary gages is 1,950 ft (594 m), from topographic map. Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 mi (2.4 km) upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mi (0.3 km) upstream at different datum. Canal gage at different datum.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000) 16 mi (26 km) upstream.

For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below powerplant No. 2, which diverts above station, see following page. Prior to Oct. 1, 1952, and since Apr. 26, 1976, Bear Valley Mutual Water Co. pumps water into channel above canal gage. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--River only: 64 years (water years 1915-78), 32.8 ft³/s (0.929 m³/s), 23,760 acre-ft/yr (29.3 hm³/yr).

Combined river and canal: 82 years, 80.3 ft³/s (2.274 m³/s), 58,180 acre-ft/yr (71.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 52,300 ft³/s (1,480 m³/s) Mar. 2, 1938, gage height, 14.3 ft (4.36 m), site and datum then in use, on basis of slope-area measurement of maximum flow; no flow at times in some years.

Combined river and canal: Maximum discharge, 52,300 ft³/s (1,480 m³/s) Mar. 2, 1938; minimum daily, 7.4 ft³/s (0.21 m³/s) Sept. 21, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Combined river and canal: Flood of Feb. 23, 1891, 53,700 ft³/s (1,520 m³/s), from notes furnished by F. C. Finkle, consulting engineer, Los Angeles.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	River Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Combined River and Diversion Discharge (ft ³ /s) (m ³ /s)
Dec. 28	0800	748 21.2	5.35 1.631	769 21.8
Jan. 14	2230	1540 43.6	5.60 1.707	1540 43.6
Jan. 19	1130	313 8.86	2.75 0.838	315 8.92
Feb. 10	Unknown	*2170 61.5	Unknown	*2170 61.5
Mar. 1	1600	1030 29.2	5.35 1.631	1030 29.2
Mar. 4	1700	970 27.5	5.75 1.753	974 27.6
Mar. 31	0500	946 26.8	5.70 1.737	949 26.9

River only: Minimum daily discharge, no flow several months.

Combined river and diversion: Minimum daily discharge, 19 ft³/s (0.54 m³/s) Dec. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	60	50	900	485	235	127	96	36	8.0
2			0	45	49	758	460	230	128	93	35	7.8
3			0	45	48	313	479	205	130	89	33	7.8
4			0	91	47	330	406	203	127	90	34	7.8
5			0	83	46	526	376	223	130	90	33	12
6			0	30	45	333	360	208	128	89	33	25
7			0	27	44	244	300	185	127	88	34	13
8			0	24	47	185	280	175	125	84	32	11
9			0	41	77	147	260	169	127	82	31	10
10			0	80	1930	115	250	169	139	81	22	10
11			0	33	800	131	240	173	133	78	16	10
12			0	14	350	128	240	171	133	76	17	9.2
13			0	8.4	310	88	240	177	130	76	16	8.4
14			0	188	235	82	240	179	130	74	15	10
15			0	200	210	75	600	175	127	69	14	10
16			0	90	185	63	400	173	123	68	14	10
17			0	216	165	54	340	163	118	66	14	10
18			.01	223	165	48	290	156	120	63	14	10
19			0	237	150	46	270	151	115	58	14	10
20			0	175	137	46	250	147	113	57	14	9.0
21			0	80	128	53	240	142	116	57	14	8.5
22			0	76	118	86	220	144	108	53	16	8.0
23			0	72	105	76	220	144	105	53	11	7.6
24			0	68	94	54	220	135	103	51	11	7.2
25			0	64	80	49	220	127	108	51	11	6.8
26			4.0	61	74	52	220	124	109	40	10	6.5
27			17	60	105	58	220	123	108	41	10	6.5
28			337	56	709	52	225	123	105	39	9.2	6.5
29			172	54	---	54	230	123	98	37	10	6.5
30			116	54	---	60	235	124	102	37	8.7	6.5
31		---	65	51	---	616	---	123	---	37	8.4	---
TOTAL	0	0	711.01	2606.4	6503	5822	9016	5099	3592	2063	590.3	279.6
MEAN	0	0	22.9	84.1	232	188	301	164	120	66.5	19.0	9.32
MAX	0	0	337	237	1930	900	600	235	139	96	36	25
MIN	0	0	0	8.4	44	46	220	123	98	37	8.4	6.5
AC-FT	0	0	1410	5170	12900	11550	17880	10110	7120	4090	1170	555

CAL YR 1977 TOTAL 1882.46 MEAN 5.16 MAX 337 MIN 0 AC-FT 3730
WTR YR 1978 TOTAL 36282.31 MEAN 99.4 MAX 1930 MIN 0 AC-FT 71970

SANTA ANA RIVER BASIN

11051500 SANTA ANA RIVER NEAR MENTONE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SANTA ANA RIVER AND SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR MENTONE, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	22	23	95	95	903	488	286	204	179	106	74
2	23	22	23	84	95	762	463	282	204	173	107	73
3	22	22	23	88	92	316	482	261	207	164	107	72
4	22	21	23	134	91	333	409	260	205	166	111	72
5	22	23	23	101	89	529	379	279	204	167	108	76
6	25	24	23	67	87	336	363	263	201	165	105	84
7	26	23	23	61	72	247	303	239	201	162	103	84
8	26	22	23	60	50	188	283	230	202	158	98	81
9	25	22	23	84	80	150	263	225	203	155	73	79
10	24	22	23	123	1930	118	253	225	217	154	70	77
11	24	22	24	76	800	134	241	226	208	150	79	77
12	22	22	24	53	350	131	242	227	206	146	88	73
13	21	22	24	50	310	91	243	233	203	139	87	72
14	21	22	24	234	235	85	244	234	201	124	88	76
15	22	22	24	201	210	78	605	229	196	140	87	75
16	22	22	24	91	185	87	403	228	192	137	83	74
17	24	22	24	217	183	97	343	215	188	137	80	74
18	24	22	27	224	202	92	294	208	189	139	80	73
19	23	22	25	238	186	91	297	203	183	134	80	72
20	24	23	24	175	173	90	307	199	180	130	77	70
21	23	23	23	80	169	96	286	192	180	129	77	69
22	22	23	24	76	163	132	256	194	173	125	69	68
23	23	22	23	72	144	120	261	201	176	125	81	68
24	22	22	23	81	145	97	264	205	177	124	79	66
25	23	22	22	98	139	92	272	203	181	122	80	65
26	24	22	23	98	133	95	278	200	181	111	80	64
27	23	22	19	95	161	102	283	196	180	111	79	63
28	23	21	340	90	734	101	279	193	175	109	77	62
29	23	22	175	86	---	104	282	193	169	106	77	61
30	23	22	132	85	---	91	286	199	179	104	75	62
31	22	---	98	88	---	619	---	200	---	106	73	---
TOTAL	716	665	1376	3405	7303	6507	9652	6928	5765	4301	2654	2156
MEAN	23.1	22.2	44.4	110	261	210	322	223	192	139	85.6	71.9
MAX	26	24	340	238	1930	903	605	286	217	179	111	84
MIN	21	21	19	50	50	78	241	192	169	104	69	61
AC-FT	1420	1320	2730	6750	14490	12910	19140	13740	11430	8530	5260	4280
CAL YR 1977	TOTAL	11566	MEAN	31.7	MAX	340	MIN	19	AC-FT	22940		
WTR YR 1978	TOTAL	51428	MEAN	141	MAX	1930	MIN	19	AC-FT	102000		

11054000 MILL CREEK[®] NEAR YUCAIPA, CA

LOCATION.--Lat 34°05'27", long 117°02'12", in NW¼NE¼NE¼ sec.13, T.1 S., R.2 W., San Bernardino County, on left bank 50 ft (15 m) downstream from bridge on State Highway 38, 3.9 mi (6.3 km) north of Yucaipa, and .53 mi (8.5 km) upstream from mouth.

DRAINAGE AREA.--42.4 mi² (110 km²).

PERIOD OF RECORD.--January 1919 to September 1938, October 1947 to current year. Monthly figures only for April and May 1923, published in WSP 1315-B. Prior to October 1954, published as "near Craftonville."

GAGE.--Water-stage recorder on creek; water-stage recorder and sharp-crested weir on power canal No. 1; water-stage recorder and Parshall flume on power canals Nos. 2 and 3. Datum of creek gage is 2,916.36 ft (888.907 m) Southern California Edison Co. datum. Canals are all at different datums. See WSP 1735 for history of changes prior to Mar. 2, 1938.

REMARKS.--Records fair. No regulation above station. Mill Creek power canals Nos. 1, 2, and 3 divert from points 100 ft (30 m), 3 mi (5 km), and 6 mi (10 km) above station, respectively. Combined flow of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3 is given on following page. See schematic diagram of Santa Ana River basin.

COOPERATION.--Water-stage recorder graph for Mill Creek power canals Nos. 2 and 3 furnished by Southern California Edison Co., in connection with a Federal Power Commission project.

AVERAGE DISCHARGE.--Creek only: 50 years (water years 1920-38, 1948-78), 15.2 ft³/s (0.430 m³/s), 11,010 acre-ft/yr (13.6 hm³/yr).

Combined creek and canals: 50 years, 35.9 ft³/s (1.02 m³/s), 26,010 acre-ft/yr (32.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 35,400 ft³/s (1,000 m³/s) Jan. 25, 1969, gage height, 16.8 ft (5.12 m), from floodmark, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of two field estimates at gage height 14.5 ft (4.42 m) and slope-area measurement of maximum flow; no flow at times in some years.

Combined creek and canals: Maximum discharge, 35,400 ft³/s (1,000 m³/s) Jan. 25, 1969; minimum daily, 2.7 ft³/s (0.08 m³/s) Feb. 23, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-area measurements made at gage heights 10.75 ft (3.277 m) and 10.9 ft (3.32 m):

Date	Time	Creek Discharge		Gage height		Combined Creek and Canals Discharge	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)	(ft ³ /s)	(m ³ /s)
Dec. 26	1800	1730	49.0	10.09	3.075	1730	49.0
Jan. 10	0600	106	3.00	9.25	2.819	108	3.06
Jan. 15	0230	564	16.0	9.85	3.002	580	16.4
Feb. 10	1100	*5400	153	11.05	3.368	*5400	153
Mar. 2	1300	4100	116	10.75	3.277	4100	116
Mar. 11	1500	1120	31.7	9.40	2.865	1140	32.3
Mar. 31	0700	2554	72.3	10.15	3.094	2560	72.5
Apr. 15	2100	1718	48.7	9.55	2.911	1720	48.7
Apr. 30	2100	1070	30.3	9.20	2.804	1090	30.9

Creek only: Minimum daily discharge, no flow some days in November and December.

Combined creek and canals: Minimum daily discharge, 13 ft³/s (0.37 m³/s) many days from November to January.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	.01	0	13	7.2	1230	673	400	192	86	40	5.4
2	.84	.01	.03	13	7.2	1520	665	390	192	81	40	5.8
3	.70	.01	.04	17	6.8	1560	625	380	192	77	36	4.8
4	.64	.01	0	70	6.8	1020	586	380	196	73	31	4.8
5	.59	.01	.06	62	6.8	1640	502	400	196	69	28	6.1
6	.24	.01	.13	16	7.2	1050	536	360	192	70	27	27
7	.03	.01	.15	10	7.2	586	557	340	192	71	27	15
8	.02	.01	.15	8.0	5.7	285	522	330	192	66	28	14
9	.02	.01	.15	18	368	294	543	325	189	60	38	12
10	.02	.01	.05	24	1740	264	543	318	186	57	30	10
11	.01	.01	0	9.5	231	418	536	315	186	55	26	9.2
12	.01	.01	0	8.5	121	321	543	310	180	51	24	8.9
13	.01	.01	0	6.4	86	277	529	307	170	48	23	9.2
14	.01	.01	0	34	77	248	543	302	160	46	22	8.9
15	.01	.01	0	168	70	248	760	300	156	49	21	8.4
16	.01	.01	.12	82	66	244	648	290	152	47	20	8.1
17	.01	.01	.11	108	62	241	536	280	147	46	19	7.8
18	.01	0	.38	32	56	241	490	270	143	43	20	6.5
19	.01	0	.17	15	53	237	460	260	141	42	19	6.8
20	.01	0	.17	12	49	237	440	248	138	41	19	5.8
21	.01	0	.11	11	46	244	420	240	132	41	18	5.8
22	.01	0	.08	9.4	42	323	410	230	127	42	17	5.6
23	.01	0	0	8.8	39	260	395	226	122	43	16	5.4
24	.01	0	0	8.5	37	256	385	229	117	43	16	5.4
25	.01	0	.05	8.5	22	256	370	219	111	43	15	5.4
26	.01	0	210	8.5	22	277	370	208	105	44	14	5.2
27	.01	0	6.0	8.0	29	285	390	205	100	44	13	3.9
28	.01	0	130	7.2	485	277	400	196	96	42	13	2.0
29	.01	0	18	7.2	---	281	420	192	90	42	10	1.8
30	.01	0	15	7.2	---	330	500	192	89	42	8.6	1.7
31	.01	---	14	7.2	---	1240	---	196	---	40	5.8	---
TOTAL	4.22	.17	394.95	817.9	3755.9	16190	15297	8838	4581	1644	684.4	226.7
MEAN	.14	.006	12.7	26.4	134	522	510	285	153	53.0	22.1	7.56
MAX	.91	.01	210	168	1740	1640	760	400	196	86	40	27
MIN	.01	0	0	6.4	5.7	237	370	192	89	40	5.8	1.7
AC-FT	8.4	.3	783	1620	7450	32110	30340	17530	9090	3260	1360	450

CAL YR 1977 TOTAL 701.41 MEAN 1.92 MAX 210 MIN 0 AC-FT 1390
WTR YR 1978 TOTAL 52434.24 MEAN 144 MAX 1740 MIN 0 AC-FT 104000

SANTA ANA RIVER BASIN

11054000 MILL CREEK YEAR YUCAIPA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF MILL CREEK AND MILL CREEK POWER
CANALS NOS. 1, 2, AND 3 NEAR YUCAIPA, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	13	13	30	1230	678	423	227	120	68	45
2	18	14	13	13	30	1520	670	413	227	115	68	45
3	18	14	13	17	30	1560	640	403	227	113	66	43
4	18	14	13	70	30	1020	615	408	231	109	65	45
5	17	15	14	71	31	1640	530	436	232	103	66	49
6	15	15	13	28	31	1060	565	397	227	106	63	70
7	18	15	13	24	31	609	587	377	227	107	63	54
8	17	15	13	22	30	308	552	367	227	101	64	53
9	15	15	13	29	371	317	573	362	224	94	73	51
10	17	15	14	26	1740	287	572	356	221	91	63	49
11	16	15	16	20	231	442	565	354	220	89	60	48
12	16	16	14	27	121	344	573	350	213	85	59	48
13	15	15	14	26	86	300	559	346	203	82	58	50
14	15	15	13	54	79	271	573	339	192	79	58	47
15	16	15	13	176	75	271	783	334	188	82	58	45
16	16	16	13	93	71	268	654	324	184	79	56	45
17	16	15	14	130	70	264	542	306	179	78	54	47
18	16	14	15	54	67	263	513	303	176	75	56	45
19	16	14	13	39	64	259	483	297	176	74	54	44
20	16	14	13	36	59	261	463	286	172	73	55	43
21	15	14	13	35	56	268	443	276	166	73	51	44
22	14	14	14	33	53	346	432	265	159	74	52	43
23	14	14	14	32	51	283	418	261	154	74	50	42
24	14	14	14	32	54	279	408	263	149	73	50	40
25	15	14	14	32	52	280	393	256	143	73	49	40
26	15	14	221	32	52	301	393	245	141	73	48	40
27	16	14	14	31	59	309	413	240	137	73	46	39
28	15	13	130	30	499	301	423	230	133	70	46	40
29	15	13	18	30	---	306	443	226	126	69	45	39
30	15	13	15	30	---	354	523	228	125	68	47	40
31	14	---	14	30	---	1240	---	232	---	67	46	---
TOTAL	490	432	751	1315	4153	16761	15979	9903	5606	2642	1757	1373
MEAN	15.8	14.4	24.2	42.4	148	541	533	319	187	85.2	56.7	45.8
MAX	18	16	221	176	1740	1640	783	436	232	120	73	70
MIN	14	13	13	13	30	259	393	226	125	67	45	39
AC-FT	972	857	1490	2610	8240	33250	31690	19640	11120	5240	3490	2720
CAL YR 1977	TOTAL	6844.8	MEAN	18.8	MAX	221	MIN	5.8	AC-FT	13580		
WTR YR 1978	TOTAL	61162.0	MEAN	168	MAX	1740	MIN	13	AC-FT	121300		

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA

LOCATION.--Lat 34°07'06", long 117°08'27", in SW¼NE¼NE¼ sec.1, T.1 S., R.3 W., San Bernardino County, on left bank at mouth of canyon at crossing of North Fork ditch siphon, and 1.8 mi (2.9 km) northeast of East Highlands.

DRAINAGE AREA.--16.9 mi² (43.8 km²).

PERIOD OF RECORD.--January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

GAGE.--Water-stage recorder on creek. Since March 1951 water-stage recorder and weir on upper diversion; water-stage recorder and concrete-lined canal on middle diversion; crest-stage gage and sharp-crested weir on lower diversion. Altitude of creek gage is 1,590 ft (485 m), from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft (1.219 m) higher. Diversions are all at different datums.

REMARKS.--Records poor. No regulation above station. Diversion from Alder Creek to Upper Plunge Creek area was active 1904-67. Diversions for irrigation are made at sites 0.5 mi (0.8 km), 1.0 mi (1.6 km), and 2.5 mi (4.0 km) above station. Water has been diverted above station for irrigation during entire period of record. Combined discharge of Plunge Creek and upper, middle, and lower diversions is given on following page. No flow in lower diversion since May 29, 1966. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--Creek only: 59 years, 6.34 ft³/s (0.180 m³/s), 4,590 acre-ft/yr (5.66 hm³/yr).
Combined creek and diversions: 27 years, 8.01 ft³/s (0.227 m³/s), 5,800 acre-ft/yr (7.15 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 5,340 ft³/s (151 m³/s) Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for part of most years.
Combined creek and diversions: Maximum discharge, 4,770 ft³/s (135 m³/s) Dec. 6, 1966; no flow Nov. 12, 1964, Sept. 29, 1965.

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

Date	Time	Creek Discharge (ft ³ /s) (m ³ /s)		Gage Height (ft) (m)		Combined Creek and Diversions Discharge (ft ³ /s) (m ³ /s)	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)	(ft ³ /s)	(m ³ /s)
Dec. 28	1515	305	8.64	3.75	1.143	305	8.64
Jan. 15	0130	850	24.1	4.93	1.503	850	24.1
Feb. 9	2230	1050	29.7	5.40	1.646	1050	29.7
Feb. 13	0100	233	6.60	3.47	1.058	233	6.60
Mar. 2	1800	880	24.9	5.10	1.554	880	24.9
Mar. 4	Unknown	*1830	51.8	6.34	1.932	*1830	51.8
Mar. 31	Unknown	407	11.5	4.09	1.247	407	11.5

Creek only: No flow many days in October and November.

Combined creek and diversions: Minimum daily discharge, 0.54 ft³/s (0.015 m³/s) Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.68	10	8.3	223	45	26	10	1.9	.35	.18
2	0	0	.43	6.9	7.4	446	40	25	10	1.7	.35	.18
3	0	0	.43	9.0	6.9	226	40	22	10	1.8	.35	.18
4	0	.01	.43	25	6.7	580	42	21	10	1.8	.35	.21
5	0	.64	.24	21	7.4	520	38	20	10	1.9	.35	.97
6	0	1.3	.21	14	14	260	42	19	10	1.2	.31	63
7	0	.24	.24	10	13	160	49	18	9.8	1.0	.31	45
8	0	.92	.39	8.9	13	130	39	18	10	.87	.91	34
9	0	1.4	.27	24	490	113	36	17	10	.80	2.9	25
10	.01	1.1	.27	74	431	96	34	17	11	.73	2.8	22
11	.01	.68	.31	36	129	110	33	16	10	.68	2.1	19
12	0	.68	.39	19	96	106	31	15	9.8	.65	2.0	15
13	0	.68	.38	23	143	86	29	15	8.9	.62	2.2	14
14	0	.68	.27	86	96	75	29	15	8.6	.59	2.2	22
15	0	.62	.24	272	75	65	60	14	8.6	.57	2.1	18
16	0	.57	.24	150	61	58	80	14	6.9	.54	1.0	13
17	0	.52	.18	190	54	52	58	13	4.7	.52	.06	12
18	0	.35	9.0	25	46	50	44	13	4.1	.50	.05	8.6
19	0	.52	1.9	21	40	47	41	13	3.6	.48	.04	4.9
20	0	.57	1.6	18	37	45	39	13	3.1	.46	.03	2.6
21	0	.35	.62	16	35	45	37	12	2.8	.45	.03	2.2
22	0	.31	.52	15	32	50	34	12	1.9	.43	.04	1.3
23	0	.31	.47	14	30	45	32	12	1.6	.42	.06	.74
24	0	.52	.43	13	28	43	30	12	1.2	.41	.10	.35
25	0	.52	.43	12	26	40	28	11	1.5	.40	.12	.18
26	0	.47	35	11	24	38	27	11	2.0	.39	.14	.10
27	0	.47	23	11	24	37	26	11	2.6	.38	.18	.10
28	0	.47	121	9.5	92	36	25	10	3.1	.37	.21	.47
29	0	.39	30	8.9	---	35	24	10	2.4	.36	.16	.47
30	0	.52	18	8.9	---	34	24	10	2.1	.35	.16	.31
31	0	---	14	8.9	---	69	---	10	---	.35	.16	---
TOTAL	.02	15.41	261.57	1171.0	2065.7	3920	1136	465	190.3	23.62	22.12	326.04
MEAN	.0006	.51	8.44	37.8	73.8	126	37.9	15.0	6.34	.76	.71	10.9
MAX	.01	1.4	121	272	490	580	80	26	11	1.9	2.9	63
MIN	0	0	.18	6.9	6.7	34	24	10	1.2	.35	.03	.10
AC-FT	.04	31	519	2320	4100	7780	2250	922	377	47	44	647

CAL YR 1977 TOTAL 1056.22 MEAN 2.89 MAX 121 MIN 0 AC-FT 2100
WTR YP 1978 TOTAL 9596.78 MEAN 26.3 MAX 580 MIN 0 AC-FT 19040

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF PLUNGE CREEK AND
DIVERSIONS NEAR EAST HIGHLANDS, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	.68	1.2	10	8.3	223	45	26	13	5.1	2.9	2.1
2	.61	.65	.90	6.9	7.4	446	40	25	13	4.7	3.1	2.1
3	.59	.64	.88	9.0	6.9	226	40	22	13	4.7	3.0	2.1
4	.57	.65	1.0	25	6.7	580	42	21	13	4.8	3.0	2.1
5	.56	1.2	.96	21	7.4	520	38	20	13	4.9	3.1	3.6
6	.61	1.7	.89	14	14	260	42	19	13	4.2	2.8	69
7	.60	.81	.80	10	13	160	49	18	13	3.9	2.6	50
8	.57	1.1	.98	8.9	13	130	39	18	13	3.9	3.6	38
9	.60	1.9	.93	24	490	113	36	18	13	4.0	6.5	29
10	.64	1.7	.86	74	431	96	34	19	14	3.7	6.0	26
11	.63	1.4	.87	36	129	110	33	18	13	3.9	4.9	23
12	.59	1.4	.90	19	96	106	31	18	13	3.8	4.5	19
13	.57	1.3	.98	23	143	86	29	18	12	3.5	4.4	18
14	.56	1.2	.96	86	96	75	29	18	12	3.6	4.4	26
15	.54	1.2	.92	272	75	65	60	17	12	3.6	4.2	22
16	.55	.86	.96	150	61	58	80	17	10	3.4	3.5	17
17	.58	.93	.86	190	54	52	58	15	8.1	3.2	2.8	16
18	.60	.99	9.2	25	46	50	44	15	7.5	3.6	2.8	13
19	.70	1.0	1.9	21	40	47	41	15	7.0	3.8	2.7	8.4
20	.77	1.1	1.9	18	37	45	39	16	6.5	3.9	2.6	5.8
21	.74	1.1	1.3	16	35	45	37	15	6.1	3.7	2.6	5.4
22	.66	1.1	1.2	15	32	50	34	15	5.1	3.5	2.5	4.1
23	.60	.95	1.1	14	30	45	32	15	4.8	3.4	2.6	3.3
24	.59	1.0	1.1	13	28	43	30	15	4.4	3.5	2.6	2.9
25	.58	.92	1.1	12	26	40	28	14	4.9	3.4	2.6	2.6
26	.58	.86	35	11	24	38	27	14	5.3	3.3	2.6	2.4
27	.66	.76	23	11	24	37	26	14	5.8	3.2	2.7	2.3
28	.67	.94	121	9.5	92	36	25	13	6.5	3.2	2.5	2.6
29	.69	.89	30	8.9	---	35	24	13	5.6	3.0	2.3	2.5
30	.69	.89	18	8.9	---	34	24	13	5.2	3.0	2.3	2.4
31	.68	---	14	8.9	---	69	---	13	---	2.9	2.2	---
TOTAL	19.22	31.82	275.65	1171.0	2065.7	3920	1136	527	285.8	116.3	100.9	422.7
MEAN	.62	1.06	8.89	37.8	73.8	126	37.9	17.0	9.53	3.75	3.25	14.1
MAX	.77	1.9	121	272	490	580	80	26	14	5.1	6.5	69
MIN	.54	.64	.80	6.9	6.7	34	24	13	4.4	2.9	2.2	2.1
AC-FT	38	63	547	2320	4100	7780	2250	1050	567	231	200	838
CAL YR 1977	TOTAL	1366.29	MEAN	3.74	MAX 121	MIN .38	AC-FT	2710				
WTR YR 1978	TOTAL	10072.09	MEAN	27.6	MAX 580	MIN .54	AC-FT	19980				

11055800 CITY CREEK NEAR HIGHLAND, CA

LOCATION.--Lat 34°08'38", long 117°11'16", in SE¼SW¼NW¼ sec.27, T.1 N., R.3 W., San Bernardino County, on right bank 0.6 mi (1.0 km) upstream from Highland Avenue, and 1.5 mi (2.4 km) northeast of Highland.

DRAINAGE AREA.--19.6 mi² (50.8 km²).

PERIOD OF RECORD.--October 1919 to current year; combined records of creek and canal, June 1924 to current year.

GAGE.--Water-stage recorder on creek; water-stage recorder on canal. Altitude of creek gage is 1,580 ft (482 m), from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi (0.3 km) downstream at different datum. Canal gage at different datum.

REMARKS.--Records fair. No regulation above station. City Creek Water Co.'s canal has diverted from point 0.5 mi (0.8 km) above station for irrigation throughout period of record. See schematic diagram of Santa Ana River basin. Combined discharge of City Creek and canal is given on following page.

AVERAGE DISCHARGE.--Creek only: 59 years, 8.94 ft³/s (0.253 m³/s), 6,477 acre-ft/yr (7.99 hm³/yr).
Combined creek and canal: 54 years, 10.6 ft³/s (0.300 m³/s), 7,680 acre-ft/yr (9.47 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 7,000 ft³/s (198 m³/s) Feb. 25, 1969, gage height, 9.39 ft (2.862 m), from rating curve extended above 580 ft³/s (16.4 m³/s) on basis of slope-area estimate at gage height 8.83 ft (2.691 m); no flow for several months in some years.
Combined creek and canal: Maximum discharge, 7,000 ft³/s (198 m³/s) Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of slope-area measurement at gage height 8.60 ft (2.621 m):

Date	Time	Creek Discharge		Gage height		Combined Creek and Canal Discharge	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)	(ft ³ /s)	(m ³ /s)
Jan. 15	0745	284	8.04	5.43	1.655	284	8.04
Feb. 9	2245	*2510	71.1	8.16	2.487	*2510	71.1
Feb. 13	0115	412	11.7	5.16	1.573	412	11.7
Mar. 2	1230	974	27.6	6.29	1.917	974	27.6
Mar. 4	1730	2140	60.6	7.79	2.374	2140	60.6
Mar. 11	1545	201	5.69	4.52	1.378	201	5.69
Mar. 31	0415	218	6.17	4.59	1.399	218	6.17
Apr. 7	0315	198	5.61	4.51	1.375	198	5.61
Apr. 15	2245	363	10.3	5.05	1.539	363	10.3

Creek only: Minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Nov. 8-15.

Combined creek and canal: Minimum daily discharge, 0.17 ft³/s (0.005 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.87	.10	11	11	411	64	36	18	8.8	3.6	2.0
2	.21	.67	.08	8.5	11	725	60	37	18	8.4	3.6	2.0
3	.20	.65	.08	10	10	408	60	35	18	8.1	3.6	2.1
4	.17	.45	.07	20	10	829	67	34	17	8.1	3.6	2.1
5	.22	.99	.07	22	12	740	60	33	17	7.8	3.8	4.0
6	.29	.72	.07	19	16	317	58	32	17	7.8	3.4	17
7	.49	.05	.07	15	17	226	99	30	16	7.5	3.0	8.1
8	.47	.04	.07	11	18	170	72	29	16	7.2	3.2	6.6
9	.67	.04	.07	17	747	138	68	28	16	6.9	4.0	6.0
10	1.1	.04	.07	38	791	114	64	28	16	6.9	4.5	6.0
11	.95	.04	.09	20	257	126	61	27	16	6.9	3.6	6.0
12	.66	.04	.09	12	162	116	60	26	15	6.3	3.4	5.7
13	.59	.04	.09	9.2	232	95	58	25	15	6.0	3.3	5.4
14	.60	.04	.09	26	110	81	58	25	15	5.7	3.2	6.0
15	.58	.04	.10	197	78	72	107	24	14	5.4	3.1	5.4
16	.57	.05	.10	96	58	67	130	24	14	5.4	2.9	4.9
17	.74	.05	.10	117	47	63	70	23	13	5.4	2.7	5.2
18	1.1	.06	6.0	49	45	60	55	23	12	5.2	2.7	5.4
19	1.7	.06	.89	21	48	58	51	22	12	5.2	2.6	5.2
20	1.9	.06	1.0	20	55	56	48	22	12	4.9	2.5	4.9
21	1.7	.06	1.8	19	48	55	46	22	12	4.7	2.4	4.9
22	1.2	.07	1.9	17	44	65	44	22	11	4.4	2.3	4.7
23	.72	.06	1.9	16	41	61	41	23	11	4.7	2.4	4.2
24	.59	.06	1.8	15	39	58	39	22	10	4.7	2.3	4.0
25	.54	.06	2.0	15	48	55	38	21	10	4.7	2.3	3.8
26	.50	.06	14	15	72	54	38	21	11	4.4	2.4	3.6
27	.78	.07	11	13	87	51	37	20	11	4.4	2.6	3.8
28	1.1	.08	87	12	122	49	37	19	12	4.0	2.4	3.8
29	1.1	.09	32	12	---	48	36	19	11	4.0	2.1	3.6
30	1.2	.10	32	12	---	47	36	18	10	3.6	2.0	3.4
31	1.0	---	17	12	---	118	---	18	---	3.4	2.0	---
TOTAL	23.94	5.71	211.70	896.7	3236	5533	1762	788	416	180.9	91.5	149.8
MEAN	.77	.19	6.83	28.9	116	178	58.7	25.4	13.9	5.84	2.95	4.99
MAX	1.9	.99	.87	197	791	829	130	37	18	8.8	4.5	17
MIN	.17	.04	.07	8.5	10	47	36	18	10	3.4	2.0	2.0
AC-FT	47	11	420	1780	6420	10970	3490	1560	825	359	181	297
CAL YR 1977	TOTAL	990.08	MEAN	2.71	MAX	87	MIN	.04	AC-FT	1960		
WTR YR 1978	TOTAL	13295.25	MEAN	36.4	MAX	829	MIN	.04	AC-FT	26370		

SANTA ANA RIVER BASIN

11055800 CITY CREEK NEAR HIGHLAND, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF CITY CREEK AND CITY CREEK
WATER CO.'S CANAL NEAR HIGHLAND, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.87	1.1	11	11	411	64	36	19	11	5.2	3.3
2	.21	.67	1.2	8.5	11	725	60	37	19	11	5.2	3.3
3	.20	.65	1.3	10	10	408	60	35	19	11	5.2	3.3
4	.17	.59	1.2	20	10	830	67	34	18	10	5.2	3.4
5	.22	2.4	1.2	22	12	741	60	33	18	10	5.5	4.8
6	.29	2.6	1.2	19	16	317	58	32	18	10	4.9	17
7	.49	1.3	1.2	15	17	226	99	30	17	9.9	4.3	8.2
8	.47	1.1	1.3	11	18	170	72	29	17	9.5	4.5	6.7
9	.67	.96	1.3	17	747	138	68	28	17	9.1	5.5	6.1
10	1.1	.91	1.2	38	791	114	64	28	17	9.1	5.8	6.0
11	.95	.94	1.4	20	257	126	61	27	17	9.1	5.0	6.0
12	.66	.92	1.4	12	162	116	60	26	16	8.5	4.7	5.7
13	.59	.89	1.4	9.2	232	95	58	25	16	8.1	4.5	6.3
14	.60	.82	1.3	26	110	81	58	25	16	7.7	4.4	7.8
15	.58	.76	1.4	197	78	72	107	24	15	7.4	4.2	7.2
16	.57	.80	1.4	96	58	67	130	25	15	7.3	3.9	6.7
17	.74	.80	1.6	117	47	63	70	24	14	7.3	3.8	7.0
18	1.1	.81	8.1	49	45	60	55	24	13	7.1	4.0	7.2
19	1.7	.86	2.4	21	48	58	51	23	13	7.1	3.9	7.0
20	1.9	.86	1.8	20	55	56	48	23	13	6.7	3.8	6.6
21	1.7	.86	1.8	19	48	55	46	23	13	6.4	3.7	6.5
22	1.2	.92	1.9	17	44	65	44	23	12	6.1	3.6	6.4
23	.72	.91	1.9	16	41	61	41	24	12	6.5	3.9	5.9
24	.59	.91	1.8	15	39	58	39	23	11	6.5	3.7	5.7
25	.54	.96	2.0	15	48	55	38	22	11	6.6	3.7	5.5
26	.50	.96	14	15	72	54	38	22	12	6.2	4.0	5.3
27	.78	.97	11	13	87	51	37	21	12	6.1	4.2	5.4
28	1.1	1.1	87	12	122	49	37	20	13	5.7	3.9	5.4
29	1.1	1.1	32	12	---	48	36	20	12	5.7	3.4	5.2
30	1.2	1.1	32	12	---	47	36	19	12	5.2	3.3	4.9
31	1.0	---	17	12	---	118	---	19	---	5.0	3.3	---
TOTAL	23.94	30.30	236.8	896.7	3236	5535	1762	804	447	242.9	134.2	185.8
MEAN	.77	1.01	7.64	28.9	116	179	58.7	25.9	14.9	7.84	4.33	6.19
MAX	1.9	2.6	87	197	791	830	130	37	19	11	5.8	17
MIN	.17	.59	1.1	8.5	10	47	36	19	11	5.0	3.3	3.3
AC-FT	47	60	470	1780	6420	10980	3490	1590	887	482	266	369
CAL YR 1977 TOTAL	1222.54			MEAN 3.35	MAX 87	MIN .13	AC-FT 2420					
WTR YR 1978 TOTAL	13534.64			MEAN 37.1	MAX 830	MIN .17	AC-FT 26850					

11056200 SANTA ANA RIVER AT WATERMAN AVENUE, AT SAN BERNARDINO, CA

LOCATION.--Lat 34°04'14", long 117°16'41", in San Bernardino Grant, San Bernardino County on downstream end of fifth pier from left bank of southbound Waterman Avenue bridge, 0.1 mi (0.16 km) upstream from San Timoteo Creek, and 2.7 mi (4.3 km) southeast of San Bernardino.

DRAINAGE AREA.--359 mi² (930 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1954 to December 1961, January 1964 to September 1970, October 1976 to current year. Prior to January 1964, published as "near San Bernardino". Records, except for extremes for October 1928 to September 1937 at site 1.6 miles (2.57 km) upstream, not equivalent as a result of discharge from Mission Ditch.

GAGE.--Water-stage recorder. Altitude of gage is 995 ft (303.3 m), from topographic map. Prior to Jan. 21, 1964, at different datum.

REMARKS.--Records poor. Stage-discharge relation indefinite during year. Flow partly regulated by Big Bear Lake (station 11049000). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--15 years (water years 1955-61, 1965-70, 1977-78), 33.8 ft³/s (0.957 m³/s), 24,500 acre-ft/yr (30.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s), estimated, Jan. 25, 1969, gage height, 8.5 ft (2.59 m); no flow for most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 75,700 ft³/s (2,140 m³/s) Mar. 2, 1938, from combined discharge of Santa Ana River near Mentone, Mill Creek nr Yucaipa, and Plunge Creek near East Highlands.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,780 ft³/s (164 m³/s), estimated, Mar. 4; other peaks above base of 1,000 ft³/s (28.3 m³/s) probably occurred Feb. 9 and 10, discharge and gage-heights unknown; no flow part of several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.60	3.0	35	2910	773	110	138	51	1.0	0
2		0	.40	2.0	26	3700	325	102	137	46	.50	0
3		0	0	1.0	26	1330	243	100	136	38	.20	0
4		0	0	23	36	5780	248	100	134	25	0	0
5		0	0	34	102	1570	256	160	130	15	0	45
6		0	0	2.0	255	1550	466	150	128	10	0	32
7		0	0	1.0	232	811	504	146	124	6.0	0	20
8		0	0	1.0	50	459	373	146	121	4.0	0	16
9		0	0	49	1830	293	192	145	120	3.0	32	12
10		0	0	29	2940	332	160	145	118	2.0	30	10
11		0	0	5.0	476	244	128	145	114	1.0	6.0	8.0
12		0	0	3.0	183	857	109	144	110	.50	2.0	7.0
13		0	0	1.0	436	672	103	144	108	.20	1.5	6.0
14		0	0	21	160	574	121	144	105	0	1.2	5.0
15		0	0	503	705	153	361	143	100	0	1.1	4.3
16		0	3.0	42	213	123	382	143	97	0	1.0	3.5
17		0	2.0	660	80	114	171	143	94	0	.80	3.0
18		0	21	205	46	105	154	142	90	0	.60	2.5
19		0	3.0	265	203	105	142	142	87	0	.40	2.0
20		0	3.0	41	170	114	100	142	84	0	.20	1.7
21		.50	5.0	87	145	270	110	141	81	0	0	1.4
22		.20	5.0	126	60	477	113	141	78	0	0	1.1
23		1.0	1.0	80	30	114	124	140	74	0	0	.50
24		.80	1.0	8.0	20	90	107	140	71	0	0	0
25		.60	.50	45	18	72	98	140	68	0	0	0
26		.50	409	45	16	63	97	140	65	0	0	0
27		.40	82	9.0	14	50	109	139	63	0	0	0
28		.40	561	5.0	60	29	110	139	61	2.0	0	0
29		.40	107	10	---	84	123	139	59	1.0	0	0
30		1.0	45	8.0	---	260	127	138	56	0	0	0
31		---	5.0	9.0	---	1460	---	138	---	0	0	---
TOTAL	0	5.80	1254.50	2323.0	8567	24765	6429	4271	2951	204.70	78.50	181.00
MEAN	0	.19	40.5	74.9	306	799	214	138	98.4	6.60	2.53	6.03
MAX	0	1.0	561	660	2940	5780	773	160	138	51	32	45
MIN	0	0	0	1.0	14	29	97	100	56	0	0	0
AC-FT	0	12	2490	4610	16990	49120	12750	8470	5850	406	156	359
CAL YR 1977	TOTAL	1788.00	MEAN	4.90	MAX	561	MIN	0	AC-FT	3550		
WTR YR 1978	TOTAL	51030.50	MEAN	140	MAX	5780	MIN	0	AC-FT	101200		

SANTA ANA RIVER BASIN

11056200 SANTA ANA RIVER AT WATERMAN AVENUE, AT SAN BERNARDINO, CA

WATER-QUALITY RECORDS

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

WATER TEMPERATURES: February 1975 to September 1977 (discontinued).

SEDIMENT RECORDS: February 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to September 1977 (discontinued).

SEDIMENT RECORDS: October 1976 to September 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 10,800 mg/L October 22, 1976; minimum daily mean, no flow for many days each year.

SEDIMENT DISCHARGE: Maximum daily mean, 16,900 tons (15,330 metric tons) October 22, 1976; minimum daily mean, 0 tons on many days each year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
NOV								
30...	1035	15.0	3.2	120	1.0	--	--	--
30...	1625	16.0	1.1	210	.62	--	--	--
DEC								
26...	1120	13.0	169	2810	1280	--	--	--
26...	1225	13.0	280	9940	7520	--	--	--
26...	1315	13.0	211	6040	3440	--	--	--
27...	1345	19.5	.25	246	.17	--	--	--
28...	0830	14.0	325	59200	51900	--	--	--
29...	0805	12.0	--	15400	--	--	--	--
29...	1140	16.5	5.6	2860	43	--	--	--
JAN								
11...	1010	13.0	.57	984	1.5	--	--	--
FEB								
09...	0800	--	--	15400	--	--	--	--
09...	1055	12.5	1780	42600	205000	--	--	--
09...	1105	12.5	1780	41200	198000	12	17	25
10...	1050	--	2400	33000	214000	11	12	20
11...	1000	10.0	1261	11700	39800	--	--	--
MAR								
04...	0940	11.5	2870	15400	119000	5	9	14
06...	1400	--	546	4950	7300	--	--	--
30...	0845	--	87	840	197	--	--	--
30...	0945	--	87	816	192	--	--	--
31...	1450	14.0	4000	15700	170000	15	21	30
MAY								
23...	1330	20.0	252	313	213	--	--	--
24...	1240	24.0	161	476	207	--	--	--
JUN								
06...	1015	18.0	102	214	59	--	--	--
14...	1300	30.0	66	592	105	--	--	--
27...	1100	--	66	569	101	--	--	--
28...	1530	31.5	57	85	13	--	--	--
JUL								
10...	1800	23.5	1.4	19	.07	--	--	--
AUG								
10...	1200	33.5	14	256	9.7	--	--	--
10...	1240	33.5	25	172	12	--	--	--
10...	1300	33.5	25	134	9.0	--	--	--
10...	1630	34.5	7.9	61	1.3	--	--	--
15...	1500	28.0	.40	28	.03	--	--	--
SEP								
06...	1140	26.0	75	692	140	--	--	--
07...	0945	--	50	255	34	--	--	--

11056200 SANTA ANA RIVER AT WATERMAN AVENUE, AT SAN BERNARDINO, CA

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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							
30...	--	55	76	96	100	--	--
30...	--	--	--	--	--	--	--
DEC							
26...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
JAN							
11...	--	--	--	--	--	--	--
FEB							
09...	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--
09...	36	45	64	84	95	99	100
10...	30	41	60	78	93	99	100
11...	--	--	--	--	--	--	--
MAR							
04...	20	33	67	87	98	100	--
06...	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--
31...	42	50	59	74	94	99	100
MAY							
23...	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--
JUN							
06...	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--
JUL							
10...	--	--	--	--	--	--	--
AUG							
10...	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--
SEP							
06...	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--

11056500 LITTLE SAN GORGONIO CREEK NEAR BEAUMONT, CA

LOCATION.--Lat 34°01'45", long 116°56'43", in NW¼SW¼NW¼ sec.1, T.2 S., R.1 W., San Bernardino County, on right bank at upstream side of bridge on Oak Glen Road, 3.0 mi (4.8 km) upstream from Wallace Creek, and 7 mi (11 km) north of Beaumont.

DRAINAGE AREA.-1.74 mi² (4.51 km²).

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,320 ft (1,317 m), from topographic map. Prior to July 30, 1970, at site 42 ft (13 m) downstream on left bank at same datum.

REMARKS.--Records poor. No regulation above station. Several small diversions above station for irrigation. See schematic diagram of Santa Ana River basin. No gage-height record Mar. 5 to May 2.

AVERAGE DISCHARGE.--30 years, 0.51 ft³/s (0.014 m³/s), 369 acre-ft/yr (455,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Feb. 25, 1969, gage height, 8.50 ft (2.591 m), from floodmarks, from rating curve extended above 32 ft³/s (0.91 m³/s) on basis of slope-area measurements at gage heights 2.18 ft (0.664 m), 3.45 ft (1.052 m), and 8.50 ft (2.591 m); no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) revised, and maximum (*), based on slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 11	Unknown	23 0.65	Unknown	Mar. 11	Unknown	100 2.83	Unknown
Mar. 2	1945	107 3.03	4.01 1.222	Mar. 31	Unknown	85 2.41	Unknown
Mar. 4	1545	* 174 4.93	4.16 1.268				

Minimum daily discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	27	11	3.6	2.3	2.6	1.0	.60
2			0	0	0	47	9.2	3.6	2.3	2.9	.75	.56
3			0	.02	0	15	8.1	3.6	2.5	2.9	.69	.55
4			0	.39	0	33	7.3	3.7	2.9	3.0	.61	.58
5			0	.76	0	28	6.4	4.1	2.5	4.2	.58	.79
6			0	.32	.02	25	6.7	3.3	2.0	2.5	.60	1.5
7			0	0	.01	23	7.5	2.5	2.2	2.3	.64	1.1
8			0	0	0	22	6.8	2.5	2.4	2.8	1.5	.89
9			0	.61	9.7	21	6.3	2.6	2.6	2.2	1.8	.82
10			0	.70	12	19	5.5	2.7	2.3	2.0	.89	.85
11			0	.17	4.0	22	5.4	2.7	2.6	2.0	.82	.82
12			0	.04	2.9	17	5.2	2.2	3.0	2.0	.88	.82
13			0	0	1.9	16	5.1	1.8	2.6	1.8	.84	.82
14			0	1.6	1.2	15	5.0	1.7	2.4	1.7	.76	.92
15			0	2.1	.90	14	6.2	1.8	2.4	1.7	.66	.95
16			0	.92	.80	13	5.3	2.1	2.3	2.1	.64	1.1
17			0	.55	.70	12	4.9	2.6	2.5	2.6	.55	1.1
18			0	.02	.60	12	4.5	2.8	3.1	2.4	.58	1.4
19			0	.23	.50	11	4.4	3.0	3.3	2.2	.56	1.0
20			0	.17	.42	11	4.3	2.6	3.4	2.1	.69	.90
21			0	.06	.36	12	4.2	2.0	3.9	1.9	.76	.90
22			0	.02	.34	11	4.2	2.1	5.2	1.8	.53	.99
23			0	.01	.34	10	4.1	2.4	4.7	1.7	.50	.96
24			0	0	.34	9.5	4.0	3.2	3.2	1.6	.53	1.2
25			0	0	.30	9.2	3.9	3.1	3.2	1.5	.56	1.3
26			.06	0	.20	8.8	3.8	3.3	3.5	1.5	.56	1.4
27			.01	0	.35	8.3	3.8	2.4	2.8	1.1	.54	1.0
28			1.2	0	1.8	8.0	3.7	2.5	2.8	1.1	.53	.99
29			.06	0	---	7.7	3.7	3.2	2.8	.84	.52	.63
30			0	0	---	10	3.6	3.0	2.7	.90	.55	.61
31		---	0	.01	---	12	---	2.3	---	1.2	.55	---
TOTAL	0	0	1.33	8.70	39.68	509.5	164.1	85.0	86.4	62.54	22.17	28.05
MEAN	0	0	.043	.28	1.42	16.4	5.47	2.74	2.88	2.02	.72	.94
MAX	0	0	1.2	2.1	12	47	11	4.1	5.2	4.2	1.8	1.5
MIN	0	0	0	0	0	7.7	3.6	1.7	2.0	.84	.50	.55
AC-FT	0	0	2.6	17	79	1010	325	169	171	184	44	56
CAL YR 1977	TOTAL	31.07	MEAN .085	MAX	2.2	MIN 0	AC-FT	62				
WTR YR 1978	TOTAL	1007.47	MEAN 2.76	MAX	47	MIN 0	AC-FT	2000				

11057000 SAN TIMOTEO CREEK NEAR REDLANDS, CA

LOCATION.--Lat 34°01'58", long 117°12'28", in NE¼NE¼NE¼ sec.5, T.2 S., R.3 W., San Bernardino County, on upstream side of left end of bridge on San Timoteo Canyon Road, 2.0 mi (3.2 km) southwest of Redlands, and 3.4 mi (5.5 km) downstream from Yucaipa Creek.

DRAINAGE AREA.--118 mi² (306 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1926 to September 1968, October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,280 ft (390 m), from topographic map. Prior to Oct. 30, 1934, at site 2 mi (3 km) upstream at different datum.

REMARKS.--Records poor. No regulation above station. Pumping above station for irrigation. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--47 years (water years 1927-68, 1974-78), 1.40 ft³/s (0.040 m³/s), 1,010 acre-ft/yr (1.26 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,460 ft³/s (211 m³/s) Mar. 2, 1938, result of slope-area measurement of maximum flow; no flow for many months in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 150 ft³/s (4.25 m³/s) and maximum (*), based on velocity-area study of peak flows:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 5	1800	190	5.38	3.45	1.052	Feb. 7	2330	305	8.64	4.02	1.225
Jan. 14	2300	300	8.50	4.05	1.234	Feb. 13	0100	640	18.1	6.60	2.012
Jan. 16	2000	*890	25.2	6.35	1.935	Mar. 1	0930	430	12.2	5.85	1.783
Jan. 19	1300	340	9.63	4.21	1.283	Mar. 4	1700	500	14.2	5.30	1.615

Minimum daily discharge, no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	159	0					
2			0	0	0	202	0					
3			0	0	0	115	0					
4			0	16	0	142	0					
5			0	40	0	.10	0					
6			0	20	2.8	0	0					
7			0	0	36	0	1.8					
8			0	0	140	0	0					
9			0	17	190	0	0					
10			0	78	121	0	0					
11			0	11	10	0	0					
12			0	0	3.4	14	0					
13			0	0	113	0	0					
14			0	50	11	0	0					
15			0	131	0	0	.22					
16			0	139	0	0	.84					
17			0	120	0	0	0					
18			0	1.6	0	0	0					
19			0	118	0	0	0					
20			0	46	0	0	0					
21			0	0	0	0	0					
22			0	0	0	0	0					
23			0	0	0	0	0					
24			0	0	0	0	0					
25			0	0	0	0	0					
26			4.7	0	0	0	0					
27			1.7	0	0	0	0					
28			26	0	2.0	0	0					
29			0	0	---	0	0					
30			0	0	---	0	0					
31		---	0	0	---	6.0	---		---			---
TOTAL	0	0	32.4	787.6	629.2	638.10	2.86	0	0	0	0	0
MEAN	0	0	1.05	25.4	22.5	20.6	.095	0	0	0	0	0
MAX	0	0	26	139	190	202	1.8	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	64	1560	1250	1270	5.7	0	0	0	0	0
CAL YR 1977	TOTAL	214.20	MEAN .59	MAX 93	MIN 0	AC-FT 425						
WTR YR 1978	TOTAL	2090.16	MEAN 5.73	MAX 202	MIN 0	AC-FT 4150						

SANTA ANA RIVER BASIN

11057000 SAN TIMOTEO CREEK NEAR REDLANDS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to current year.

SEDIMENT RECORDS: October 1976 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 116,000 mg/L Feb. 13, 1978; minimum daily mean, no flow for many days each year.

SEDIMENT DISCHARGE: Maximum daily, 72,400 tons (65,700 metric tons) Jan. 16, 1978; minimum daily, 0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 116,000 mg/L Feb. 13; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 72,400 tons (65,700 metric tons) Jan. 16; minimum daily, 0 tons on many days.

REMARKS.--Sediment table for period July-September is omitted because there was no flow.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	---	---						
2			---	---	---	---						
3			---	---	---	---						
4			---	11.5	---	13.0						
5			---	13.5	---	---						
6			---	---	---	---						
7			---	---	---	---						
8			---	---	---	---						
9			---	---	12.5	---						
10			---	---	12.5	---						
11			---	---	---	---						
12			---	---	---	---						
13			---	---	---	---						
14			---	---	---	---						
15			---	---	---	---						
16			---	---	---	---						
17			---	---	---	---						
18			---	---	---	---						
19			---	---	---	---						
20			---	---	---	---						
21			---	---	---	---						
22			---	---	---	---						
23			---	---	---	---						
24			---	---	---	---						
25			---	---	---	---						
26			13.0	---	---	---						
27			---	---	---	---						
28			---	---	---	---						
29			---	---	---	---						
30			---	---	---	---						
31			---	---	---	23.0						
MONTH			---	---	---	---						

11057000 SAN TIMOTEO CREEK NEAR REDLANDS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	0	0
2							0	0	0
3							0	0	0
4							0	0	0
5							0	0	0
6							0	0	0
7							0	0	0
8							0	0	0
9							0	0	0
10							0	0	0
11							0	0	0
12							0	0	0
13							0	0	0
14							0	0	0
15							0	0	0
16							0	0	0
17							0	0	0
18							0	0	0
19							0	0	0
20							0	0	0
21							0	0	0
22							0	0	0
23							0	0	0
24							0	0	0
25							0	0	0
26							4.7	15000	1270
27							1.7	5660	302
28							26	61500	9600
29							0	0	0
30							0	0	0
31							0	0	0
TOTAL	0	0	0	0	0	0	32.40	---	11172.00
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	159	92100	49800
2	0	0	0	0	0	0	202	92000	60000
3	0	0	0	0	0	0	115	73500	31000
4	16	49400	4800	0	0	0	142	71400	63400
5	40	45600	11700	0	0	0	.10	17500	1890
6	20	17800	2350	2.8	1630	109	0	0	0
7	0	0	0	36	19100	7960	0	0	0
8	0	0	0	140	52700	27200	0	0	0
9	17	13800	4600	190	90000	53500	0	0	0
10	78	70800	17200	121	89700	33300	0	0	0
11	11	5880	686	10	0	0	0	0	0
12	0	0	0	3.4	1500	304	14	24400	1820
13	0	0	0	113	116000	45500	0	0	0
14	50	27500	15100	11	18800	1900	0	0	0
15	131	56400	29000	0	0	0	0	0	0
16	139	42000	72400	0	0	0	0	0	0
17	120	67700	28600	0	0	0	0	0	0
18	1.6	763	17	0	0	0	0	0	0
19	118	54000	34900	0	0	0	0	0	0
20	46	11300	2640	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	2.0	2980	258	0	0	0
29	0	0	0	---	---	---	0	0	0
30	0	0	0	---	---	---	0	0	0
31	0	0	0	---	---	---	6.0	6240	208
TOTAL	787.60	---	223993.0	629.20	---	170031.0	638.10	---	208118.0

SANTA ANA RIVER BASIN

11057000 SAN TIMOTEO CREEK NEAR REDLANDS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0						
2	0	0	0						
3	0	0	0						
4	0	0	0						
5	0	0	0						
6	0	0	0						
7	1.8	675	39						
8	0	0	0						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	.22	938	18						
16	.84	7870	66						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	---	---	---						
TOTAL	2.86	---	123.00	0	0	0	0	0	0
YEAR	2090.16		613437.0						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.
						% FINER THAN .004 MM	% FINER THAN .008 MM
DEC 26...	1525	13.0	16	76800	3320	44	59
JAN 05...	1600	13.5	24	40500	2620	31	43
FEB 09...	1545	12.5	255	73100	50300	21	25
MAR 04...	1400	--	196	84000	44500	23	29
APR 16...	0830	--	.18	17800	8.7	77	94
DATE		SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.
		% FINER THAN .016 MM	% FINER THAN .031 MM	% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM
DEC 26...	81	93	96	98	99	100	--
JAN 05...	60	72	80	88	97	99	100
FEB 09...	37	52	68	87	98	100	--
MAR 04...	41	56	74	89	97	99	100
APR 16...	98	100	100	--	--	--	--

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA

LOCATION.--Lat 34°10'45", long 117°15'53", in NW¼NE¼NE¼ sec.14, T.1 N., R.4 W., San Bernardino County, on right bank 100 ft (30 m) upstream from Del Rosa Water Co.'s diversion dam, 0.5 mi (0.8 km) south of Arrowhead Springs, and 1.0 mi (1.6 km) downstream from Strawberry Creek.

DRAINAGE AREA.--8.80 mi² (22.79 km²).

PERIOD OF RECORD.--December 1919 to current year. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

GAGE.--Water-stage recorder. Broad-crested weir since September 1938. Altitude of gage is 1,590 ft (485 m), from topographic map.

REMARKS.--Records poor. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--58 years (water years 1921-78), 4.45 ft³/s (0.126 m³/s), 3,220 acre-ft/yr (3.97 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,360 ft³/s (95.2 m³/s) Mar. 2, 1938, based on rainfall-runoff studies; no flow at times in 1929, 1931-35.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.133 m³/s) and maximum (*), based on slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0430	55 1.558	4.05 1.234	Mar. 11	Unknown	100 † 2.832	Unknown
Jan. 14	2200	149 4.220	4.58 1.396	Mar. 31	0100	222 6.287	6.42 1.957
Feb. 9	2230	166 4.701	4.65 1.417	Apr. 7	0100	171 4.843	6.27 1.911
Mar. 1	2100	446 12.63	5.36 1.634	Apr. 15	1830	506 14.33	6.93 2.112
Mar. 4	1700	*1480 41.91	7.67 2.338				

† Estimated.

Minimum daily discharge, 0.30 ft³/s (0.008 m³/s) Oct. 1, Oct. 26 to Nov. 4, Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.30	.40	6.6	1.8	89	83	19	8.3	4.6	3.6	2.6
2	.31	.30	.37	5.8	1.8	54	60	18	8.1	4.5	3.6	2.6
3	.32	.30	.37	6.1	1.8	20	50	17	7.9	4.5	3.6	2.5
4	.32	.30	.37	7.4	1.7	314	56	17	7.7	4.4	3.5	2.5
5	.32	2.0	.37	6.3	1.9	240	41	16	7.5	4.4	3.5	2.5
6	.32	1.4	.37	5.6	2.6	160	39	16	7.4	4.4	3.4	8.2
7	.32	1.0	.37	4.4	2.5	96	44	15	7.2	4.3	3.4	3.8
8	.32	.84	.37	4.1	2.5	62	40	15	7.0	4.3	3.3	3.5
9	.32	.72	.37	6.0	1.50	46	37	14	6.9	4.2	3.3	3.4
10	.32	.65	.40	7.6	1.20	39	35	14	6.8	4.2	3.3	3.3
11	.31	.56	.40	6.0	1.6	70	34	14	6.6	4.2	3.2	3.2
12	.31	.50	.40	4.4	1.7	47	33	13	6.5	4.2	3.2	3.1
13	.31	.46	.40	2.5	1.1	34	32	13	6.3	4.1	3.1	3.0
14	.31	.42	.40	1.9	6.4	28	31	13	6.2	4.1	3.1	3.0
15	.31	.39	.40	5.5	5.6	24	108	12	6.1	4.1	3.0	2.9
16	.31	.39	.40	4.1	5.1	22	53	12	6.0	4.1	3.0	2.9
17	.31	.40	.57	3.6	4.4	20	41	12	5.9	4.0	3.0	2.9
18	.31	.47	2.6	3.5	4.0	19	37	11	5.8	4.0	3.0	2.8
19	.31	.47	.57	3.4	3.9	18	35	11	5.6	4.0	2.9	2.8
20	.31	.47	.40	3.1	3.5	17	33	11	5.5	4.0	2.9	2.7
21	.31	.47	.33	2.9	3.2	20	30	11	5.4	4.0	2.9	2.7
22	.31	.47	.43	2.6	3.1	30	27	11	5.3	3.9	2.9	2.7
23	.31	.47	.37	2.3	2.7	23	25	10	5.2	3.9	2.8	2.7
24	.31	.47	.30	2.1	2.5	22	24	10	5.1	3.9	2.8	2.6
25	.31	.47	.37	1.8	2.3	21	23	9.8	5.0	3.9	2.8	2.6
26	.30	.43	3.6	1.7	2.1	20	21	9.6	4.9	3.8	2.7	2.6
27	.30	.43	.09	1.8	2.1	19	21	9.4	4.8	3.8	2.7	2.6
28	.30	.43	23	1.8	5.9	19	19	9.2	4.8	3.8	2.7	2.6
29	.30	.47	13	1.8	---	18	18	8.9	4.7	3.7	2.6	2.6
30	.30	.47	12	1.8	---	18	19	8.7	4.6	3.7	2.6	2.5
31	.30	---	6.8	1.8	---	137	---	8.5	---	3.7	2.6	---
TOTAL	9.62	16.92	71.39	137.4	387.4	1766	1149	389.1	185.1	126.7	95.0	90.4
MEAN	.31	.56	2.30	4.43	13.8	57.0	38.3	12.6	6.17	4.09	3.06	3.01
MAX	.32	2.0	23	19	150	314	108	19	8.3	4.6	3.6	8.2
MIN	.30	.30	.30	1.7	1.7	17	18	8.5	4.6	3.7	2.6	2.5
AC-FT	19	34	142	273	768	3500	2280	772	367	251	188	179

CAL YR 1977 TOTAL 407.35 MEAN 1.12 MAX 23 MIN .30 AC-FT 808
WTR YR 1978 TOTAL 4424.03 MEAN 12.1 MAX 314 MIN .30 AC-FT 8780

SANTA ANA RIVER BASIN

11058600 WATERMAN CANYON CREEK NEAR ARROWHEAD SPRINGS, CA

LOCATION.--Lat 34°11'36", long 117°16'25", in NE¼NW¼NW¼ sec.11, T.1 N., R.4 W., San Bernardino County, on left bank 0.8 mi (1.3 km) northwest of Arrowhead Springs, and 1.3 mi (2.1 km) north of San Bernardino National Forest boundary.

DRAINAGE AREA.--4.65 mi² (12.04 km²).

PERIOD OF RECORD.--November 1911 to October 1914 (published as "near San Bernardino"), December 1919 to current year.

GAGE.--Water-stage recorder. Broad-crested weir since September 1938. Datum of gage is 2,045.46 ft (623.456 m) National Geodetic Vertical Datum of 1929. Prior to December 1919, nonrecording gage at site 300 ft (91 m) downstream at different datum.

REMARKS.--Records fair. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE, --60 years, (water years 1913-14, 1921-78), 2.57 ft³/s (0.073 m³/s), 1,860 acre-ft/yr (2.29 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1920).--Maximum discharge, 2,350 ft³/s (66.6 m³/s) Mar. 2, 1938, based on rainfall-runoff studies; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35 ft³/s (0.99 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0145	93 2.63	2.89 0.881	Mar. 11	0830	66 1.87	2.76 0.841
Jan. 15	0100	121 3.43	3.01 0.917	Mar. 31	0115	195 5.52	3.29 1.003
Feb. 10	0345	479 13.6	4.14 1.262	Apr. 7	0030	42 1.19	2.66 0.801
Mar. 2	1730	210 5.95	3.34 1.018	Apr. 15	1715	109 3.09	2.96 0.902
Mar. 4	1500	*870 24.6	5.05 1.539				

Minimum daily discharge, 0.10 ft³/s (0.003 m³/s) Oct. 15-17, 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.13	.37	3.4	3.7	38	14	9.7	5.6	3.3	2.0	1.6
2	.17	.13	.26	3.1	3.5	92	14	9.2	5.6	3.3	2.1	1.5
3	.21	.13	.31	2.8	3.4	33	13	8.9	5.4	3.2	2.0	1.5
4	.13	.13	.31	4.3	3.3	211	14	9.0	5.3	3.2	2.0	1.5
5	.17	1.4	.31	4.5	3.5	166	12	8.8	5.1	3.1	2.0	5.0
6	.21	.89	.31	4.1	4.1	97	12	8.5	4.9	3.1	2.0	1.8
7	.17	.73	.31	3.5	3.8	69	16	8.2	4.7	3.0	2.0	1.6
8	.13	.65	.37	3.2	3.8	44	13	7.9	4.6	2.9	2.1	1.5
9	.21	.50	.37	3.8	108	30	13	7.8	4.5	2.8	2.5	1.4
10	.26	.43	.37	5.4	98	25	12	7.7	4.5	2.7	2.3	1.4
11	.17	.37	.37	4.1	18	33	12	7.6	4.5	2.7	2.2	1.3
12	.13	.37	.43	3.7	20	25	12	7.2	4.4	2.7	2.1	1.2
13	.13	.31	.43	3.5	16	20	12	7.0	4.2	2.7	1.9	1.2
14	.13	.31	.43	12	10	18	12	6.9	4.2	2.6	1.9	1.2
15	.10	.26	.43	17	8.1	17	21	7.0	4.2	2.4	1.9	1.2
16	.10	.26	.50	13	7.5	15	14	6.8	4.1	2.4	1.8	1.1
17	.10	.26	.81	7.3	6.9	14	13	6.5	4.0	2.4	1.8	1.1
18	.13	.21	2.2	5.7	6.6	14	12	6.4	3.8	2.4	1.8	1.1
19	.26	.31	.73	5.9	6.4	13	12	6.2	3.8	2.3	1.8	1.1
20	.26	.37	.57	5.2	6.2	13	11	6.3	3.7	2.2	1.8	1.0
21	.26	.37	.57	5.0	6.0	14	11	6.3	3.4	2.2	1.8	1.0
22	.17	.31	.57	4.8	5.8	18	10	6.2	3.3	2.2	1.8	.99
23	.13	.31	.73	4.7	5.7	14	10	6.4	3.1	2.2	1.7	.98
24	.10	.31	.57	4.7	5.6	13	10	6.3	3.1	2.2	1.7	.96
25	.10	.26	.57	4.5	5.5	12	10	6.1	3.1	2.2	1.7	.94
26	.10	.26	4.5	4.3	5.4	12	9.7	6.0	3.2	2.3	1.7	.93
27	.17	.26	2.7	3.9	5.3	11	9.5	5.8	3.5	2.3	1.7	.91
28	.17	.26	14	3.8	9.8	11	9.3	5.7	3.6	2.2	1.7	.91
29	.17	.31	4.3	3.8	---	10	9.3	5.5	3.5	2.2	1.6	.90
30	.17	.37	4.4	3.8	---	11	9.7	5.5	3.5	2.1	1.6	.90
31	.17	---	3.8	3.8	---	34	---	5.4	---	2.0	1.6	---
TOTAL	5.09	11.17	46.90	162.6	389.9	1147	362.5	218.8	124.4	79.5	58.6	39.72
MEAN	.16	.37	1.51	5.25	13.9	37.0	12.1	7.06	4.15	2.56	1.89	1.32
MAX	.26	1.4	14	17	108	211	21	9.7	5.6	3.3	2.5	5.0
MIN	.10	.13	.26	2.8	3.3	10	9.3	5.4	3.1	2.0	1.6	.90
AC-FT	10	22	93	323	773	2280	719	434	247	158	116	79
CAL YR 1977	TOTAL	257.42										
WTR YR 1978	TOTAL	2646.18										
MEAN			.71		14	.06						
MAX			211		10	.10						

11059000 WARM CREEK FLOODWAY AT SAN BERNARDINO, CA

LOCATION.--Lat 34°05'45", long 117°16'30", in San Bernardino Grant, San Bernardino County, on left bank 0.4 mi (0.6 km) upstream from Mill Street, and 1.8 mi (2.9 km) upstream from mouth.

DRAINAGE AREA.--47.8 mi² (123.8 km²).

PERIOD OF RECORD.--January 1961 to current year. Prior to October 1965, published as "near San Bernardino."

GAGE.--Water-stage recorder. Altitude of gage is 1,000 ft (305 m), from topographic map. Prior to Dec. 21, 1967, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records poor. Flow partly regulated by percolation basins above Marshall Boulevard. Del Rosa Water Company diverts from East Twin Creek for domestic use and irrigation. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,600 ft³/s (272 m³/s) Feb. 25, 1969, gage height, 6.75 ft (2.057 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,570 ft³/s (101 m³/s) Mar. 4, gage height, 5.41 ft (1.649 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	698	.10	62	0	.02	0	.03
2	0	0	0	0	0	591	.10	46	0	.01	.01	.03
3	0	0	0	33	0	166	.10	25	0	0	.01	.02
4	0	0	0	48	0	883	4.5	22	0	0	.01	0
5	0	6.0	0	39	21	204	17	17	0	0	0	.64
6	0	.10	0	9.6	23	20	8.4	17	0	.02	0	19
7	0	0	0	.24	69	2.0	166	14	0	.01	0	0
8	0	0	0	0	31	.10	.64	12	0	0	0	0
9	0	0	0	73	813	.10	2.5	17	0	0	.02	0
10	0	0	0	144	291	.10	3.4	19	0	0	.01	0
11	0	0	0	15	69	10	6.0	6.0	0	0	.01	0
12	0	0	0	1.2	88	3.0	4.5	.10	0	0	.02	0
13	0	0	0	.14	162	.50	1.6	.07	0	0	0	0
14	.03	0	0	113	64	.10	3.4	0	0	0	0	0
15	0	0	0	719	269	.10	311	0	0	0	0	0
16	0	0	0	819	71	.10	192	0	0	0	.02	0
17	0	0	.02	72	29	.10	102	0	0	.02	.02	0
18	.05	0	15	4.2	18	.10	80	0	0	.01	.03	0
19	.10	0	0	22	12	.10	62	0	0	.02	.02	0
20	.05	0	0	1.7	6.4	.10	74	.03	0	.01	0	0
21	0	0	.07	2.7	2.0	3.0	74	0	0	.01	.03	0
22	0	0	0	1.2	.10	16	62	0	0	.01	0	0
23	0	0	0	.80	.07	.50	46	.03	0	.01	.03	0
24	0	0	0	.98	.32	.10	57	.07	0	.03	0	0
25	0	0	.65	.14	0	.10	62	0	0	.01	0	0
26	0	0	157	0	0	2.0	57	0	0	.01	.03	0
27	0	0	38	0	.41	.10	46	0	0	.01	.01	0
28	0	0	184	0	134	.10	32	0	.05	.01	0	0
29	0	0	47	0	---	.10	28	0	.04	.01	0	0
30	0	0	18	.98	---	3.2	46	0	.03	0	0	0
31	0	---	.05	0	---	206	---	0	---	0	0	---
TOTAL	.23	6.10	459.79	2120.88	2173.30	2809.70	1549.24	257.30	.12	.23	.28	19.72
MEAN	.007	.20	14.8	68.4	77.6	90.6	51.6	8.30	.004	.007	.009	.66
MAX	.10	6.0	184	819	813	883	311	62	.05	.03	.03	19
MIN	0	0	0	0	0	.10	.10	0	0	0	0	0
AC-FT	.5	12	912	4210	4310	5570	3070	510	.2	.5	.6	39
CAL YR 1977	TOTAL	1436.88	MEAN	3.94	MAX	184	MIN	0	AC-FT	2850		
WTR YR 1978	TOTAL	9396.89	MEAN	25.7	MAX	883	MIN	0	AC-FT	18640		

SANTA ANA RIVER BASIN

11059100 SAN BERNARDINO WATER QUALITY CONTROL PLANT AT SAN BERNARDINO, CA

LOCATION.--Lat 34°04'16", long 117°17'16", in San Bernardino Grant, San Bernardino County, at effluent end of chlorine contact chamber, 0.5 mi (0.8 km) upstream from Santa Ana River at E Street bridge, in San Bernardino.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 979.50 ft (298.552 m) National Geodetic Vertical Datum of 1929 (levels by city of San Bernardino).

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft³/s (1.22 m³/s) Jan. 24, 1978; minimum daily, 12 ft³/s (0.34 m³/s) Oct. 25, Nov. 4, 5, 7-9, 1972.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	26	25	24	26	34	27	26	26	26	26	24
2	24	26	25	25	26	32	25	27	26	24	26	23
3	25	26	26	26	26	26	27	26	26	26	26	22
4	24	25	25	26	25	37	27	25	26	25	26	23
5	24	25	25	26	25	30	27	26	27	26	24	25
6	24	25	26	25	27	27	26	26	26	25	24	26
7	25	26	25	25	28	27	28	25	27	26	25	25
8	24	25	25	25	26	26	26	26	27	26	25	25
9	24	25	25	28	36	26	25	26	27	25	25	24
10	25	25	25	28	28	25	27	26	27	25	25	24
11	25	25	25	25	26	26	26	26	26	27	25	24
12	24	25	25	25	26	26	26	26	27	25	24	24
13	26	25	25	25	29	27	25	25	27	26	23	24
14	26	25	24	27	25	26	26	24	27	26	25	24
15	25	25	25	27	26	27	28	26	25	27	24	24
16	25	25	26	30	26	26	26	26	27	25	24	24
17	26	25	25	26	26	26	27	26	26	27	24	24
18	24	25	26	26	26	25	26	26	25	26	24	24
19	24	25	27	26	25	25	26	26	27	26	24	24
20	25	25	25	26	27	26	26	26	26	27	23	24
21	25	26	26	25	26	27	26	25	26	27	25	24
22	25	25	26	25	26	27	25	26	26	26	24	24
23	24	25	26	26	26	25	25	25	26	26	24	24
24	25	24	26	43	26	27	26	27	26	28	23	24
25	25	25	22	26	25	26	25	26	25	27	24	24
26	25	24	29	26	25	25	26	26	27	28	24	24
27	25	25	28	26	26	27	25	24	27	25	23	24
28	25	25	29	26	28	26	25	24	27	27	24	24
29	25	25	26	25	---	26	25	25	27	26	24	24
30	24	25	27	26	---	27	24	26	27	26	24	24
31	25	---	25	26	---	30	---	26	---	26	24	---
TOTAL	766	753	795	821	743	843	779	796	792	808	755	721
MEAN	24.7	25.1	25.6	26.5	26.5	27.2	26.0	25.7	26.4	26.1	24.4	24.0
MAX	26	26	29	43	36	37	28	27	27	28	26	26
MIN	24	24	22	24	25	25	24	24	25	24	23	22
AC-FT	1520	1490	1580	1630	1470	1670	1550	1580	1570	1600	1500	1430
CAL YR 1977	TOTAL	8933	MEAN 24.5	MAX 30	MIN 20	AC-FT	17720					
WTR YR 1978	TOTAL	9372	MEAN 25.7	MAX 43	MIN 22	AC-FT	18590					

11059100 SAN BERNARDINO WATER QUALITY CONTROL PLANT AT SAN BERNARDINO, CA--Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1973 to current year.

SPECIFIC CONDUCTANCE: Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to current year.

INSTRUMENTATION.--Specific conductance recorder since October 1972.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,260 micromhos May 23, 1975; minimum recorded, 658 micromhos Mar. 31, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,160 micromhos Sept. 23, 26, 27; minimum recorded, 658 micromhos Mar. 31.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT					
04...	0900	29	1020	22.5	586
NOV					
01...	0900	36	1020	24.0	582
05...	1515	30	905	24.5	550
17...	1240	36	897	26.0	565
DEC					
15...	1105	36	934	24.0	583
JAN					
04...	0905	30	1030	22.5	562
18...	1400	33	939	22.5	510
FEB					
08...	0920	36	944	22.0	493
MAR					
15...	1300	34	933	23.5	503
31...	1515	33	708	--	388
APR					
05...	1255	31	875	24.0	488
25...	1315	31	924	24.0	510
MAY					
03...	1100	36	933	24.5	497
19...	1215	36	971	26.5	511
JUN					
05...	1040	37	934	22.0	484
JUL					
05...	1245	41	928	28.5	500
AUG					
04...	0800	26	895	28.5	570
SEP					
06...	1515	31	920	28.5	507

SANTA ANA RIVER BASIN

11059100 SAN BERNARDINO WATER QUALITY CONTROL PLANT AT SAN BERNARDINO, CA--Continued

WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	986	878	930	1030	938	981	1010	920	977	1010	926	972
2	944	868	914	986	922	958	1040	920	987	1010	923	961
3	1010	866	930	976	866	927	1010	927	974	1100	931	990
4	1030	928	987	974	864	920	955	887	929	1100	965	1030
5	991	921	964	990	880	947	986	872	965	1030	923	987
6	1000	903	964	967	839	904	1010	904	975	1020	931	989
7	998	898	957	949	837	896	1010	914	975	1030	987	1010
8	981	911	949	953	877	929	1000	900	958	1000	942	977
9	942	872	916	967	873	933	1010	891	962	1030	936	976
10	1010	882	936	995	889	951	1010	919	968	1040	878	949
11	1010	931	981	1010	895	972	949	867	915	1020	908	952
12	998	896	960	1000	889	953	1010	883	944	1080	936	996
13	1000	912	965	947	855	914	1030	923	991	1090	976	1030
14	999	897	953	994	856	930	1030	921	997	1030	948	997
15	1010	918	964	1010	902	979	1020	926	980	943	791	867
16	939	873	915	1010	896	966	1040	930	1000	1040	879	915
17	999	869	936	994	898	962	1030	898	958	1010	771	892
18	994	902	955	1000	901	966	942	876	913	1020	939	984
19	995	895	957	971	887	935	988	884	934	1030	975	1010
20	1000	881	955	962	872	923	1030	938	993	1040	957	1000
21	1000	878	946	980	862	928	1040	923	990	1040	963	1010
22	953	865	913	997	901	967	1050	957	1010	998	926	966
23	914	822	874	983	885	956	1040	957	1010	1030	932	982
24	954	844	897	1010	928	972	1030	955	1000	1070	968	1020
25	973	853	922	988	852	913	1030	931	977	1090	978	1040
26	976	868	937	983	905	957	951	903	931	1090	978	1030
27	968	862	927	966	890	938	972	830	898	1090	1000	1050
28	935	849	907	1000	884	947	1000	882	944	1080	994	1050
29	960	880	931	997	919	970	1050	926	971	1050	963	1010
30	957	847	908	1020	935	990	1060	952	1020	1060	955	1010
31	1020	815	896	---	---	---	1060	984	1030	1060	935	1000
MONTH	1030	815	937	1030	837	946	1060	830	970	1100	771	989

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1120	993	1070	965	817	879	902	772	821	990	878	928
2	1070	961	1030	894	814	862	886	804	847	1010	932	972
3	1050	949	1010	1010	834	904	988	822	884	982	882	948
4	1060	971	1020	1030	795	954	1010	850	943	995	867	931
5	1020	928	975	856	664	746	990	874	939	1020	936	984
6	984	912	945	983	853	902	1060	897	971	1010	939	976
7	1040	936	985	1040	903	972	1000	876	951	1000	900	948
8	1020	972	996	1060	932	999	999	887	941	1020	877	937
9	993	723	881	1010	897	962	954	872	915	1040	940	998
10	919	729	818	1020	941	987	979	863	914	1020	911	981
11	986	904	941	998	952	981	988	896	956	1080	992	1030
12	973	899	943	967	889	932	965	873	932	1080	951	1010
13	954	792	897	1040	890	957	1010	878	949	1020	888	972
14	1020	878	938	1020	928	989	1020	893	965	1020	889	947
15	1050	941	1000	1020	937	998	954	876	930	1050	858	949
16	1050	942	999	1060	935	1010	869	743	814	1050	985	1010
17	1050	938	1000	1040	915	988	972	814	877	1040	954	1010
18	999	919	972	994	904	960	995	897	959	1050	949	1010
19	962	888	934	984	900	946	998	918	971	1080	962	1020
20	1050	887	952	981	867	925	993	905	962	1110	984	1060
21	1030	927	975	967	871	931	992	894	952	1060	956	1010
22	1040	952	997	1000	864	940	965	879	923	1030	944	991
23	1080	959	1010	968	860	918	960	870	916	1080	970	1020
24	1070	965	1030	983	855	928	1030	855	923	1080	1000	1050
25	1040	930	995	929	827	895	994	906	960	1110	968	1040
26	995	899	951	928	830	882	1020	892	948	1110	1000	1060
27	1030	906	963	978	816	875	1020	920	983	1060	1030	1050
28	1010	928	975	945	855	918	990	890	944	1050	944	997
29	---	---	---	935	823	886	990	940	968	1050	924	975
30	---	---	---	934	852	895	974	880	929	1050	924	987
31	---	---	---	882	658	790	---	---	---	1060	976	1030
MONTH	1120	723	972	1060	658	926	1060	743	930	1110	858	995

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA

LOCATION (REVISED).--Lat 34°04'13", Long 117°17'21", in San Bernardino Grant, San Bernardino County, 500 feet (150 m) upstream from E Street bridge, 0.7 mi (1.1 km) downstream from San Timoteo Creek, 1 mi (2 km) upstream from Warm Creek, 3 mi (5 km) south of San Bernardino, and 26 mi (42 km) downstream from Big Bear Lake.

DRAINAGE AREA.--532 mi² (1,378 km²).

PERIOD OF RECORD.-- March 1939 to September 1954, October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 950 ft (289.6 m), from topographic map. Prior to Nov. 10, 1950, water-stage recorder on right bank 500 feet (150 m) downstream at datum 964.50 ft (293.980 m) National Geodetic Vertical Datum of 1929. Nov. 11, 1950 to Sept. 30, 1954, water-stage recorder on both banks 500 feet (150 m) downstream at datum 964.50 ft (293.980 m) NGVD. Oct. 1, 1966 to Sept. 30, 1976 water-stage recorder on right bank 500 feet (150 m) downstream at datum 954.50 ft (290.932 m) NGVD. Oct. 1, 1976 to Sept. 30, 1977 gage was removed for channel construction.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000) 26 mi (42 km) upstream. Natural flow of stream affected by ground-water withdrawals and diversion for domestic use and irrigation above station. Effluent from sewage reclamation plant 0.4 mi (0.6 km) upstream, causes sustained flow past gage since 1967. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--15 years (water years 1940-54), 12.5 ft³/s (0.354 m³/s), 9,050 acre-ft/yr (11.2 hm³/yr); 12 years (water years 1967-78), 69.5 ft³/s (1.968 m³/s), 50,350 acre-ft/yr (62.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Feb. 25, 1969, gage height 11.9 ft (3.63 m), site and datum then in use; maximum gage height, 16.50 ft (5.029 m), site and datum then in use, Jan. 23, 1943, discharge uncertain, but was probably less than 8,000 ft³/s (227 m³/s); no flow many days prior to 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 13,700 ft³/s (388 m³/s) Mar. 4, gage height, 5.7 ft (1.74 m) from high-water marks; minimum daily, 23 ft³/s (0.65 m³/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	26	25	24	61	3800	800	180	190	30	30	40
2	24	26	25	24	52	4520	350	180	190	30	30	40
3	25	26	26	25	52	1640	270	180	190	30	30	40
4	24	25	25	113	61	7150	280	185	183	30	30	46
5	25	25	25	139	148	1800	300	190	180	31	30	71
6	24	28	26	25	308	1600	500	190	53	31	30	51
7	25	31	25	24	365	840	700	190	32	31	30	43
8	24	25	25	26	113	485	400	190	30	31	30	39
9	24	25	28	164	2870	319	220	190	29	31	30	39
10	25	25	25	276	3380	357	190	190	29	31	30	38
11	24	25	25	45	581	280	160	190	29	31	30	38
12	24	25	28	24	300	900	140	190	29	31	30	38
13	26	25	24	25	740	700	130	190	29	31	30	38
14	26	25	24	211	260	600	150	190	29	31	30	38
15	25	25	25	1380	1000	180	700	190	29	31	30	38
16	25	26	28	1030	310	150	600	190	29	31	30	38
17	26	25	25	878	135	140	300	190	29	31	30	38
18	24	25	62	237	90	130	260	190	29	31	30	38
19	24	24	28	431	240	130	230	190	29	31	30	38
20	25	30	28	115	41	140	220	190	29	31	30	38
21	25	35	31	115	173	300	210	190	29	31	30	38
22	25	35	31	152	40	520	200	190	29	31	30	37
23	24	36	26	107	40	140	195	190	29	31	30	37
24	25	25	26	52	40	49	190	190	29	31	31	37
25	25	25	23	71	40	49	185	190	29	30	35	37
26	25	25	600	71	40	90	180	190	29	30	40	37
27	25	25	150	35	40	77	180	190	29	30	40	37
28	25	26	800	28	50	55	180	190	29	30	40	37
29	25	25	180	25	---	110	180	190	29	30	40	37
30	24	25	90	35	---	290	180	190	29	30	40	37
31	25	---	26	35	---	1700	---	190	---	30	40	---
TOTAL	766	799	2535	5942	11570	29241	8780	5855	1686	950	996	1198
MEAN	24.7	26.6	81.8	192	413	943	293	189	56.2	30.6	32.1	39.9
MAX	26	36	800	1380	3380	7150	800	190	190	31	40	71
MIN	24	24	23	24	40	49	130	180	29	30	30	37
AC-FT	1520	1580	5030	11790	22950	58000	17420	11610	3340	1880	1980	2380
CAL YR 1977	TOTAL	12375	MEAN	33.9	MAX	800	MIN	20	AC-FT	24550		
WTR YR 1978	TOTAL	70318	MEAN	193	MAX	7150	MIN	23	AC-FT	139500		

11060400 WARM CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°04'42", long 117°17'58", in San Bernardino Grant, San Bernardino County, on left bank 0.2 mi (0.3 km) downstream from State Highway 395 bridge, and 2.0 mi (3.2 km) southeast of San Bernardino.

DRAINAGE AREA.--15.0 mi² (38.9 km²).

PERIOD OF RECORD.--February 1964 to September 1972, October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 960 ft (293 m), from topographic map. Prior to Oct. 1, 1974, at site 0.1 mi (0.2 km) upstream at different datum.

REMARKS.--Records poor. Natural channel prior to September 1972; concrete-lined channel October 1974 to current year. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--8 years (water years 1965-72), 1.61 ft³/s (0.046 m³/s), 1,170 acre-ft/yr (1.44 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s), estimated, March 1, 1978, gage height unknown; no flow some days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,000 ft³/s (340 m³/s), estimated, Mar. 1, gage height unknown; no flow for several days in October, November and January.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.06	.09	.03	.23	3400	10	.90	.08	.05	26	16
2	.01	.08	.08	0	.09	2800	1.0	.90	.08	.05	26	12
3	0	.11	.02	21	.09	500	1.0	.80	.08	.05	27	14
4	.04	.14	.08	32	.02	2500	1.0	.80	.08	.05	26	13
5	.30	2.3	.10	18	13	1200	1.0	.80	.08	10	28	28
6	.31	.48	.06	4.6	12	500	10	.70	.08	14	26	33
7	.31	0	.09	.86	46	130	12	.70	.07	35	23	23
8	.04	.03	.59	.11	18	40	3.0	.70	.07	3.8	23	19
9	.27	.01	.55	39	1590	10	1.0	.60	.07	.08	21	14
10	.18	0	.10	55	3140	190	1.0	.60	.07	29	22	15
11	.05	0	.04	2.1	800	50	1.0	.50	.07	25	21	18
12	.02	.02	.15	.33	2300	20	1.0	.50	.07	20	20	17
13	.07	0	.30	.08	1400	5.0	1.0	.40	.07	27	19	18
14	0	0	.44	55	800	1.0	1.0	.40	.07	23	18	21
15	.03	.06	.34	33	70	1.0	1.0	.30	.06	21	19	17
16	.03	.12	.10	120	10	1.0	10	.30	.06	34	19	15
17	.04	.09	.15	4.0	8.0	1.0	2.0	.20	.06	31	20	15
18	0	.09	17	.97	6.0	1.0	1.0	.20	.06	25	19	16
19	.44	.06	.14	21	6.0	1.0	1.0	.10	.06	.10	18	14
20	.31	0	.02	.87	5.0	1.0	1.0	.10	.06	.10	15	15
21	.19	.02	.85	.13	5.0	10	1.0	.09	.06	30	15	14
22	.26	.35	.38	.06	5.0	17	1.0	.09	.06	29	17	11
23	.04	.24	1.1	.02	4.0	2.0	1.0	.09	.06	29	16	11
24	.11	.01	.88	0	4.0	1.0	2.0	.09	.06	28	14	11
25	.05	.08	5.4	0	4.0	1.0	1.0	.09	.06	28	13	13
26	.19	.08	70	0	5.0	1.0	1.0	.09	.06	27	11	14
27	.10	.34	23	0	150	1.0	1.0	.09	.06	27	12	14
28	.07	.75	69	.01	1300	1.0	1.0	.08	.06	27	11	11
29	.04	.60	12	.14	---	1.0	1.0	.08	.06	27	11	8.4
30	0	.07	9.1	3.9	---	150	1.0	.08	.06	27	12	8.0
31	.07	---	.30	.63	---	120	---	.08	---	26	15	---
TOTAL	3.60	6.19	212.45	412.84	11701.43	11657.0	72.0	11.45	2.00	603.28	583	468.4
MEAN	.12	.21	6.85	13.3	418	376	2.40	.37	.067	19.5	18.8	15.6
MAX	.44	2.3	70	120	3140	3400	12	.90	.08	35	28	33
MIN	0	0	.02	0	.02	1.0	1.0	.08	.06	.05	11	8.0
AC-FT	7.1	12	421	819	23210	23120	143	23	4.0	1200	1160	929
CAL YR 1977 TOTAL		821.00		MEAN 2.25	MAX 120	MIN 0	AC-FT 1630					
WTR YR 1978 TOTAL		25733.64		MEAN 70.5	MAX 3400	MIN 0	AC-FT 51040					

SANTA ANA RIVER BASIN

11060500 MEEKS AND DALEY CANAL NEAR COLTON, CA

LOCATION.--Lat 34°04'47", long 117°18'00", in San Bernardino Grant, San Bernardino County, 1.5 mi (2.4 km) north-east of Colton.

PERIOD OF RECORD.--September 1920 to current year. Published with station Warm Creek near Colton, October 1950 to September 1961.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 965 ft (294 m), from topographic map.

REMARKS.--Records good. All flow passing station is pumped from ground-water basin for irrigation in vicinity of Colton, Riverside, and Corona. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 25 ft³/s (0.71 m³/s) Mar. 2, 1938; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.1	4.4			0		0	1.4	1.1	1.1	.57
2	4.1	4.1	4.4			0		0	1.4	1.1	1.1	.01
3	4.1	4.1	4.5			0		0	1.4	1.1	1.1	0
4	4.1	4.1	4.6			.01		0	1.4	1.1	1.1	0
5	4.1	4.1	4.4			0		0	1.4	1.1	1.1	.44
6	4.1	4.1	4.4			0		0	1.3	1.1	1.1	0
7	3.8	4.1	4.4			0		0	1.3	1.1	1.1	0
8	3.8	4.1	4.4			0		0	1.3	1.1	1.1	0
9	3.9	4.3	4.4			0		.22	1.3	1.1	.96	0
10	3.6	4.7	4.4			0		.57	1.3	1.1	.96	0
11	3.6	4.4	4.4			0		.57	1.1	1.1	.96	0
12	3.9	4.1	4.7			0		.57	1.1	1.1	1.3	0
13	3.8	4.3	6.1			0		.57	1.1	1.1	1.1	0
14	3.8	4.9	5.2			0		.57	1.1	1.1	1.1	0
15	3.9	4.4	4.4			0		.66	1.1	1.1	1.1	0
16	3.8	4.1	4.4			0		.70	1.1	1.1	1.1	0
17	3.8	4.4	4.4			0		.70	1.1	1.1	1.1	0
18	3.8	4.3	4.4			0		.70	1.1	1.1	1.1	0
19	4.1	4.4	4.4			0		1.3	1.1	1.2	1.1	0
20	4.0	4.1	4.4			0		1.7	1.1	1.2	1.1	4.1
21	3.9	4.2	4.4			0		1.2	1.1	1.1	1.1	6.5
22	4.8	4.1	4.4			0		.57	1.1	1.1	1.1	6.9
23	4.7	1.1	4.4			0		.57	1.1	1.1	1.1	6.5
24	3.8	0	4.4			0		.57	1.1	1.1	1.1	6.2
25	3.8	0	4.4			0		.60	1.1	1.1	.96	6.2
26	3.8	0	1.4			0		.70	1.1	1.1	.70	6.2
27	3.8	0	0			0		.64	1.1	1.1	.70	6.2
28	4.1	3.2	0			0		.57	1.1	1.1	.25	6.5
29	4.1	4.7	0		---	0		1.4	1.1	1.1	0	6.5
30	4.1	4.6	0		---	0		1.7	1.1	1.1	.35	6.5
31	4.1	---	0		---	0	---	1.5	---	1.1	.57	---
TOTAL	123.2	107.1	114.5	0	0	.01	0	18.85	35.5	34.3	29.71	69.32
MEAN	3.97	3.57	3.69	0	0	.0003	0	.61	1.18	1.11	.96	2.31
MAX	4.8	4.9	6.1	0	0	.01	0	1.7	1.4	1.2	1.3	6.9
MIN	3.6	0	0	0	0	0	0	0	1.1	1.1	0	0
AC-FT	244	212	227	0	0	.02	0	37	70	68	59	137

CAL YR 1977 TOTAL 1172.90 MEAN 3.21 MAX 6.2 MIN 0 AC-FT 2330
WTR YR 1978 TOTAL 532.49 MEAN 1.46 MAX 6.9 MIN 0 AC-FT 1060

11062000 LYTLE CREEK NEAR FONTANA, CA

LOCATION.--Lat 34°12'44", long. 117°27'26", in SE¼NW¼SE¼ sec.36, T.2 N., R.6 W., San Bernardino County, on right bank 75 ft (20 m) upstream from highway bridge, 0.7 mi (1.1 km) upstream from right tributary, 2.3 mi (3.7 km) downstream from Lytle Creek conduit, and 8 mi (13 km) north of Fontana.

DRAINAGE AREA.--46.3 mi² (119.9 km²).

PERIOD OF RECORD.--October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898-99, as "near, San Bernardino" 1904-18, and as Lytle Creek and Fontana pipeline near Fontana 1919-31). Monthly discharge only for some periods published in WSP 1315-B.

GAGE.--Water-stage recorder on creek. Dual arch-culvert control since 1964. Water-stage recorders and sharp-crested weirs on conduit since June 3, 1949, and infiltration line since Oct. 1, 1971. Altitude of creek gage is 2,380 ft (725 m), from topographic map. October 1918 to Mar. 21, 1938, at site 1 mi (1.6 km) downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft (20 m) downstream at datum 4.58 ft (1.396 m) lower. Sharp-crested weirs at different datum.

REMARKS.--Records, creek only, poor; combined creek and diversion, poor. No regulation above station. Southern California Edison Co.'s Lytle Creek conduit diverts 2.3 mi (3.7 km) upstream for power development, and Fontana Union Water Co. collects water from an infiltration line upstream for irrigation. See schematic diagram of Santa Ana River basin. For records of combined discharge of Lytle Creek and diversions, see following page.

AVERAGE DISCHARGE.--Creek only: 60 years, 15.5 ft³/s (0.439 m³/s), 11,230 acre-ft/yr (13.8 hm³/yr).

Combined creek and diversions: 75 years (water years 1899, 1905-78), 43.3 ft³/s (1.226 m³/s), 31,370 acre-ft/yr (38.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 35,900 ft³/s (1,020 m³/s) Jan. 25, 1969, gage height, 15.0 ft (4.57 m), from floodmark, from rating curve extended above 570 ft³/s (16.1 m³/s) on basis of slope-area measurements at gage heights 10.78 ft (3.286 m) and 15.0 ft (4.57 m); no flow at times each year. Combined creek and diversions: Maximum discharge, 35,900 ft³/s (1,020 m³/s) Jan. 25, 1969; minimum daily, 0.12 ft³/s (0.003 m³/s) June 21, 22, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) revised, and maximum (*), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of slope-area measurements at gage heights 6.78 ft (2.067 m), 10.78 ft (3.286 m), and 15.0 ft (4.57 m):

Date	Time	Creek Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Combined Creek and Diversions Discharge (ft ³ /s) (m ³ /s)	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)	(ft ³ /s)	(m ³ /s)
Jan. 15	0315	1740	49.3	4.90	1.494	1750	49.6
Feb. 10	0830	7580	215	*9.28	2.829	7600	215
Feb. 13	0400	922	26.1	4.85	1.478	927	26.3
Mar. 2	1600	4780	135	8.03	2.448	4780	135
Mar. 4	1230	*8600†	240	7.80	2.377	*8600†	240
Mar. 31	0500	740	21.0	4.55	1.387	745	21.1
Apr. 7	0030	402	11.4	3.89	1.186	407	11.5
Apr. 15	0430	503	14.2	4.11	1.253	509	14.4

† Estimated.

Creek only: Minimum daily discharge, no flow Oct. 1 to Dec. 17, Dec. 21-25.

Combined creek and diversions: Minimum daily discharge, 6.7 ft³/s (0.19 m³/s) Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	25	33	1450	326	198	154	110	70	45
2			0	24	28	2910	302	189	152	112	69	43
3			0	22	25	1240	286	195	152	110	70	43
4			0	21	24	3500	264	198	147	98	69	40
5			0	68	21	1750	264	204	140	106	68	46
6			0	48	22	1050	264	204	138	106	65	60
7			0	33	23	740	298	198	135	104	64	45
8			0	30	22	510	275	195	129	102	60	44
9			0	39	835	376	246	192	126	100	58	43
10			0	140	1930	326	246	204	131	102	57	42
11			0	99	688	318	253	201	122	102	55	40
12			0	35	250	267	253	195	126	98	55	39
13			0	28	655	287	264	192	129	97	55	38
14			0	157	450	243	271	186	131	95	53	37
15			0	913	330	229	324	192	129	93	53	36
16			0	598	250	229	275	195	126	93	52	35
17			0	656	190	216	257	198	122	93	52	35
18			10	370	150	201	246	195	124	90	50	35
19			1.0	264	120	195	246	178	129	88	51	34
20			.20	193	100	195	243	183	135	87	50	34
21			0	156	90	198	232	180	126	87	46	34
22			0	125	76	216	223	175	120	85	45	33
23			0	104	64	204	229	178	120	80	45	33
24			0	87	56	198	229	175	124	79	45	32
25			0	78	46	195	219	170	122	78	45	32
26			3.5	69	42	198	232	164	126	76	45	32
27			80	61	38	195	229	162	122	75	46	30
28			200	54	170	198	204	162	112	73	45	28
29			72	49	---	195	204	157	116	73	45	28
30			50	44	---	214	204	162	112	72	45	28
31		---	31	39	---	427	---	157	---	70	45	---
TOTAL	0	0	447.70	4629	6728	18640	7608	5734	3877	2834	1673	1124
MEAN	0	0	14.4	149	240	601	254	185	129	91.4	54.0	37.5
MAX	0	0	200	913	1930	3500	326	204	154	112	70	60
MIN	0	0	0	21	21	195	204	157	112	70	45	28
AC-FT	0	0	888	9180	13340	36970	15090	11370	7690	5620	3320	2230
CAL YR 1977 TOTAL	1033.06			MEAN 2.83	MAX 200	MIN 0	AC-FT 2050					
WTR YR 1978 TOTAL	53294.70			MEAN 146	MAX 3500	MIN 0	AC-FT 105700					

SANTA ANA RIVER BASIN

11062000 LYTLE CREEK NEAR FONTANA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF LYTLE CREEK,
SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CONDUIT, AND FONTANA UNION WATER
CO.'S INFILTRATION LINE, NEAR FONTANA, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	17	16	34	63	1450	336	223	201	139	115	81
2	15	17	16	33	57	2910	311	217	200	141	114	79
3	16	18	17	31	55	1240	295	221	200	139	116	83
4	16	18	17	30	53	3510	272	226	194	127	115	88
5	16	17	17	77	43	1750	273	233	161	135	113	94
6	16	17	17	58	32	1050	273	233	179	135	110	106
7	15	17	17	45	33	743	307	227	177	133	110	87
8	15	16	16	50	32	512	284	224	169	131	101	92
9	16	16	16	61	845	379	255	229	167	129	92	89
10	16	16	16	151	1950	333	255	242	174	131	99	87
11	15	16	17	109	693	328	262	236	172	136	99	86
12	15	16	16	52	255	277	262	232	173	137	101	86
13	15	17	17	50	660	267	273	234	170	137	101	85
14	15	17	17	176	455	253	280	232	159	136	99	84
15	16	16	17	923	335	239	333	235	147	123	94	82
16	16	16	17	608	255	242	284	239	148	133	83	81
17	15	17	19	667	198	234	266	248	193	138	90	76
18	15	18	17	380	155	217	255	241	155	138	94	75
19	16	18	7.9	281	125	205	255	224	160	136	95	79
20	16	18	7.0	223	105	205	252	228	163	134	94	79
21	16	17	6.7	186	95	209	241	228	155	132	93	79
22	16	18	12	155	81	226	232	222	149	133	91	78
23	16	17	19	135	74	214	238	226	149	127	90	77
24	17	17	19	117	72	208	238	223	151	126	90	76
25	16	17	19	109	63	205	228	216	152	124	90	75
26	15	17	15	100	57	208	241	210	155	122	90	75
27	16	17	88	91	56	205	238	208	152	120	91	73
28	16	17	209	84	187	208	218	207	141	118	90	71
29	16	17	80	79	---	205	226	205	145	117	86	71
30	17	17	58	74	---	224	229	210	141	116	81	70
31	17	---	39	69	---	437	---	205	---	114	81	---
TOTAL	488	509	881.6	5238	7084	18893	7912	6986	4932	4047	3008	2444
MEAN	15.7	17.0	28.4	169	253	609	264	225	164	131	97.0	81.5
MAX	17	18	209	923	1950	3510	336	248	201	141	116	106
MIN	15	16	6.7	30	32	205	218	205	141	114	81	70
AC-FT	968	1010	1750	10390	14050	37470	15690	13860	9780	8030	5970	4850
CAL YR 1977 TOTAL	7515.6			MEAN 20.6	MAX 209	MIN 6.7	AC-FT 14910					
WTR YR 1978 TOTAL	62422.6			MEAN 171	MAX 3510	MIN 6.7	AC-FT 123800					

11063000 CAJON CREEK NEAR KEENBROOK, CA

LOCATION.--Lat 34°16'01", long 117°27'33", in SE¼SW¼SE¼ sec.12, T.2 N., R.6 W., San Bernardino County, on left bank 1,300 ft (400 m) upstream from Lone Pine Creek and 1.2 mi (1.9 km) north of Keenbrook.

DRAINAGE AREA.--40.6 mi² (105.2 km²).

PERIOD OF RECORD.--December 1919 to September 1971, October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 2,630 ft (802 m), from topographic map. Prior to Oct. 24, 1935, at site 1,300 ft (400 m) downstream at different datum. Oct. 24, 1935, to Jan. 26, 1966, at site 500 ft (150 m) upstream at datum 6.68 ft (2.036 m) higher.

REMARKS.--Records poor. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--52 years (1920-71, 1978), 10.6 ft³/s (0.300 m³/s), 7,680 acre-ft/yr (9.47 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) Mar. 2, 1938, gage height, 26.0 ft (7.92 m) datum then in use, on basis of slope-area measurement of peak flow; minimum daily, 0.05 ft³/s (0.001 m³/s) June 25, 1920.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) revised, and maximum (*), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of slope-area measurements at gage heights 4.20 ft (1.280 m), 10.75 ft (3.277 m), and 14.2 ft (4.33 m);

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 16	Unknown	1070	30.3	4.20	1.280	Mar. 4	1300	*9550	270	14.2	4.328
Feb. 10	0415	7900	224	10.75	3.277	Mar. 23	1400	550	15.6	3.10	0.945
Mar. 1	0600	4010	114	8.25	2.515	Apr. 1	0100	5000	142		Unknown

Minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Nov. 27 to Dec. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.7	2.0	4.9	4.1	2280	2000	24	12	7.7	7.1	6.8
2	2.6	2.7	2.0	4.5	6.9	1890	300	23	12	7.6	6.9	6.7
3	2.6	2.7	2.0	4.3	9.2	1460	100	23	11	7.3	6.2	6.7
4	2.6	2.7	2.0	8.4	4.4	2400	50	22	11	7.2	6.2	6.8
5	2.6	2.7	2.0	52	9.9	1280	38	21	11	7.0	6.2	20
6	2.6	2.7	2.0	38	5.1	786	42	21	11	6.8	6.3	12
7	2.6	2.7	2.0	30	4.3	190	50	20	10	6.7	6.4	8.0
8	2.6	2.7	2.0	25	4.0	150	200	20	10	6.6	6.5	6.6
9	2.6	2.7	2.0	30	861	110	100	19	10	6.5	6.8	6.6
10	2.6	2.7	2.0	94	3220	98	90	19	9.8	6.4	7.2	6.6
11	2.6	2.7	2.4	23	1810	82	65	18	9.6	6.2	7.2	6.5
12	2.6	2.7	2.4	20	1580	72	48	18	9.5	6.1	7.2	6.5
13	2.6	2.7	2.4	19	1200	64	40	18	9.3	6.1	7.2	6.5
14	2.6	2.7	2.4	18	951	57	70	17	9.2	6.0	7.2	6.4
15	2.6	2.7	2.4	50	300	53	180	17	9.1	5.9	7.1	6.4
16	2.6	2.7	2.4	600	180	47	100	16	9.0	5.8	7.1	6.4
17	2.6	2.7	2.4	150	130	48	36	16	9.0	5.7	7.1	6.4
18	2.6	2.7	2.4	50	100	49	35	16	8.9	5.7	7.1	6.4
19	2.6	2.7	2.4	34	83	50	34	15	8.7	5.7	7.1	6.4
20	2.6	2.7	2.4	18	70	52	33	15	8.7	5.6	7.1	6.3
21	2.6	2.7	2.4	11	60	56	32	15	8.6	5.7	7.0	6.3
22	2.6	2.7	2.4	6.0	52	100	32	14	8.5	5.8	7.0	6.3
23	2.6	2.7	2.4	3.5	46	400	31	14	8.4	5.9	7.0	6.3
24	2.6	2.5	2.4	2.3	42	150	30	14	8.4	6.0	7.0	6.3
25	2.7	2.4	2.4	2.2	38	42	29	13	8.4	6.2	6.9	6.2
26	2.7	2.2	6.0	2.1	35	46	28	13	8.3	6.3	6.9	6.2
27	2.7	2.0	20	2.7	32	52	27	13	8.2	6.5	6.9	6.2
28	2.7	2.0	100	3.0	799	62	26	13	8.1	6.7	6.8	6.2
29	2.7	2.0	20	5.1	---	80	26	12	8.0	6.9	6.8	6.2
30	2.7	2.0	6.3	6.9	---	200	25	12	7.9	7.1	6.8	6.2
31	2.7	---	5.5	5.1	---	1000	---	12	---	7.2	6.8	---
TOTAL	81.3	77.2	213.8	1323.0	11636.9	13406	3897	523	281.6	198.9	213.1	213.4
MEAN	2.62	2.57	6.90	42.7	416	432	130	16.9	9.39	6.42	6.87	7.11
MAX	2.7	2.7	100	600	3220	2400	2000	24	12	7.7	7.2	20
MIN	2.6	2.0	2.0	2.1	4.0	42	25	12	7.9	5.6	6.2	6.2
AC-FT	161	153	424	2620	23080	26590	7730	1040	559	395	423	423

WTR YR 1978 TOTAL 32065.2 MEAN 87.8 MAX 3220 MIN 2.0 AC-FT 63600

LOCATION.--Lat 34°15'59", long 117°27'47", in SE₄SE₄SW₄ sec.12, T.2 N., R.6 W., San Bernardino County, on right bank 50 ft (15 m) upstream from the Atchison, Topeka, and Santa Fe Railway Co. bridge, 150 ft (46 m) upstream from mouth, and 1.1 mi (1.8 km) north of Keenbrook.

PERIOD OF RECORD.--December 1919 to September 1938, June 1949 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft (794.284 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood) and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft (0.299 m) higher.

REMARKS.--Records poor. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--47 years (water years 1921-38, 1950-78) 1.55 ft³/s (0.044 m³/s), 1,120 acre-ft/yr (1.38 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,180 ft³/s (175 m³/s) Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow Aug. 6-8, Sept. 29, 30, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.27 m³/s) and maximum (*), from rating curve extended above 400 ft³/s (11.3 m³/s) based on slope-conveyance computation at gage height 9.07 ft (2.765 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 14	1830	191	5.41	3.54	1.079	Mar. 1	0615	435	12.3	4.84	1.475
Feb. 10	0315	881	24.9	6.47	1.972	Mar. 4	1330	*1160	32.9	7.31	2.228

Minimum daily discharge, 0.07 ft³/s (0.002 m³/s) Jan. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.15	.29	.11	.24	143	20	8.6	6.0	5.0	4.7	5.4
2	.24	.14	.29	.11	.22	82	11	8.7	6.1	5.0	4.7	5.5
3	.24	.15	.29	.12	.19	79	8.5	8.5	6.6	4.9	4.7	5.5
4	.24	.15	.29	6.8	.19	266	7.9	8.5	6.2	4.9	4.7	5.5
5	.26	.17	.29	.60	.21	150	7.0	8.5	6.0	4.9	4.7	5.5
6	.28	.17	.29	.42	.49	88	9.4	8.5	6.4	4.9	4.8	5.6
7	.23	.15	.29	.37	.50	65	7.6	8.2	6.3	4.9	4.8	5.6
8	.23	.15	.29	.27	.97	48	5.5	7.9	5.7	4.9	4.8	5.6
9	.24	.15	.29	.65	223	34	5.1	8.4	6.3	4.9	4.8	5.6
10	.24	.15	.29	7.3	203	27	5.3	7.5	6.6	4.9	4.8	5.7
11	.24	.11	.29	.19	100	22	6.1	7.5	6.0	4.9	4.9	5.7
12	.24	.13	.35	.09	70	18	5.2	7.5	6.0	4.8	4.9	5.7
13	.24	.15	.29	.07	50	15	5.5	7.2	6.0	4.8	4.9	5.7
14	.24	.15	.35	33	42	13	7.1	7.2	6.0	4.8	5.0	5.8
15	.22	.15	.35	21	32	11	9.4	7.5	6.6	4.8	5.0	5.8
16	.22	.12	.35	13	28	9.5	5.0	7.2	6.0	4.8	5.0	5.8
17	.22	.11	.42	2.9	22	8.3	5.3	7.2	6.3	4.8	5.1	5.8
18	.23	.11	.35	1.2	19	7.7	5.5	6.9	6.3	4.8	5.1	5.9
19	.19	.15	.19	.98	14	7.1	6.0	6.6	5.4	4.8	5.1	5.9
20	.19	.24	.15	.88	12	7.2	6.1	6.6	5.5	4.8	5.1	5.9
21	.19	.24	.12	.81	11	7.3	6.3	6.0	5.5	4.8	5.2	5.9
22	.19	.24	.11	.78	9.8	7.5	6.3	6.0	5.3	4.8	5.2	5.9
23	.19	.24	.12	.69	8.9	7.3	6.5	6.0	5.0	4.5	5.2	6.0
24	.19	.24	.11	.56	8.2	7.1	7.5	5.5	5.0	4.5	5.2	6.0
25	.19	.24	.12	.46	7.5	7.0	7.2	6.0	5.0	4.5	5.3	6.0
26	.19	.24	3.5	.34	7.0	7.0	6.9	5.7	5.0	4.6	5.3	6.1
27	.23	.24	1.1	.29	17	7.4	7.5	4.8	5.0	4.6	5.3	6.2
28	.22	.29	.79	.24	50	10	8.2	4.3	5.0	4.6	5.3	6.3
29	.22	.29	.39	.24	---	18	8.2	4.8	5.0	4.6	5.4	6.3
30	.15	.29	.11	.24	---	30	8.5	5.3	5.0	4.6	5.4	6.0
31	.15	---	.11	.24	---	40	---	5.4	---	4.6	5.4	---
TOTAL	6.77	5.50	12.57	94.95	937.41	1249.4	221.6	214.5	173.1	148.0	155.8	174.2
MEAN	.22	.18	.41	3.06	33.5	40.3	7.39	6.92	5.77	4.77	5.03	5.81
MAX	.28	.29	3.5	33	223	266	20	8.7	6.6	5.0	5.4	6.3
MIN	.15	.11	.11	.07	.19	7.0	5.0	4.3	5.0	4.5	4.7	5.4
AC-FT	13	11	25	188	1860	2480	440	425	343	294	309	346
CAL YR 1977	TOTAL	119.73		MEAN	.33	MAX	8.4	MIN	.11	AC-FT	237	
WTR YR 1978	TOTAL	3393.80		MEAN	9.30	MAX	266	MIN	.07	AC-FT	6730	

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°12'30", long 117°19'50", in Muscupiabe Grant, San Bernardino County, on left bank 0.6 mi (1.0 km) downstream from confluence of East and West Forks, and 7.5 mi (12.1 km) northwest of San Bernardino.

DRAINAGE AREA.--5.49 mi² (14.22 km²).

PERIOD OF RECORD.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.

GAGE.--Water-stage recorder on creek; flowmeter on diversion. Altitude of gage is 2,080 ft (634 m), from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi (0.8 km) downstream at different datum. December 1919 to July 1969, at site 0.4 mi (0.6 km) downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records poor. No regulation above station. City of San Bernardino diverts above station for municipal supply. See schematic diagram of Santa Ana River basin. No gage-height record Jan. 1 to Mar. 6.

COOPERATION.--Records of diversion were furnished by city of San Bernardino.

AVERAGE DISCHARGE.--Creek only: 59 years (water years 1914, 1921-78), 2.07 ft³/s (0.059 m³/s), 1,500 acre-ft/yr (1.85 hm³/yr).
Combined creek and diversion.--45 years (water years 1914, 1935-78), 3.80 ft³/s (0.11 m³/s), 2,750 acre-ft/yr (3.39 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (1913-14 AND SINCE 1919).--Maximum discharge, 3,720 ft³/s (105 m³/s) Jan. 25, 1969, gage height, 5.40 ft (1.646 m), site and datum then in use, on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,820 ft³/s (51.5 m³/s) Mar. 4, gage height, 8.4 ft (2.56 m), from slope-area measurement of peak flow; peaks above base of 25 ft³/s (0.71 m³/s) probably occurred on Feb. 9 and 10; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	4.3	.50	75	55	20	7.3	3.5	.08	0
2		0	0	3.8	.50	120	50	17	7.0	3.7	.07	0
3		0	0	3.7	3.8	66	44	15	6.4	4.3	.08	0
4		0	0	5.8	5.3	260	42	14	6.0	3.3	.04	0
5		.02	0	6.2	5.0	180	37	15	5.7	2.4	.03	1.4
6		0	0	5.5	6.8	95	36	14	5.5	3.4	.02	12
7		0	0	4.9	6.5	83	41	13	5.2	6.1	.01	5.0
8		0	0	4.5	6.0	76	38	13	4.9	3.3	.01	.20
9		0	0	4.9	175	81	35	14	4.7	1.9	3.3	.16
10		0	0	10	150	81	28	14	4.6	1.7	4.5	.15
11		0	0	8.1	30	76	24	14	4.5	1.6	.13	.10
12		0	0	8.1	35	63	22	14	4.4	1.2	.11	.06
13		0	0	7.5	30	58	22	14	4.1	.97	.09	.03
14		0	0	17	23	51	22	14	4.1	.82	.05	.02
15		0	0	48	20	47	32	14	3.9	.67	.02	.01
16		0	0	26	17	43	34	13	3.8	.71	.01	0
17		0	0	19	15	41	30	13	3.7	.66	.01	0
18		0	4.7	11	14	38	28	13	3.6	.53	0	0
19		0	1.2	9.8	13	35	27	13	3.5	.44	0	0
20		0	0	7.8	12	33	23	12	3.5	.46	0	0
21		0	0	6.3	11	31	21	12	3.4	.42	0	.02
22		0	0	5.4	10	44	20	13	3.3	.37	0	0
23		0	0	4.7	9.0	33	19	14	3.2	.34	0	0
24		0	0	3.0	8.2	28	18	13	3.1	.27	0	0
25		0	0	1.8	8.0	26	19	12	3.1	.23	0	0
26		0	1.0	1.0	8.1	24	19	11	3.0	.26	0	0
27		0	2.0	1.1	8.3	23	16	11	2.9	.25	0	0
28		0	25	1.1	50	22	16	11	2.8	.16	0	0
29		0	6.6	.92	---	22	15	10	3.9	.13	0	0
30		0	6.0	.79	---	21	17	10	3.8	.11	0	0
31		---	4.7	.66	---	74	---	9.0	---	.09	0	---
TOTAL	0	.02	51.2	242.67	681.00	1950	850	409.0	128.9	44.29	8.56	19.15
MEAN	0	.0007	1.65	7.83	24.3	62.9	28.3	13.2	4.30	1.43	.28	.64
MAX	0	.02	25	48	175	260	55	20	7.3	6.1	4.5	12
MIN	0	0	0	.66	.50	21	15	9.0	2.8	.09	0	0
AC-FT	0	.04	102	481	1350	3870	1690	811	256	88	17	38
a	60	60	158	576	1470	3940	1840	1130	580	406	281	257
CAL YR 1977 TOTAL	217.51											
WTR YR 1978 TOTAL	4384.79											
MEAN				.60								
MAX				25								
MIN				0								
AC-FT				8700								
a				1690								

a Combined discharge, in acre-feet, of Devil Canyon Creek and city of San Bernardino diversion.

SANTA ANA RIVER BASIN

11065000 LYTLE CREEK AT COLTON, CA

LOCATION.--Lat 34°04'44", long 117°18'17", in San Bernardino Grant, San Bernardino County, on right bank 400 ft (120 m) downstream from Colton Avenue, 1,930 ft (588 m) upstream from outlet end of channel, and 1.3 mi (2.1 km) northeast of Colton.

DRAINAGE AREA.--172 mi² (445 km²).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 974.67 ft (297.079 m) Corps of Engineers datum.

REMARKS.--Records poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 mi (5.1 km) upstream. Diversions above station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s (496 m³/s) Mar. 4, 1978, gage height, 14.8 ft (4.51 m), from rating curve extended above 4,200 ft³/s (119 m³/s) on basis of discharge for design flood at gage height 21.4 ft (6.52 m); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,500 ft³/s (496 m³/s) Mar. 4, gage height, 14.8 ft (4.51 m), from rating curve extended as explained above; no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	1490	14	12	47	77		0
2			0	0	0	1580	5.1	11	47	84		0
3			0	7.3	0	350	5.1	10	70	70		0
4			0	95	0	3870	16	9.5	77	70		0
5			0	11	12	1710	1.8	9.0	98	56		0
6			0	.75	.75	390	5.1	8.5	112	84		30
7			0	0	12	210	54	8.0	77	61		2.0
8			0	0	2.7	91	17	7.5	84	56		0
9			0	35	711	37	4.2	7.0	84	53		0
10			0	137	740	20	9.0	6.5	70	52		0
11			0	4.2	76	77	8.7	6.5	84	51		0
12			0	0	288	8.6	25	6.5	61	50		0
13			0	0	369	7.5	16	6.5	61	50		0
14			0	342	8.6	6.5	18	6.0	61	49		0
15			0	424	3.5	5.5	124	6.0	61	48		0
16			0	304	.75	5.0	90	6.0	70	45		0
17			0	179	.75	4.5	70	6.0	47	40		0
18			0	1.1	.55	4.0	60	6.0	37	35		0
19			0	4.4	0	3.5	50	6.0	37	23		0
20			0	0	0	3.5	45	32	56	16		0
21			0	0	0	10	38	32	47	11		0
22			0	0	0	17	33	56	42	8.0		0
23			0	0	.50	10	30	56	42	4.5		0
24			0	0	.50	8.0	27	56	32	2.5		0
25			.29	0	.05	6.5	24	65	32	1.0		0
26			43	0	0	5.5	22	56	32	.35		0
27			15	0	1.5	5.0	20	47	56	0		0
28			249	0	197	4.5	18	37	70	0		0
29			12	0	---	4.5	16	70	61	0		0
30			.95	.10	---	25	14	37	84	0		0
31		---	0	0	---	140	---	51	---	0		---
TOTAL	0	0	320.24	1544.85	2425.15	10109.6	880.0	739.5	1839	1097.35	0	32.0
MEAN	0	0	10.3	49.8	86.6	326	29.3	23.9	61.3	35.4	0	1.07
MAX	0	0	249	424	740	3870	124	70	112	84	0	30
MIN	0	0	0	0	0	3.5	1.8	6.0	32	0	0	0
AC-FT	0	0	635	3060	4810	20050	1750	1470	3650	2180	0	63
CAL YR 1977	TOTAL	320.24	MEAN	.88	MAX	249	MIN	0	AC-FT	635		
WTR YR 1978	TOTAL	18987.69	MEAN	52.0	MAX	3870	MIN	0	AC-FT	37660		

11066440 SANTA ANA RIVER AT MISSION BOULEVARD, AT RIVERSIDE, CA

LOCATION.--Lat 33°59'28", long 117°23'36", in Jurupa Grant, Riverside County, near right bank on downstream end of pier of Mission Boulevard Bridge between Rubidoux and Riverside.

DRAINAGE AREA.--810 mi² (2,098 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 758.52 ft (231.197 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. This is a project station the purpose of which is to record surface flow entering Riverside narrows from upper Santa Ana River drainage. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--7 years, 36.6 ft³/s (1.037 m³/s), 26,520 acre-ft/yr (32.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 18,600 ft³/s (527 m³/s) Mar. 4, 1978, gage height, 12.60 ft (3.840 m), on basis of slope-conveyance study of maximum flow; maximum gage height, 13.35 ft (4.069 m) Feb. 10, 1978; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) revised, and maximum (*), on basis of rating extended to slope-conveyance studies of 16,600 ft³/s (470 m³/s) and 18,600 ft³/s (527 m³/s).

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 28	1730	3200	90.6	10.95	3.338	Mar. 12	0500	Unknown		10.38	3.164
Jan. 16	2100	8570	243	11.85	3.612	Mar. 22	1600	3700	105	10.40	3.170
Feb. 10	0400	16600	470	*13.35	4.069	Mar. 31	Unknown	Unknown		Unknown	
Feb. 13	0200	5250	149	10.35	3.155	Apr. 7	Unknown	Unknown		Unknown	
Mar. 2	1900	10100	286	11.60	3.536	Apr. 15	Unknown	Unknown		Unknown	
Mar. 4	1630	*18600	527	12.60	3.840						

Minimum daily discharge, no flow much of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	6330	700	103	100			
2			0	0	0	6570	290	103	100			
3			0	11	0	843	250	103	100			
4			0	58	0	6920	280	103	100			
5			0	149	12	4490	260	103	100			
6			0	11	11	2100	350	102	100			
7			0	0	133	2100	700	102	100			
8			0	0	25	400	230	102	100			
9			0	158	3570	89	250	102	100			
10			0	689	6440	100	280	102	82			
11			0	71	687	190	180	101	60			
12			0	0	822	1700	150	101	40			
13			0	0	2520	1030	140	101	25			
14			0	329	620	400	150	101	17			
15			0	2160	63	100	580	101	12			
16			0	1160	1.5	72	560	100	11			
17			0	851	.11	43	270	100	10			
18			0	320	.15	60	140	100	7.0			
19			0	204	0	54	120	100	4.0			
20			0	0	0	89	110	100	2.5			
21			0	0	.06	310	108	98	1.5			
22			0	0	0	825	105	97	.50			
23			0	0	.18	250	105	97	0			
24			0	0	.22	310	105	96	0			
25			0	0	.18	54	104	94	0			
26			196	0	.09	14	103	95	0			
27			382	0	.20	10	103	130	0			
28			800	0	247	6.0	103	110	0			
29			27	0	---	100	103	105	0			
30			5.6	0	---	600	103	102	0			
31		---	0	0	---	2200	---	102	---			---
TOTAL	0	0	1410.6	6171	15152.69	38359.0	7032	3156	1172.50	0	0	0
MEAN	0	0	45.5	199	541	1237	234	102	39.1	0	0	0
MAX	0	0	800	2160	6440	6920	700	130	100	0	0	0
MIN	0	0	0	0	0	6.0	103	94	0	0	0	0
AC-FT	0	0	2800	12240	30060	76090	13950	6260	2330	0	0	0
CAL YR 1977	TOTAL	6593.72	MEAN	18.1	MAX	1640	MIN	0	AC-FT	13080		
WTR YR 1978	TOTAL	72453.79	MEAN	199	MAX	6920	MIN	0	AC-FT	143700		

LOCATION.--Lat 33°58'04", long 117°26'46", in NE¼NE¼SW¼ sec. 30, T.2 S., R.5 W., Riverside County, on left bank 300 ft (91 m) upstream from MWD crossing, 0.7 mi (1.1 km) downstream from Union Pacific Railroad bridge, 1.2 mi (1.9 km) upstream from bridge on Van Buren Boulevard, and 3.3 mi (5.3 km) north of Arlington.

WATER-DISCHARGE RECORDS

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flows from irrigated areas. The records at this station are equivalent to those collected at 11066500 Santa Ana River at Riverside Narrows, near Arlington minus the flow at 11066480 Riverside Water Quality Control Plant at Riverside Narrows, near Arlington. See schematic diagram of Santa Ana River basin.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1927, 100,000 ft³/s (2,830 m³/s) Mar. 2, 1938, on basis of slope-area measurement at site 1.2 mi (1.9 km) downstream. Flood of Jan. 22, 1862, 320,000 ft³/s (9,060 m³/s), by slope-conveyance measurement at site 8.1 mi (13.0 km) upstream. Stage at that site was 5 ft (2 m) higher than Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 19,500 ft³/s (552 m³/s) Mar. 4, by flood routing, gage height, 20.23 ft (6.166 m). Other peaks above base of 1,500 ft³/s (42.5 m³/s) revised, probably occurred on following dates: Dec. 27, Jan. 10, Jan. 16, Feb. 7, Feb. 10, Feb. 13, Mar. 12, Mar. 25, Mar. 31, Apr. 7, and Apr. 15, discharge and gage-heights are unknown; minimum daily discharge, 23 ft³/s (0.65 m³/s) Oct. 23, Dec. 24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	27	28	31	6400	800	116	125	27	33	32
2	25	26	27	25	31	6600	300	113	123	35	33	32
3	25	26	27	99	31	1500	250	112	122	34	33	32
4	26	26	28	148	31	6800	290	111	121	33	32	32
5	26	26	28	319	57	3100	290	110	120	33	32	45
6	27	25	27	132	120	3900	270	110	120	32	32	70
7	25	26	27	39	307	1000	600	110	120	32	32	55
8	26	26	27	27	244	200	500	110	120	32	32	42
9	26	27	26	235	4600	95	420	110	120	32	32	38
10	29	27	26	834	6400	100	290	110	120	32	32	33
11	28	27	26	202	2310	400	189	110	120	32	32	33
12	28	25	25	45	855	1550	143	110	120	32	32	32
13	28	26	25	32	2500	1000	138	110	110	32	32	32
14	27	26	25	204	688	308	143	110	103	32	32	31
15	27	27	25	2200	200	133	600	110	97	32	32	36
16	26	27	25	1000	80	86	600	110	93	32	32	30
17	26	28	25	1400	54	25	400	110	87	32	32	29
18	26	27	55	720	44	129	160	110	83	32	32	29
19	25	26	27	417	41	55	155	110	77	32	32	29
20	26	27	27	104	39	260	155	110	74	32	32	29
21	25	25	26	67	38	266	155	110	71	33	32	29
22	25	26	24	55	37	327	155	110	67	33	32	29
23	23	27	24	42	36	253	155	110	63	33	32	29
24	26	27	23	39	35	70	155	110	58	33	32	28
25	25	26	28	36	35	380	155	110	54	33	32	28
26	25	26	173	37	34	344	150	110	51	33	32	28
27	25	27	288	34	34	42	140	130	47	33	32	28
28	25	26	1130	34	34	42	132	140	45	33	32	28
29	26	29	226	31	---	61	128	128	42	33	32	27
30	25	27	59	33	---	700	118	127	39	33	32	27
31	24	---	33	32	---	2500	---	126	---	33	32	---
TOTAL	802	791	2589	8650	18946	38618	8136	3523	2712	1015	995	996
MEAN	25.9	26.4	83.5	279	677	1246	271	114	90.4	32.7	32.1	33.2
MAX	29	29	1130	2200	6400	6800	800	140	125	37	33	70
MIN	23	24	23	25	31	25	118	110	39	32	32	27
AC-FT	1590	1570	5140	17160	37580	76600	16140	6990	3380	2010	1970	1980
CAL YR 1977	TOTAL	14072	MEAN	38.6	MAX	1130	MIN	20	AC-FT	27910		
WTR YR 1978	TOTAL	87773	MEAN	240	MAX	6800	MIN	23	AC-FT	174100		

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

CHEMICAL ANALYSES: Water years 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

INSTRUMENTATION.--Specific conductance recorder since October 1969.

REMARKS.--Missing specific conductance record for January through September due to sand accumulation at probe, recorder malfunction, or vandalism.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,320 micromhos Nov. 4, 1969; minimum recorded, 95 micromhos Nov. 27, 1970.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,130 micromhos Dec. 5, 7, 10; minimum recorded, 220 micromhos Dec. 26.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT					
04...	1110	26	1105	23.0	750
13...	1200	25	1090	25.0	728
NOV					
01...	1220	24	1080	21.0	716
17...	1350	29	1050	20.5	725
DEC					
05...	1340	28	1100	19.5	740
15...	1305	25	1120	19.5	743
JAN					
04...	1440	40	766	18.0	386
18...	1600	86	717	14.0	343
24...	1450	40	838	17.0	424
FEB					
08...	1330	88	773	16.0	440
MAR					
06...	1250	3900	273	--	158
22...	1320	255	377	--	191
28...	1245	32	723	--	416
APR					
04...	1700	350	360	14.5	192
15...	1420	165	397	--	193
25...	1120	160	580	22.5	352
MAY					
02...	1420	110	660	28.0	399
19...	1400	115	620	22.0	363
JUN					
02...	1400	120	626	23.3	360
JUL					
06...	1115	32	626	23.5	360
AUG					
03...	1300	34	953	--	687
SEP					
06...	1330	40	1000	26.5	645

SANTA ANA RIVER BASIN

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	1080	1030	1050	1110	1080	1100			
2	---	---	---	1080	1020	1040	1110	1070	1090			
3	---	---	---	1070	1020	1040	1120	1050	1100			
4	---	---	---	1080	1020	1050	1120	1070	1100			
5	---	---	---	1060	1040	1050	1130	1090	1100			
6	---	---	---	1080	1040	1050	1120	1070	1090			
7	---	---	---	1060	1030	1050	1130	1100	1110			
8	---	---	---	1080	1010	1070	1110	1050	1100			
9	---	---	---	1090	1050	1070	1120	1100	1110			
10	---	---	---	1080	1040	1060	1130	1090	1110			
11	---	---	---	1080	1050	1060	---	---	---			
12	---	---	---	1090	1070	1070	---	---	---			
13	---	---	---	1080	1070	1070	---	---	---			
14	996	960	976	1080	1060	1070	---	---	---			
15	1010	970	988	1080	1030	1050	---	---	---			
16	998	974	985	1070	1030	1050	---	---	---			
17	1010	964	988	1060	1040	1050	1090	1060	1080			
18	1020	970	992	1070	1060	1060	1080	426	799			
19	1000	980	990	1080	1060	1070	1060	1020	1040			
20	1010	972	989	1090	1020	1070	1040	1000	1020			
21	1000	984	990	1090	1070	1080	1040	934	1010			
22	1020	982	997	1090	1060	1070	1030	938	1020			
23	1020	980	996	1090	1070	1080	1040	1010	1020			
24	1030	982	1010	1080	1060	1070	1040	998	1020			
25	1040	990	1010	1090	1030	1080	1040	434	979			
26	1040	986	1010	1100	1070	1090	864	220	442			
27	1030	984	1010	1100	1070	1080	---	---	---			
28	1030	974	1000	1090	1040	1070	---	---	---			
29	1050	1010	1030	1080	1020	1060	---	---	---			
30	1050	1020	1030	1090	1050	1070	---	---	---			
31	1050	1020	1030	---	---	---	---	---	---			
MONTH	---	---	---	1100	1010	1060	---	---	---			

11066480 RIVERSIDE WATER QUALITY CONTROL PLANT AT RIVERSIDE NARROWS, NEAR ARLINGTON, CA

LOCATION.--Lat 33°57'53", long 117°27'26", in SE4NE4SE4 sec.25, T.2 S., R.6 W., Riverside County, at effluent end of chlorine contact chambers, 0.4 mi (0.6 km) upstream from Van Buren Boulevard, and 3.1 mi (5.0 km) northwest of Arlington.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year. Prior to May 25, 1967, published as "Sheehan ditch."

GAGE.--Two water-stage recorders with concrete controls for plants Nos. 1 and 2. Altitude of both gages are 690 ft (210 m), from topographic map.

REMARKS.--Records good. Discharge reported is total effluent from city of Riverside's Water Quality Control Plants Nos. 1 and 2, released to river 1.0 mi (1.6 km) downstream from Santa Ana River at MWD crossing (station 11066460).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 6, 7, 8, 11, 12, 1978; minimum daily, 16 ft³/s (0.45 m³/s) Feb. 11, 1978, due to temporary shutdown of Plant No. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	27	22	28	33	29	29	30	27	28	29
2	24	27	27	24	28	30	27	29	31	25	28	28
3	27	28	26	27	28	28	29	27	28	26	27	27
4	25	27	25	34	27	29	29	28	28	26	28	29
5	27	27	27	29	26	29	28	28	28	28	27	34
6	27	25	27	28	31	29	29	27	28	29	25	35
7	26	27	26	27	31	33	30	25	27	29	28	35
8	26	27	26	25	23	34	27	29	27	27	28	35
9	24	28	26	29	34	32	26	28	26	24	28	34
10	27	27	25	31	21	31	30	28	27	28	28	34
11	26	29	25	29	16	31	29	29	28	28	28	35
12	26	27	26	28	25	29	29	28	30	28	25	35
13	26	25	26	27	30	32	30	27	30	28	24	34
14	26	29	26	29	29	32	29	25	29	28	28	34
15	25	28	26	28	28	32	29	29	29	27	27	33
16	24	30	27	32	28	32	27	28	28	27	28	32
17	27	30	25	31	27	30	30	28	28	29	28	32
18	27	30	25	30	27	30	29	28	27	28	27	33
19	26	30	27	33	25	28	28	29	27	28	26	32
20	26	28	27	30	28	30	29	28	27	28	24	33
21	26	29	26	28	27	30	30	26	26	28	27	31
22	25	30	28	26	27	29	27	29	28	28	27	31
23	24	31	28	28	27	29	26	28	28	26	28	31
24	27	26	25	28	27	30	30	30	27	30	26	29
25	27	25	22	28	27	29	29	30	27	29	28	32
26	27	25	26	28	25	27	29	30	29	28	26	32
27	28	25	25	28	27	30	29	26	29	28	28	32
28	28	28	27	28	28	31	29	25	29	29	28	32
29	27	28	25	26	---	29	27	26	29	27	28	31
30	25	27	25	28	---	30	27	30	28	25	29	30
31	27	---	24	28	---	31	---	30	---	28	29	---
TOTAL	808	832	803	877	755	939	856	867	843	864	841	964
MEAN	26.1	27.7	25.9	28.3	27.0	30.3	28.5	28.0	28.1	27.5	27.1	32.1
MAX	28	31	28	34	34	34	30	30	31	30	29	35
MIN	24	25	22	22	16	27	26	25	26	24	24	27
AC-FT	1600	1650	1590	1740	1500	1860	1700	1720	1670	1690	1670	1910
CAL YR 1977	TOTAL	9493	MEAN 26.0	MAX 33	MIN 22	AC-FT 18830						
WTR YR 1978	TOTAL	10239	MEAN 28.1	MAX 35	MIN 16	AC-FT 20310						

11066480 RIVERSIDE WATER QUALITY CONTROL PLANT AT RIVERSIDE NARROWS, NEAR ARLINGTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

CHEMICAL ANALYSES: Water years 1970 to current year.

SPECIFIC CONDUCTANCE: Water years 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

INSTRUMENTATION.--Specific-conductance recorder since October 1969.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,740 micromhos Oct. 29, 1971; minimum recorded, 672 micromhos May 5, 1971.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,590 micromhos Mar. 8; minimum recorded, 480 micromhos Apr. 25.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT					
04...	1315	32	967	24.0	594
NOV					
01...	1300	33	1000	26.0	596
17...	1330	37	940	24.5	566
DEC					
05...	1135	37	970	23.5	592
15...	1240	34	994	22.0	594
JAN					
04...	1215	35	1010	21.0	595
18...	1450	30	1120	24.0	574
FEB					
08...	1120	38	1020	22.5	597
MAR					
07...	1125	40	1470	23.0	879
22...	1500	30	951	--	566
APR					
25...	1030	40	1090	24.0	496
MAY					
02...	1455	32	1080	26.0	580
19...	1400	32	1090	18.5	642
JUN					
02...	1250	32	1130	23.0	639
JUL					
05...	1120	33	1020	22.0	599
AUG					
03...	1415	35	1130	--	656
SEP					
01...	1120	35	1010	27.5	574

11066480 RIVERSIDE WATER QUALITY CONTROL PLANT AT RIVERSIDE NARROWS, NEAR ARLINGTON, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1030	964	1000	1040	1000	1010	1040	985	1020	1100	1020	1060
2	978	896	948	1030	987	1010	1080	1020	1050	1080	981	1040
3	1040	899	960	1060	950	997	1130	1020	1080	1080	994	1040
4	1030	963	994	1060	1010	1040	1060	957	1000	1140	1010	1050
5	1020	969	995	1040	980	1020	---	---	---	1140	1020	1080
6	1050	984	1010	981	909	949	---	---	---	1070	1020	1050
7	1030	966	1010	1000	902	948	1150	1080	1110	1110	1050	1080
8	1010	942	974	1050	986	1010	1180	1110	1140	1070	1020	1050
9	943	877	920	1030	965	1010	1200	1120	1150	1070	969	1020
10	1030	887	949	1060	998	1030	1170	1010	1100	1110	945	1010
11	1030	949	992	1010	951	983	1000	935	979	1130	1050	1090
12	1010	974	995	1000	946	979	1080	955	1010	1180	1090	1130
13	1030	948	988	981	907	953	1150	1080	1110	1150	1110	1130
14	1030	989	1010	1010	890	952	1140	1040	1080	1120	1020	1090
15	1030	967	1000	1040	957	1000	1050	985	1020	1020	909	962
16	1020	927	988	1010	951	989	1080	1020	1050	1090	995	1030
17	1030	902	967	989	939	968	1080	1030	1060	1200	980	1070
18	1010	950	980	1020	957	991	1030	938	982	1220	1160	1190
19	1080	972	1020	1040	995	1010	1110	959	1020	1190	989	1110
20	1090	1010	1050	1040	953	997	1130	1070	1100	1200	1050	1140
21	1040	1010	1030	997	905	962	1160	1100	1130	1200	1120	1160
22	1080	1030	1050	1100	979	1020	1140	1080	1110	1190	1100	1130
23	1030	948	999	1110	1030	1080	1140	1090	1120	1210	1130	1160
24	1040	934	991	1080	1000	1040	1150	1070	1120	1170	1140	1150
25	1030	968	1000	1060	955	1020	1070	985	1030	1160	1120	1140
26	1080	981	1030	1110	1060	1080	1020	958	988	1180	1130	1150
27	1060	979	1020	1060	977	1030	1090	1020	1060	1260	1180	1220
28	1060	996	1030	1070	1020	1050	1080	1020	1060	1200	1110	1160
29	1060	960	1010	1070	1020	1040	1270	1090	1150	1100	1040	1080
30	1010	934	973	1070	1030	1050	1280	1220	1250	1150	1060	1090
31	1010	903	955	---	---	---	1230	1100	1170	1160	1110	1130
MONTH	1090	877	995	1110	890	1010	1280	935	1080	1260	909	1100

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1140	1060	1100	---	---	---	910	854	875	1100	1000	1050
2	1120	1080	1110	---	---	---	915	849	885	1080	1060	1070
3	1140	1070	1120	---	---	---	918	884	900	1100	1020	1050
4	1150	1080	1120	---	---	---	971	889	938	1090	1000	1050
5	1120	1030	1080	---	---	---	990	908	948	1140	1060	1100
6	1040	945	1010	---	---	---	925	889	912	1080	984	1030
7	1080	1010	1040	1470	1430	1460	946	872	902	1080	944	1000
8	1070	1010	1040	1590	1350	1440	916	840	881	1120	978	1060
9	1070	974	1010	1400	1290	1340	897	797	854	1160	1090	1140
10	1290	958	1090	1480	1250	1340	900	826	870	1160	1100	1130
11	1420	1260	1350	1260	1190	1220	915	879	897	1170	1120	1140
12	1360	1170	1300	1240	1150	1200	900	848	886	1180	1110	1140
13	1280	1090	1190	1200	1080	1140	941	903	928	1150	1090	1120
14	1380	1270	1320	1220	1120	1150	960	938	948	1130	1060	1100
15	1450	1320	1370	1140	1090	1120	971	843	920	1180	1060	1120
16	1450	1280	1340	1240	1110	1160	936	788	865	1160	1080	1120
17	1370	1250	1310	1200	1100	1160	965	803	898	1150	1070	1100
18	1330	1230	1260	1130	992	1070	992	880	927	1090	1060	1070
19	1260	1190	1230	1030	955	999	913	851	883	1130	1090	1110
20	1220	1150	1190	1030	954	1000	941	851	901	1140	1060	1100
21	1300	1160	1230	1070	980	1030	984	950	967	1080	1020	1050
22	1330	1130	1230	1030	943	982	979	873	927	1100	1020	1070
23	1190	1090	1140	1010	908	956	940	848	888	1090	1050	1070
24	---	---	---	963	915	937	963	883	936	1090	1040	1070
25	---	---	---	978	894	936	996	480	954	1080	1020	1050
26	---	---	---	1000	869	926	998	936	961	1070	1040	1060
27	---	---	---	1010	888	951	967	891	927	1080	1050	1070
28	---	---	---	954	886	932	1020	959	1000	1060	1000	1040
29	---	---	---	953	877	912	1040	967	1010	1070	1000	1050
30	---	---	---	906	834	873	1080	927	986	1110	1040	1070
31	---	---	---	887	797	858	---	---	---	1210	1120	1160
MONTH	1450	945	1180	1590	797	1080	1080	480	919	1210	944	1080

11067890 SANTA ANA RIVER AT PRADO PARK, NEAR CORONA, CA

LOCATION.--Lat 33°55'42", long 117°35'44", in Jurupa Grant, Riverside County, in Prado Park on right bank 0.4 mi (0.6 km) upstream from Auburndale Bridge, and 4.1 mi (6.6 km) northwest of Corona.

DRAINAGE AREA.--1,010 mi² (2,616 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1971 to current year. Records May 1930 to November 1966 (irrigation seasons only), October 1966 to September 1968 at site 0.4 mi (0.6 km) downstream (at Auburndale Bridge, station 11068000), equivalent if diversion to Durkee ditch added.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000) 44 mi (71 km) upstream. Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flows from irrigated areas. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--7 years, 90.8 ft³/s (2.571 m³/s), 65,780 acre-ft/yr (81.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 30,000 ft³/s (850 m³/s) Mar. 4, 1978, by flood routing, gage height, 9.82 ft (2.993 m); maximum gage height, 11.43 ft (3.484 m) Feb. 10, 1978, from backwater; minimum daily discharge, 10 ft³/s (0.28 m³/s) Aug. 7, Sept. 23, 1971.

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

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Dec. 28	2400	1690	47.9	5.84	1.780	Mar. 1	Unknown	16700	473	Unknown	
Jan. 15	1900	2110	59.8	6.10	1.859	Mar. 4	Unknown	*30000	850	9.82	2.993
Jan. 17	1000	3080	87.2	6.30	1.920	Mar. 12	Unknown	4800	136	Unknown	
Feb. 6	Unknown	1930	54.7	5.60	1.707	Mar. 31	Unknown	6300	178	Unknown	
Feb. 10	1200	21000	595	*11.43	3.484	Apr. 16	0030	1680	47.6	5.43	1.655
Feb. 13	0730	7160	203	8.02	2.444						

Minimum daily discharge, 25 ft³/s (0.71 m³/s) Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	36	38	74	184	8000	1800	190	130	33	32	35
2	37	36	38	68	180	10500	900	185	130	34	32	35
3	38	38	37	156	176	1300	360	180	130	36	32	35
4	37	38	37	272	176	12000	460	175	130	36	32	36
5	37	40	38	438	192	6000	150	172	130	36	31	72
6	38	41	41	390	684	1900	90	160	130	36	31	80
7	40	40	41	179	568	900	530	150	130	35	31	52
8	38	41	41	128	180	800	90	145	130	35	30	47
9	37	38	41	290	1070	700	122	140	130	35	29	44
10	40	38	41	618	11300	640	122	135	130	34	29	41
11	38	41	40	287	2210	1200	90	135	125	34	28	39
12	42	38	40	131	580	2300	95	130	120	33	28	37
13	40	38	40	108	2890	900	83	130	120	32	27	36
14	37	38	40	263	376	350	144	130	120	31	26	36
15	36	38	40	1320	161	140	319	130	110	30	26	35
16	36	38	40	458	245	100	1100	130	100	29	26	35
17	37	38	40	1070	236	108	400	130	92	28	25	35
18	41	38	58	256	196	114	230	135	82	28	26	34
19	37	38	43	483	192	240	220	135	73	27	26	34
20	37	38	40	205	188	270	210	135	64	27	27	34
21	37	38	40	188	182	245	210	140	58	27	27	34
22	37	38	40	196	178	211	210	140	52	27	28	34
23	36	38	40	196	176	188	210	145	42	27	29	34
24	36	38	40	169	174	90	270	145	42	27	30	34
25	36	38	40	144	170	74	250	145	40	27	31	34
26	35	38	151	138	170	61	220	140	40	27	32	34
27	35	38	276	176	170	79	210	135	38	27	33	34
28	35	38	552	192	170	93	200	135	37	28	34	34
29	35	38	598	204	---	138	195	130	33	29	34	34
30	35	38	134	200	---	154	190	130	31	30	34	34
31	35	---	86	192	---	3050	---	130	---	31	34	---
TOTAL	1155	1149	2811	9189	23374	52845	9680	4467	2719	956	920	1172
MEAN	37.3	38.3	90.7	296	835	1705	323	144	90.6	30.8	29.7	39.1
MAX	42	41	598	1320	11300	12000	1800	190	130	36	34	80
MIN	35	36	37	68	161	61	83	130	31	27	25	34
AC-FT	2290	2280	5580	18230	46360	104800	19200	8860	5390	1900	1820	2320

CAL YR 1977 TOTAL 20933 MEAN 57.4 MAX 671 MIN 22 AC-FT 41520
WTR YR 1978 TOTAL 110437 MEAN 303 MAX 12000 MIN 25 AC-FT 219100

SANTA ANA RIVER BASIN

11067890 SANTA ANA RIVER AT PRADO PARK NEAR CORONA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD. --

WATER TEMPERATURES: October 1975 to current year.

SEDIMENT RECORDS: February 1976 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 23,500 mg/L Mar. 4, 1978; minimum daily mean, 20 mg/L July 15, 1976.

SEDIMENT DISCHARGE: Maximum daily, 842,000 tons (764,000 metric tons) Mar. 2, 1978; minimum daily, 1.2 tons (1.1 metric tons) July 15, 1976.

EXTREMES FOR CURRENT YEAR. --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 23,500 mg/L Mar. 4; minimum daily mean, 48 mg/L Dec. 11.

SEDIMENT DISCHARGE: Maximum daily, 842,000 tons (764,000 metric tons) Mar. 2; minimum daily, 5.2 tons (4.7 metric tons) Dec. 11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

11067890 SANTA ANA RIVER AT PRADO PARK NEAR CORONA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	40	98	11	36	75	7.3	38	76	7.8
2	37	92	9.2	36	74	7.2	38	83	8.5
3	38	85	8.7	38	78	8.0	37	85	8.5
4	37	79	7.9	38	96	9.8	37	85	8.5
5	37	74	7.4	40	115	12	38	86	8.8
6	38	70	7.2	41	146	16	41	84	9.3
7	40	67	7.2	40	163	18	41	72	8.0
8	38	63	6.5	41	145	16	41	62	6.9
9	37	61	6.1	38	110	11	41	54	6.0
10	40	64	6.9	38	83	8.5	41	50	5.5
11	38	70	7.2	41	61	6.8	40	48	5.2
12	42	75	8.5	38	65	6.7	40	50	5.4
13	40	78	8.4	38	97	10	40	54	5.8
14	37	81	8.1	38	95	9.7	40	56	6.0
15	36	84	8.2	38	98	10	40	59	6.4
16	36	86	8.4	38	100	10	40	60	6.5
17	37	87	8.7	38	102	10	40	368	40
18	41	82	9.1	38	104	11	58	751	118
19	37	74	7.4	38	103	11	43	184	21
20	37	73	7.3	38	102	10	40	140	15
21	37	74	7.4	38	100	10	40	88	9.5
22	37	75	7.5	38	99	10	40	140	15
23	36	76	7.4	38	96	9.8	40	125	13
24	36	77	7.5	38	95	9.7	40	130	14
25	36	79	7.7	38	94	9.6	40	235	25
26	35	82	7.7	38	104	11	151	1390	944
27	35	85	8.0	38	109	11	276	5180	4050
28	35	89	8.4	38	113	12	552	6800	14800
29	35	93	8.8	38	107	11	598	7290	18200
30	35	96	9.1	38	86	8.8	134	2210	820
31	35	85	8.0	---	---	---	86	1250	290
TOTAL	1155	---	246.9	1149	---	311.9	2811	---	39487.6

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	74	600	120	184	310	154	8000	19500	811000
2	68	400	73	180	285	139	10500	21000	842000
3	156	1900	2620	176	260	124	1300	17500	116000
4	272	3970	4300	176	245	116	12000	23500	778000
5	438	10500	14100	192	1500	778	6000	13500	268000
6	390	8090	8860	684	4000	7390	1900	11800	60500
7	179	1700	906	568	6000	9200	900	8600	20900
8	128	1100	380	180	4500	2190	800	6750	14600
9	290	2400	4340	1070	10800	34000	700	5450	10300
10	618	6310	10800	11300	17400	596000	640	4500	7780
11	287	3300	3340	2210	6580	51000	1200	4800	15600
12	131	1800	637	580	3400	5320	2300	8200	50900
13	108	1100	321	2890	13300	124000	900	4150	10100
14	263	1260	1710	376	7180	8910	350	3650	3450
15	1320	6640	25300	161	3000	1300	140	3180	1200
16	458	4810	6630	245	2300	1520	100	2920	788
17	1070	6400	23300	236	1600	1020	108	2740	799
18	256	2220	1740	196	1300	688	114	2600	800
19	483	4120	7360	192	5500	2850	240	2450	1590
20	205	3020	1710	188	2600	1320	270	2400	1750
21	188	1350	685	182	1340	658	245	3150	2080
22	196	890	471	178	1120	538	211	4060	2910
23	196	690	365	176	960	456	188	3300	1680
24	169	580	265	174	850	399	90	2450	595
25	144	510	198	170	770	353	74	2000	400
26	138	445	166	170	710	326	61	1600	264
27	176	380	181	170	660	303	79	1310	279
28	192	378	196	170	910	418	93	1150	289
29	204	377	208	---	---	---	138	1330	496
30	200	376	203	---	---	---	154	1720	715
31	192	340	176	---	---	---	3050	17600	35200
TOTAL	9189	---	121661	23374	---	851470	52845	---	3060965

11067890 SANTA ANA RIVER AT PRADO PARK NEAR CORONA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1800	7800	37900	190	3550	1820	130	1890	663
2	900	7100	17300	185	3350	1670	130	1910	670
3	360	6990	6790	180	3200	1560	130	1900	667
4	460	4300	5340	175	3050	1440	130	1980	695
5	150	3900	1580	172	2910	1350	130	2020	709
6	90	3650	887	160	2830	1220	130	2110	741
7	530	7300	11500	150	2790	1130	130	2190	769
8	90	4900	1190	145	2770	1080	130	2110	741
9	122	2600	856	140	2730	1030	130	1800	632
10	122	3430	1130	135	2820	1030	130	1540	541
11	90	3050	741	135	2940	1070	125	1330	449
12	95	2790	716	130	3040	1070	120	1200	389
13	83	2580	578	130	3050	1070	120	1230	399
14	144	2400	933	130	3050	1070	120	1430	463
15	319	3380	7780	130	2980	1050	110	1600	475
16	1100	8800	11000	130	2810	986	100	1600	432
17	400	5200	5620	130	2860	1000	92	1600	397
18	230	3420	2120	135	2800	1020	82	1600	354
19	220	2950	1750	135	2700	984	73	1580	311
20	210	2630	1490	135	2620	955	64	1500	259
21	210	2380	1350	140	2510	949	58	1080	169
22	210	2180	1240	140	2450	926	52	1030	145
23	210	2070	1170	145	2370	928	42	1010	115
24	270	3250	2370	145	2310	904	42	994	113
25	250	2950	1990	145	2210	865	40	985	106
26	220	2810	1670	140	2150	813	40	974	105
27	210	3050	1730	135	2080	758	38	965	99
28	200	3300	1780	135	2020	736	37	854	85
29	195	3550	1870	130	1990	698	33	900	80
30	190	3930	2020	130	1910	670	31	950	80
31	---	---	---	130	1900	667	---	---	---
TOTAL	9680	---	134391	4467	---	32519	2719	---	11853
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	33	700	62	32	440	38	35	560	53
2	34	590	54	32	433	37	35	595	56
3	36	535	52	32	460	40	35	610	58
4	36	465	45	32	520	45	36	625	61
5	36	428	42	31	650	54	72	2310	900
6	36	420	41	31	770	64	80	2250	879
7	35	425	40	31	780	65	52	693	97
8	35	440	42	30	775	63	47	649	82
9	35	450	43	29	740	58	44	604	72
10	34	470	43	29	714	56	41	560	62
11	34	475	44	28	660	50	39	515	54
12	33	450	40	28	620	47	37	471	47
13	32	410	35	27	550	40	36	435	42
14	31	385	32	26	538	38	36	400	39
15	30	360	29	26	500	35	35	364	34
16	29	325	25	26	475	33	35	328	31
17	28	315	24	25	515	35	35	325	31
18	28	304	23	26	525	37	34	322	30
19	27	290	21	26	515	36	34	348	32
20	27	280	20	27	500	36	34	375	34
21	27	255	19	27	480	35	34	401	37
22	27	241	18	28	465	35	34	380	35
23	27	235	17	29	450	35	34	359	33
24	27	280	20	30	441	36	34	338	31
25	27	295	22	31	433	36	34	305	28
26	27	346	25	32	425	37	34	296	27
27	27	390	28	33	417	37	34	290	27
28	28	540	41	34	408	37	34	262	24
29	29	585	46	34	400	37	34	249	23
30	30	500	40	34	500	46	34	238	22
31	31	511	43	34	530	49	---	---	---
TOTAL	956	---	1076	920	---	1327	1172	---	2981
YEAR 110437.0			4258289						

11067890 SANTA ANA RIVER AT PRADO PARK NEAR CORONA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW (CFS)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	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
DEC											
28...	0930	16.5	--	184	2890	1440	58	69	84	88	--
JAN											
04...	1445	16.0	--	379	1460	1490	33	42	50	59	--
17...	1100	13.0	--	1880	8910	45300	51	71	83	89	90
19...	1700	14.0	--	957	5120	13200	25	30	37	45	54
MAR											
02...	1215	13.5	12000	--	23100	748000	18	22	35	46	--
06...	1645	18.0	1900	--	11400	58500	12	25	36	52	86
APR											
07...	1115	16.0	--	438	9790	11600	18	22	34	43	59

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC										
28...	89	--	95	--	99	--	100	--	--	--
JAN										
04...	63	--	66	--	72	--	91	--	99	100
17...	--	91	--	94	--	99	--	100	--	--
19...	--	63	--	80	--	99	--	100	--	--
MAR										
02...	61	--	81	--	96	--	100	--	--	--
06...	--	98	--	100	--	--	--	--	--	--
APR										
07...	--	84	--	97	--	100	--	--	--	--

SANTA ANA RIVER BASIN

11069000 LAKE HEMET NEAR IDYLLWILD, CA

LOCATION.--Lat 33°39'56", long 116°42'19", in SE&SW&NE& sec.7, T.6 S., R.3 E., Riverside County, on upstream face near right end of dam on South Fork San Jacinto River, 5 mi (8 km) southeast of Idyllwild, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--65.6 mi² (169.9 km²).

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

GAGE.--Nonrecording gage read once daily. Datum of gage is 4,201.5 ft (1,280.617 m) National Geodetic Vertical Datum of 1929 (levels by Lake Hemet Municipal Water District).

REMARKS.--Lake is formed by single-arch dam. Dam was completed to a height of 110 ft (33.5 m) in 1893; raised to 122.5 ft (37.34 m) in 1895, and to 135 ft (41.1 m) in 1923. Capacity table is dated February 1932 (furnished by Lake Hemet Municipal Water District). Capacity below spillway level, elevation, 4,333.0 ft (1,320.70 m), 11,882 acre-ft (14.7 hm³). Water is released from lake to South Fork San Jacinto River for domestic use and irrigation in the Hemet-San Jacinto Valley. See schematic diagram of Santa Ana River basin.

COOPERATION.--Elevations were furnished by Lake Hemet Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 14,050 acre-ft (17.3 hm³) Mar. 9, 1978, elevation, 4,338.0 ft (1,322.22 m), from capacity table extended above 4,336.5 (1,321.77 m); minimum observed, 264 acre-ft (326 m³) Nov. 19, 1962, Nov. 19, 1963, elevation, 4,266.9 ft (1,300.55 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 14,050 acre-ft (17.3 hm³) Mar. 9, elevation, 4,338.0 ft (1,322.22 m), from capacity table extended above 4,336.5 ft (1,321.77 m); minimum observed, 4,920 acre-ft (6.07 hm³) Dec. 25, elevation, 4,309.9 ft (1,313.66 m).

MONTHEND ELEVATION, NGVD, AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4311.67	5310	--
Oct. 31.....	4310.60	5070	-240
Nov. 30.....	4310.40	5030	-40
Dec. 31.....	4310.40	5030	0
CAL YR 1977.....	--	--	-460
Jan. 31.....	4318.40	6990	+1960
Feb. 28.....	4325.10	8940	+1950
Mar. 31.....	4336.50	13400	+4460*
Apr. 30.....	4336.50	13400	0*
May 31.....	4336.50	13400	0*
June 30.....	4336.40	13350	-50
July 31.....	4334.61	12570	-780
Aug. 31.....	4334.10	12350	-220
Sept. 30.....	4332.90	11840	-510
WTR YR 1978.....	--	--	+6530

*Lake is spilling.

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA

LOCATION.--Lat 33°44'10", long 116°49'26", in NE¼NE¼SE¼ sec.13, T.5 S., R.1 E., Riverside County, on right bank 350 ft (107 m) upstream from bridge on State Highway 74, 1 mi (2 km) downstream from North Fork, 8.3 mi (13.4 km) southeast of San Jacinto, and 9 mi (14 km) downstream from Lake Hemet.

DRAINAGE AREA.--141 mi² (365 km²).

PERIOD OF RECORD.--October 1920 to February 1927, March 1927 to current year. Records since Oct. 1, 1969, equivalent to prior records if lower diversion is deducted from flow past station. Combined records of river and diversion, October 1948 to current year. Monthly discharge only for October 1920 and July to September 1926, published in WSP 1315-B.

GAGE.--Water-stage recorder on river; water-stage recorder on upper canal. Datum of river gage is 1,982.75 ft (604.342 m) Corps of Engineers datum. See WSP 1735 for history of changes prior to Jan. 23, 1948. Prior to Oct. 1, 1969, at site 350 ft (107 m) downstream at same datum. Canal gage at different datum.

REMARKS.--Records poor. Flow partly regulated by Lake Hemet (station 11069000). Lake Hemet Municipal Water District's upper canal diverts 4.0 mi (6.4 km) above station. One small diversion for domestic use above station. Diversion above station began prior to 1920. Since relocation of station above lower diversion on Oct. 1, 1969, the records of lower diversion are available at Lake Hemet Municipal Water District. See schematic diagram of Santa Ana River basin. Combined records are equivalent for period of record. For records of combined daily discharge of San Jacinto River and diversion, see following page.

AVERAGE DISCHARGE.--River only: 48 years (water years 1921-26, 1928-69), 18.0 ft³/s (0.510 m³/s), 13,040 acre-ft/yr (16.1 hm³/yr); 9 years (water years 1970-78), 11.3 ft³/s (0.320 m³/s), 8,190 acre-ft/yr (10.1 hm³/yr).
Combined river and diversion: 30 years (water years 1949-78), 18.8 ft³/s (0.532 m³/s), 13,620 acre-ft/yr (16.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 45,000 ft³/s (1,270 m³/s) Feb. 16, 1927, on basis of slope-area measurement of maximum flow; no flow for several months in some years.
Combined river and diversion: Maximum discharge, 7,420 ft³/s (210 m³/s) Jan. 25, 1969; no flow at times in 1951, 1952, 1957, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) revised, and maximum (*), from rating curve extended above 729 ft³/s (20.6 m³/s):

Date	Time	River Discharge		Gage height		Combined River and Diversion Discharge	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)	(ft ³ /s)	(m ³ /s)
Jan. 5	0100	684	19.4	11.96	3.645	684	19.4
Jan. 10	0815	1140	32.3	12.38	3.773	1140	32.3
Jan. 15	0700	*4500	127	14.25	4.343	*4510	128
Feb. 10	1400	923	26.1	12.20	3.719	923	26.1
Mar. 2	1145	3190	90.3	13.62	4.151	3190	90.3
Mar. 5	0015	2890	81.8	13.47	4.106	2890	81.8

River only: Minimum daily discharge, no flow Oct. 1 to Dec. 17, Dec. 19-25.

Combined river and diversion: Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	13	40	686	116	62	28	11	5.9	4.4
2			0	9.6	29	2170	97	53	28	10	5.9	4.5
3			0	8.6	34	616	84	49	27	10	6.2	4.5
4			0	115	33	907	81	51	27	10	6.4	4.7
5			0	202	36	2210	77	54	27	9.5	6.2	5.4
6			0	185	71	703	72	51	24	9.5	5.8	6.8
7			0	191	97	446	97	46	25	9.0	5.8	6.7
8			0	188	112	347	88	44	25	9.0	4.9	6.1
9			0	210	222	193	86	43	23	9.0	4.6	6.0
10			0	519	576	193	86	43	23	8.5	5.0	5.8
11			0	156	216	197	79	41	22	8.5	5.8	5.7
12			0	73	132	222	72	41	22	8.5	5.4	5.7
13			0	61	192	165	69	41	22	8.0	5.5	5.8
14			0	98	119	146	66	45	21	8.0	5.4	6.7
15			0	1490	108	120	74	45	19	8.0	5.3	6.8
16			0	272	104	111	168	42	18	7.5	5.1	7.2
17			0	260	90	91	95	41	18	7.5	5.3	7.5
18			1.3	115	75	91	81	40	17	7.5	5.3	7.4
19			0	180	71	88	72	39	16	7.0	5.2	6.5
20			0	149	66	85	67	38	15	7.0	5.1	6.1
21			0	107	64	95	64	37	15	7.0	5.0	5.7
22			0	86	61	106	61	37	14	7.0	5.0	5.5
23			0	66	56	101	58	36	14	7.0	5.2	5.3
24			0	54	52	90	57	34	13	6.5	5.1	5.0
25			0	46	48	78	60	33	13	6.5	5.2	5.0
26			5.0	41	44	75	61	33	12	6.5	5.3	4.9
27			55	30	49	73	53	35	12	6.5	5.4	4.8
28			145	32	217	75	52	34	12	6.0	4.9	5.1
29			57	29	---	74	50	34	11	6.0	4.5	5.1
30			21	31	---	82	50	30	11	6.0	4.5	5.2
31			16	49	---	156	---	29	---	6.0	4.4	---
TOTAL	0	0	300.3	5066.2	3014	10792	2293	1281	574	244.0	164.6	171.9
MEAN	0	0	9.69	163	108	348	76.4	41.3	19.1	7.87	5.31	5.73
MAX	0	0	145	1490	576	2210	168	62	28	11	6.4	7.5
MIN	0	0	0	8.6	29	73	50	29	11	6.0	4.4	4.4
AC-FT	0	0	596	10050	5980	21410	4550	2540	1140	484	326	341

CAL YR 1977 TOTAL 709.78 MEAN 1.94 MAX 145 MIN 0 AC-FT 1410
WTR YR 1978 TOTAL 23901.00 MEAN 65.5 MAX 2210 MIN 0 AC-FT 47410

SANTA ANA RIVER BASIN

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SAN JACINTO RIVER AND LAKE HEMET
WATER CO.'S UPPER CANAL, NEAR SAN JACINTO, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	2.3	2.6	13	40	686	116	66	34	16	9.0	5.3
2	3.3	2.4	2.7	9.6	29	2170	97	58	34	15	8.9	5.4
3	2.8	2.3	2.7	8.6	34	616	84	56	32	15	9.1	5.4
4	2.6	2.4	2.8	116	33	907	81	59	30	15	9.4	5.6
5	2.6	2.6	2.8	202	36	2210	77	61	31	14	9.0	6.4
6	2.8	3.0	2.8	185	71	703	72	58	29	14	8.3	8.6
7	2.7	3.0	2.8	191	97	446	97	53	31	14	8.3	8.7
8	2.6	2.8	2.8	188	112	347	88	50	29	14	7.3	7.7
9	2.7	2.6	2.8	210	222	193	86	49	27	13	6.9	7.4
10	2.8	2.6	2.8	519	576	193	86	47	29	14	7.3	7.1
11	2.5	2.6	2.9	156	216	197	79	46	29	14	8.1	7.0
12	2.5	2.6	2.9	73	132	222	72	50	28	13	7.6	7.0
13	2.4	2.6	2.9	61	192	165	69	49	27	12	7.6	7.1
14	2.3	2.6	2.9	98	119	146	66	52	27	12	7.4	8.3
15	2.3	2.6	3.0	1500	108	120	74	48	26	12	7.2	8.5
16	2.3	2.6	3.0	272	104	111	168	47	25	11	6.8	8.9
17	2.0	2.6	3.0	260	90	91	95	47	25	10	7.0	8.7
18	1.9	2.7	9.2	115	75	91	81	45	24	10	6.9	8.0
19	2.1	2.8	5.3	180	71	88	72	46	23	9.3	6.8	7.6
20	2.4	2.8	3.1	149	66	85	67	42	22	8.9	6.6	6.1
21	2.4	2.8	2.4	107	64	95	64	38	22	8.7	6.4	5.7
22	2.4	2.8	2.2	86	61	106	61	38	21	8.5	6.4	5.5
23	2.1	2.8	2.2	66	56	101	58	40	20	8.3	6.5	5.3
24	2.0	2.7	2.0	54	52	90	59	41	19	7.8	6.3	5.0
25	2.1	2.7	1.7	46	48	78	64	37	19	9.3	6.4	5.0
26	2.2	2.6	8.3	41	44	75	65	36	18	8.7	6.5	4.9
27	2.3	2.7	56	30	49	73	57	37	18	8.3	6.5	4.8
28	2.4	2.7	146	32	217	75	56	34	17	7.3	6.0	5.1
29	2.4	2.6	57	29	---	74	54	34	15	7.1	5.5	5.1
30	2.5	2.6	21	31	---	82	54	34	15	8.4	5.5	5.2
31	2.4	---	16	49	---	156	---	35	---	9.2	5.3	---
TOTAL	76.2	79.5	380.6	5077.2	3014	10792	2319	1433	746	347.8	222.8	196.4
MEAN	2.46	2.65	12.3	164	108	348	77.3	46.2	24.9	11.2	7.19	6.55
MAX	3.4	3.0	146	1500	576	2210	168	66	34	16	9.4	8.9
MIN	1.9	2.3	1.7	8.6	29	73	54	34	15	7.1	5.3	4.8
AC-FT	151	158	755	10070	5980	21410	4600	2840	1480	690	442	390
CAL YR 1977 TOTAL	1933.7			5.30	146	1.7	AC-FT	3840				
WTR YR 1978 TOTAL	24684.5			67.6	2210	1.7	AC-FT	48960				

LOCATION.--Lat 33°44'04", long 116°53'33", in SE~~4~~NE~~4~~SE~~4~~ sec.17, T.5 S., R.1 E., Riverside County, on left levee of flood channel, 1.0 mi (1.6 km) south of Valle Vista.

REMARKS.--Records poor. No regulation above station. Diversion above station for irrigation of about 15 acres (61,000 mi²). Some infiltration by detention dam, 1.5 mi (2.4 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Aug. 17, 1977, gage height, 2.96 ft (0.902 m), from floodmark, from rating curve extended above 80 ft³/s (2.27 m³/s) on basis of computation of flow in concrete-lined channel at gage heights 1.50 ft (0.457 m), 2.00 ft (0.610 m), and 3.00 ft (0.914 m): no flow for many days in each year.

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 4	1830	177	5.01	1.69	0.515	Mar. 7	1400	233	6.60	1.81	0.552
Feb. 13	1845	128	3.62	1.56	0.475	Mar. 11	2145	*253	7.16	1.85	0.564
Mar. 3	0745	157	4.45	1.63	0.497						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	0	.10	0	.32	19	46	15	11	10		
2	0	0	.10	0	.32	23	43	14	5.8	13		
3	.10	0	.10	.74	.06	36	37	13	.50	9.5		
4	0	0	0	9.7	.22	17	32	13	8.6	12		
5	.14	.01	0	6.2	1.7	17	28	12	9.1	13		
6	.17	.08	0	1.9	1.2	136	25	12	12	8.3		
7	0	.07	0	.08	4.9	181	22	12	5.6	9.4		
8	0	0	0	0	4.7	160	35	11	3.9	5.5		
9	0	0	0	3.1	9.1	158	28	11	7.9	5.3		
10	.04	0	0	8.9	22	157	25	10	4.7	3.9		
11	0	0	0	.40	23	175	21	9.0	1.1	.02		
12	0	0	.04	.22	11	150	19	8.3	.60	0		
13	.29	0	0	.22	31	120	18	1.6	.56	.02		
14	.14	0	0	4.9	18	110	18	.50	1.0	0		
15	0	0	0	14	5.9	100	17	0	2.8	0		
16	0	.04	0	8.6	.25	95	25	2.5	.89	.10		
17	0	0	.38	11	.22	80	20	1.4	.51	.02		
18	0	.02	8.6	.36	.22	70	19	.07	.45	.16		
19	0	.01	7.6	9.4	.24	60	18	.19	.57	9.1		
20	.28	0	3.4	.45	.28	50	17	0	1.4	5.2		
21	.75	0	.44	.22	.22	60	16	3.7	1.9	.25		
22	.17	0	.22	.22	.22	70	14	14	.19	1.1		
23	0	0	.34	.22	.22	60	13	17	.96	.13		
24	0	.03	.11	.33	.22	52	12	9.0	1.3	.11		
25	.07	.03	.28	.32	.22	44	13	3.1	1.2	9.4		
26	0	.12	.50	.32	.22	41	12	1.7	.82	2.4		
27	.08	.08	.12	.29	2.2	35	11	2.6	.58	0		
28	0	.03	5.6	.22	4.8	40	10	6.4	.06	0		
29	0	.01	.33	.22	---	33	10	4.5	0	0		
30	0	.07	.25	1.8	---	25	10	.45	.20	0		
31	0	---	0	1.4	---	50	---	6.4	---	0		---
TOTAL	2.97	.60	28.51	85.73	142.95	2424	634	215.41	86.19	117.91	0	0
MEAN	.096	.020	.92	2.77	5.11	78.2	21.1	6.95	2.87	3.80	0	0
MAX	.75	.12	8.6	14	31	181	46	17	12	13	0	0
MIN	0	0	0	0	.06	17	10	0	0	0	0	0
AC-FT	5.9	1.2	57	170	284	4810	1260	427	171	234	0	0
CAL YR 1977	TOTAL	255.35	MEAN	.70	MAX	60	MIN	0	AC-FT	506		
WTR YR 1978	TOTAL	3738.27	MEAN	10.2	MAX	181	MIN	0	AC-FT	7410		

SANTA ANA RIVER BASIN

11070375 SAN JACINTO RIVER AT RAILROAD CANYON WEIR, NEAR ELSINORE, CA

LOCATION.--Lat 33°44'10", long 117°15'08", in SW¼SE¼NW¼ sec.13, T.5 S., R.4 W., Riverside County, on right bank 4.3 mi (6.9 km) northeast of Railroad Canyon Dam, and 5.8 mi (9.3 km) northeast of Elsinore.

DRAINAGE AREA.--562 mi² (1,456 km²).

PERIOD OF RECORD.--October 1951 to current year. Monthly discharge only prior to October 1971. Daily discharge available in district files.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (427 m), from topographic map. Prior to Sept. 28, 1960, at site 0.8 mi (1.3 km) upstream at different datum.

REMARKS.--Flow partially regulated by Lake Hemet (station 11069000). Diversions for irrigation and domestic use above station. At times imported Colorado River water is discharged into channel above station by Temescal Water Co. or Elsinore Valley Municipal Water District.

COOPERATION.--Records were published as furnished by Riverside County Flood Control and Water Conservation District.

AVERAGE DISCHARGE.--River only: 27 years, 7.89 ft³/s (0.223 m³/s), 5,720 acre-ft/yr (7.05 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,330 ft³/s (151 m³/s) Feb. 25, 1969, results of runoff study by Riverside County Flood Control and Water Conservation District; no flow for long periods in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,590 ft³/s (102 m³/s) Mar. 1, gage height, 6.06 ft (1.847 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0			.15	1.1	2200	89	7.8	4.6			0
2	0			0	.72	1730	92	7.8	.23			0
3	0			0	.54	807	95	7.8	0			0
4	0			7.2	.45	1420	79	7.6	0			0
5	45			96	.36	1070	61	8.5	0			0
6	80			97	262	938	49	32	0			7.9
7	81			20	212	1030	71	10	35			.18
8	82			4.6	246	797	54	5.9	59			0
9	81			4.1	834	725	70	5.2	64			0
10	81			178	729	524	66	5.0	66			0
11	81			92	187	433	57	4.3	67			0
12	81			19	1370	373	67	3.9	66			0
13	80			12	745	345	35	3.4	67			0
14	80			26	177	320	28	3.1	67			0
15	80			315	125	289	25	2.7	67			0
16	80			94	95	271	24	3.3	67			0
17	80			449	69	239	38	1.6	68			0
18	80			88	49	218	53	1.4	66			0
19	80			333	28	188	50	1.4	64			0
20	80			171	13	165	36	1.4	54			0
21	80			57	7.8	144	0	1.2	62			0
22	43			33	5.2	124	17	.99	63			0
23	3.3			17	4.7	120	15	.90	21			0
24	1.1			9.3	3.6	124	13	.81	1.5			0
25	.31			6.0	2.5	118	11	.72	.07			0
26	.21			4.0	2.2	105	10	.72	0			0
27	12			2.2	2.0	82	9.7	.63	0			0
28	8.0			2.0	6.8	78	9.5	.45	0			0
29	24			1.5	---	66	8.8	.27	0			0
30	2.8			1.3	---	61	8.0	.18	0			0
31	1.2	---		1.3	---	196	---	16	---			---
TOTAL	1427.92	0	0	2140.65	5178.97	15300	1241.0	146.97	1029.40	0	0	8.08
MEAN	46.1	0	0	69.1	185	494	41.4	4.74	34.3	0	0	.27
MAX	82	0	0	449	1370	2200	95	32	68	0	0	7.9
MIN	0	0	0	0	.36	61	0	.18	0	0	0	0
AC-FT	2830	0	0	4250	10270	30350	2460	292	2040	0	0	16
a	2740	0	0	0	0	0	0	0	2030	0	0	0
CAL YR 1977 TOTAL	2026.71			MEAN 5.55	MAX 141	MIN 0	AC-FT 4020					
WTR YR 1978 TOTAL	26472.99			MEAN 72.5	MAX 2200	MIN 0	AC-FT 52510	AC-FT a 2740	AC-FT a 2030			

a Imported Colorado River water, in acre-feet.

LOCATION.--Lat 33°40'42", long 117°14'03", in SW¼SE¼NW¼ sec.6, T.6 S., R.3 W., Riverside County, on left bank at Railroad Canyon Road, 5.1 mi (8.2 km) northeast of Elsinore.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,382.0 ft (421.23 m) National Geodetic Vertical Datum of 1929 (levels by Riverside County Flood Control and Water Conservation District).

COOPERATION.--Records were published as furnished by Riverside County Flood Control and Water Conservation District.

AVERAGE DISCHARGE, --9 years, 1.79 ft³/s (0.051 m³/s), 1,300 acre-ft/yr (1.60 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) Mar. 1, 1978, gage height not furnished;
no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, 2,010 ft³/s (56.9 m³/s), at site 1 mi (1.6 km) upstream, from records of Riverside County Flood Control and Water Conservation District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) Mar. 1, gage height not furnished; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.22	931						
2			0	0	.03	325						
3			0	0	0	156						
4			0	.29	0	625						
5			0	24	0	581						
6			0	23	0	209						
7			0	6.8	.83	68						
8			0	1.1	10	34						
9			0	1.6	98	25						
10			0	24	369	20						
11			0	24	133	17						
12			0	9.0	66	13						
13			0	.77	269	9.4						
14			0	2.8	109	2.4						
15			0	162	35	.80						
16			0	133	17	.22						
17			0	162	3.9	.10						
18			0	39	1.4	.06						
19			0	74	.61	.04						
20			0	75	.34	.02						
21			0	28	.17	0						
22			0	9.0	.05	0						
23			0	1.5	0	0						
24			0	.51	0	0						
25			0	.45	0	0						
26			1.1	.36	0	0						
27			1.7	.15	0	0						
28			.29	0	14	0						
29			12	0	---	0						
30			1.2	.14	---	0						
31		---	0	3.4	---	0	---		---			---
TOTAL	0	0	16.29	805.87	1127.55	3017.04	0	0	0	0	0	0
MEAN	0	0	.53	26.0	40.3	97.3	0	0	0	0	0	0
MAX	0	0	12	162	369	931	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	32	1600	2240	5980	0	0	0	0	0	0
CAL YR 1977	TOTAL	87.81	MEAN	.24	MAX 18	MIN 0	AC-FT	174				
WTR YR 1978	TOTAL	4966.75	MEAN	13.6	MAX 931	MIN 0	AC-FT	9850				

11070500 SAN JACINTO RIVER NEAR ELSINORE, CA

LOCATION.--Lat 33°39'51", long 117°17'35", in SE4SE4NE4 sec.9, T.6 S., R.4 W., Riverside County, on right bank 2 mi (3 km) east of Elsinore, 2.1 mi (3.4 km) downstream from Railroad Canyon Dam, and 36 mi (58 km) upstream from Lake Hemet.

DRAINAGE AREA.--723 mi² (1,873 km²).

PERIOD OF RECORD.--January 1916 to current year. Monthly figures 1927-50, adjusted for diversion, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 1,270 ft (387 m), from topographic map. Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mi (1.1 km) downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site at different datum.

REMARKS.--Records good. Flow partly regulated by Lake Hemet (station 11069000) and regulated since 1928 by Railroad Canyon Reservoir, capacity, 12,000 acre-ft (14.8 hm³), 2.1 mi (3.4 km) above station. Diversion for irrigation and domestic use above Railroad Canyon Reservoir. Temescal Water Co. diverted 844 acre-ft (1.04 hm³/yr) during current year from Railroad Canyon Reservoir for irrigation below station in vicinity of Corona. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) Feb. 17, 1927, gage height, 11.8 ft (3.60 m), from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of maximum flow; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,270 ft³/s (178 m³/s) Mar. 1, gage height, 9.29 ft (2.832 m); minimum daily, no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	.26	7.4	3080	44	22	12	.75	0	.48
2		0	0	.26	7.4	2340	74	43	5.2	.71	0	.51
3		0	0	.28	7.6	1550	151	78	4.8	.92	0	.51
4		0	0	.59	7.9	1530	56	71	4.0	.67	0	.48
5		0	0	1.6	8.2	2010	78	38	4.0	.67	0	.79
6		0	0	2.7	8.2	1560	80	40	3.7	.67	0	1.1
7		0	.01	1.2	74	1430	108	38	3.7	.63	0	.67
8		0	.13	.73	236	1030	108	38	3.7	.63	.09	.59
9		0	.11	.84	218	754	108	31	3.7	.59	.37	.59
10		0	.06	3.2	829	329	111	21	4.0	.59	.48	.59
11		0	.02	3.7	653	40	97	21	4.4	.63	.59	.59
12		0	0	3.0	165	237	82	21	4.4	.63	.48	.63
13		0	.11	3.0	694	189	69	22	4.4	.63	.48	.55
14		0	.26	3.5	582	125	58	22	4.2	.63	.41	.51
15		0	.09	8.5	143	64	52	24	2.3	.63	.31	.51
16		0	.07	7.4	34	60	52	24	1.4	.63	0	.48
17		0	.07	311	94	54	54	26	1.2	.63	0	.48
18		0	.07	296	6.8	120	50	33	1.2	.67	0	.48
19		0	.06	166	6.3	255	52	40	1.1	.67	.31	.48
20		0	.04	161	6.1	160	52	41	1.1	.63	.55	.44
21		0	.04	161	6.1	200	48	42	1.1	.63	.55	.41
22		0	.06	160	6.1	150	44	42	1.1	.59	.55	.48
23		0	.07	134	5.9	130	46	40	.87	.55	.55	.48
24		0	.09	9.3	5.9	120	48	32	.83	.55	.55	.44
25		0	.09	7.6	5.9	110	35	32	.83	.48	.55	.44
26		0	.66	5.0	5.9	90	20	13	.79	.41	.59	.37
27		0	.80	2.4	6.1	75	24	12	.83	.31	.59	.37
28		0	.49	2.3	26	60	24	12	.83	.25	.55	.37
29		0	.69	2.3	---	50	24	12	.83	.07	.55	.41
30		.88	.43	2.4	---	170	23	14	.79	0	.55	.41
31		---	.31	4.4	---	390	---	14	---	0	.51	---
TOTAL	0	.88	4.83	1465.46	3855.8	18462	1872	959	83.30	17.05	10.16	15.64
MEAN	0	.029	.16	47.3	138	596	62.4	30.9	2.78	.55	.33	.52
MAX	0	.88	.80	311	829	3080	151	78	12	.92	.59	1.1
MIN	0	0	0	.26	5.9	40	20	12	.79	0	0	.37
AC-FT	0	1.7	9.6	2910	7650	36620	3710	1900	165	34	20	31
CAL YR 1977 TOTAL	112.57			MEAN .31	MAX 3.4	MIN 0	AC-FT 223					
WTR YR 1978 TOTAL	26746.12			MEAN 73.3	MAX 3080	MIN 0	AC-FT 53050					

11072000 TEMESCAL GREEK NEAR CORONA, CA

LOCATION.--Lat 33°50'29", long 117°30'37", in El Sobrante de San Jacinto Grant, Riverside County, on left bank 0.2 mi (0.3 km) downstream from unnamed tributary, and 3.8 mi (6.1 km) southeast of Corona.

DRAINAGE AREA.--164 mi² (425 km²), excludes 768 mi² (1,989 km²) above Lake Elsinore.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for the period October 1928 to January 1929, published in WSP 1315-B.

GAGE.--Water-stage recorder. Concrete control since June 12, 1970. Altitude of gage is 730 ft (223 m), from topographic map. Prior to Feb. 11, 1943, at datum 6.00 ft (1.829 m) higher.

REMARKS.--Records poor. Flow regulated by several storage reservoirs. Many diversions above station for irrigation. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--51 years, 3.56 ft³/s (0.101 m³/s), 2,580 acre-ft/yr (3.18 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft³/s (422 m³/s) Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,500 ft³/s (70.8 m³/s) Mar. 4, gage height, 12.3 ft (3.75 m), from floodmark, from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of indirect measurement of peak flow; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.10	405	58	33	16	6.0	2.0	2.0
2			0	0	.09	520	52	32	16	5.5	2.0	2.0
3			0	5.8	.06	380	43	32	16	5.3	2.0	2.0
4			0	11	.04	600	42	31	15	4.9	2.0	2.0
5			0	31	.05	230	41	30	15	4.6	2.0	2.0
6			0	12	.22	180	44	29	14	4.4	2.0	5.0
7			0	.50	.45	160	55	28	14	4.1	2.0	2.0
8			0	.22	.25	125	48	28	13	3.7	2.0	2.0
9			0	23	206	105	48	27	13	3.5	2.0	2.0
10			0	81	220	95	48	27	13	3.3	2.0	2.0
11			0	30	75	84	44	26	12	3.1	2.0	2.0
12			0	15	28	74	44	25	12	2.9	2.0	2.0
13			0	10	15	67	42	25	12	2.7	2.0	2.0
14			0	30	10	61	39	24	11	2.5	2.0	2.0
15			0	100	7.5	56	48	24	11	2.4	2.0	2.0
16			0	60	6.0	51	47	23	11	2.3	2.0	2.0
17			0	12	5.5	51	46	23	10	2.1	2.0	2.0
18			0	5.0	5.1	51	45	22	10	2.0	2.0	2.0
19			0	3.0	4.7	51	44	22	9.8	2.0	2.0	2.0
20			0	2.2	4.5	51	43	21	9.5	2.0	2.0	2.0
21			0	1.5	4.3	51	42	21	9.3	2.0	2.0	2.0
22			0	.90	4.1	65	41	20	9.0	2.0	2.1	2.0
23			0	.50	3.9	59	40	20	8.7	2.0	3.0	2.0
24			0	.20	3.7	54	39	19	8.5	2.0	2.4	2.0
25			0	.15	3.5	48	38	19	8.3	2.0	2.0	2.0
26			2.1	.16	4.0	43	37	19	8.1	2.0	2.0	2.0
27			0	.13	5.1	43	36	18	7.8	2.0	2.0	2.0
28			5.4	.11	25	42	35	18	7.3	2.0	2.0	2.0
29			19	.10	---	39	34	18	6.8	2.0	2.0	2.0
30			0	.10	---	55	34	17	6.5	2.0	2.0	2.0
31		---	0	.10	---	66	---	17	---	2.0	2.0	---
TOTAL	0	0	26.5	435.67	733.24	3962	1297	738	333.6	91.3	63.5	81.0
MEAN	0	0	.85	14.1	26.2	128	43.2	23.8	11.1	2.95	2.05	2.70
MAX	0	0	19	100	220	600	58	33	16	6.0	3.0	20
MIN	0	0	0	0	.04	39	34	17	6.5	2.0	2.0	2.0
AC-FT	0	0	53	864	1450	7860	2570	1460	662	181	126	161
CAL YR 1977	TOTAL	113.67	MEAN	.31	MAX	30	MIN	0	AC-FT	225		
WTR YR 1978	TOTAL	7761.81	MEAN	21.3	MAX	600	MIN	0	AC-FT	15400		

SANTA ANA RIVER BASIN

11073200 SAN ANTONIO CREEK BELOW SAN ANTONIO DAM, CA

LOCATION.--Lat 34°09'26", long 117°40'50", in NE¼NE¼SE¼ sec.23, T.1 N., R.8 W., Los Angeles-San Bernardino County line, on left wall of outlet channel at toe of San Antonio Dam, and 4.7 mi (7.6 km) northeast of Claremont.

DRAINAGE AREA.--26.9 mi² (69.7 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2,093.94 ft (638.233 m) Corps of Engineers datum.

REMARKS.--Records poor. Flow regulated by San Antonio flood-control reservoir, capacity, 7,620 acre-ft (9.40 km³). Water diverted out of basin for power, domestic use, and irrigation. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,420 ft³/s (238 m³/s) Jan. 25, 1969, gage height, 11.22 ft (3.420 m), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of gate openings at dam; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft³/s (56.6 m³/s) Mar. 1, estimated, gage height unknown; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0		0	60	28	800	120	64	64	25	.24	0
2	0		0	37	20	860	120	65	64	23	.24	0
3	0		0	26	18	480	120	65	64	24	.16	0
4	.05		0	24	16	500	117	65	64	24	.16	0
5	6.0		0	22	16	800	117	65	64	24	.16	.01
6	.05		0	21	19	250	117	65	64	23	.16	.01
7	0		0	28	13	180	109	65	64	22	.16	0
8	0		0	26	.05	120	107	65	64	21	.23	0
9	0		0	30	42	280	103	65	57	20	.24	0
10	0		0	150	775	230	100	65	60	18	.14	0
11	0		0	90	404	190	97	65	56	16	.10	0
12	0		0	56	150	170	93	65	57	20	.10	0
13	0		0	40	150	160	91	65	23	.10	.30	0
14	0		0	18	232	160	91	65	0	.07	.57	0
15	0		0	32	142	150	88	65	0	.05	.29	0
16	0		0	78	111	150	88	65	0	.05	.88	0
17	0		0	112	81	150	88	65	0	.05	.43	0
18	0		0	113	81	140	87	65	0	.05	.32	0
19	0		0	109	81	140	85	65	0	.05	.16	0
20	0		0	103	81	140	83	65	10	.05	.18	0
21	0		0	94	81	140	82	64	18	55	1.2	0
22	0		0	46	81	140	80	64	18	.36	1.3	0
23	0		0	43	81	130	77	64	20	.36	1.2	0
24	0		0	40	81	130	77	64	20	.36	1.8	0
25	0		0	40	81	130	76	64	21	.36	1.3	0
26	0		0	43	81	130	73	64	21	.36	.50	0
27	0		0	37	81	130	69	64	22	.35	.01	0
28	0		0	39	80	130	69	64	22	.24	0	0
29	0		0	43	---	120	69	64	24	.24	0	0
30	0		45	45	---	120	65	64	24	.24	0	0
31	0	---	64	29	---	120	---	64	---	.24	0	---
TOTAL	6.10	0	109	1674	3107.05	7470	2758	2003	985	318.58	12.53	.02
MEAN	.20	0	3.52	54.0	111	241	91.9	64.6	32.8	10.3	.40	.0007
MAX	6.0	0	64	150	775	860	120	65	64	55	1.8	.01
MIN	0	0	0	18	.05	120	65	64	0	.05	0	0
AC-FT	12	0	216	3320	6160	14820	5470	3970	1950	632	25	.04
CAL YR 1977	TOTAL	1025.99	MEAN	2.81	MAX	216	MIN	0	AC-FT	2040		
WTR YR 1978	TOTAL	18443.28	MEAN	50.5	MAX	860	MIN	0	AC-FT	36580		

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA

LOCATION.--Lat 34°00'14", long 117°43'34", in Santa Ana del Chino Grant, San Bernardino County, on right bank 300 ft (91 m) downstream from Schaefer Avenue, 0.8 mi (1.3 km) downstream from San Antonio Creek, and 1.5 mi (2.4 km) southwest of Chino.

DRAINAGE AREA.--48.9 mi² (126.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Concrete wingwalls have formed low-water control since October 1975. Altitude of gage is 685 ft (209 m), from topographic map.

REMARKS.--Records good. Flow mostly regulated by San Antonio flood-control reservoir, capacity, 7,620 acre-ft (9.40 hm³). Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use, irrigation, and return flow from irrigated areas. California Water Project reported releases of 1,770 acre-ft (2.18 hm³) to basin at San Antonio Creek at Rialto pipeline below San Antonio Dam (station 11073210) at a point 10 mi (16 km) upstream. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,190 ft³/s (175 m³/s) Mar. 1, 1978, gage height, 9.66 ft (2.944 m), from rating curve extended above 1,520 ft³/s (43.0 m³/s) on basis of computation of flow in concrete-lined channel at gage height 7.3 ft (2.23 m); no flow May 21, June 30, July 1, Oct. 30, Nov. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, 9,200 ft³/s (261 m³/s), gage height, 9.23 ft (2.813 m), present datum, by contracted-opening measurement at site 6.1 mi (9.8 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,190 ft³/s (175 m³/s) Mar. 1, gage height, 9.66 ft (2.944 m) from rating curve extended as explained above; no flow Oct. 30, Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.04	.17	.25	.64	2060	6.3	.51	.17	1.9	.51	.25
2	.06	.03	.17	.21	.64	1240	26	.25	.14	11	.57	.21
3	.04	0	.17	19	.17	381	.51	.21	.11	.21	.57	.17
4	.14	.04	.11	98	.17	1760	34	.17	.53	.21	.45	.29
5	.10	4.4	.08	40	30	914	1.7	.25	.14	1.2	.48	86
6	.07	.45	.14	31	10	585	26	3.0	.17	1.1	.61	26
7	.07	.04	.08	.51	70	341	49	436	.14	.25	.29	.34
8	.07	.04	.11	61	64	23	.64	.14	.14	.73	.39	.45
9	.07	.07	.06	114	471	79	.45	.21	.17	.21	.45	.29
10	.07	.03	.06	214	777	249	.45	.14	.21	.17	.45	.25
11	.07	.03	.06	34	274	69	.39	.27	.08	.17	.45	.25
12	.07	.04	.06	.92	165	42	.51	.17	.08	.14	.45	.34
13	.07	.04	.04	.34	98	12	.45	.14	.11	.14	.39	.21
14	.07	.08	.03	143	52	3.7	.39	.14	.15	.11	.29	.21
15	.07	.06	.04	100	1.2	3.0	65	.17	.73	.14	.25	.25
16	.07	.06	.08	191	.34	2.3	3.1	.28	.11	.25	.17	.34
17	.07	.06	.06	11	.14	1.9	.45	.11	.29	.14	.21	.25
18	.07	.11	70	.51	.11	1.7	.39	.17	.14	.21	.25	.25
19	.07	.12	.08	21	.06	2.3	.34	.14	.14	.17	.25	.29
20	.07	.04	.03	.77	.04	2.8	.34	.14	.17	.21	.21	.21
21	.06	.19	5.4	.39	.04	15	.29	.11	.14	10	.29	.21
22	.04	.17	.45	.25	.06	60	.29	.14	.17	.51	.17	.21
23	.03	.11	11	.29	.06	20	.57	.11	.42	.45	.17	.29
24	.04	.08	.39	.57	.08	4.0	.73	.14	.17	.51	.17	.25
25	.03	.08	20	.57	.06	1.9	.82	.21	.14	.57	.21	66
26	.06	.06	136	.45	.06	1.5	.45	.14	.11	.57	.29	132
27	.11	.11	51	.51	9.9	1.4	.64	.11	.21	.64	.21	130
28	.04	.14	347	.39	711	1.0	.82	.08	.25	.57	.21	132
29	.03	.14	8.0	.51	---	.92	.45	.08	.17	.51	.29	130
30	0	.17	9.5	.45	---	28	.45	.21	.17	.45	.25	134
31	.03	---	.29	1.7	---	54	---	.14	---	.51	.25	---
TOTAL	1.90	7.03	660.66	1086.59	2735.77	7960.42	221.92	444.08	5.87	33.95	10.20	841.81
MEAN	.061	.23	21.3	35.1	97.7	257	7.40	14.3	.20	1.10	.33	28.1
MAX	.14	4.4	347	214	777	2060	65	436	.73	11	.61	134
MIN	0	0	.03	.21	.04	.92	.29	.08	.08	.11	.17	.17
AC-FT	3.8	14	1310	2160	5430	18790	440	881	12	67	20	1670
CAL YR 1977	TOTAL	5186.60	MEAN 14.2	MAX 347	MIN 0	AC-FT 10290						
WTR YR 1978	TOTAL	14010.20	MEAN 38.4	MAX 2060	MIN 0	AC-FT 27790						

SANTA ANA RIVER BASIN

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: March 1974 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
JAN												
11...	1215	.25	484	8.9	20.5	150	58	47	7.5	27	24	1.0
20...	0950	.25	610	8.3	12.0	140	35	45	7.0	48	36	1.8
FEB												
09...	0950	439	113	7.3	14.5	34	2	11	1.5	3.6	17	.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JAN											
11...	26	110	0	90	.2	70	34	.5	14	280	--
20...	33	130	0	110	1.0	48	82	.5	17	345	--
FEB											
09...	3.4	38	0	31	3.0	8.7	4.2	.2	4.5	61	1.1

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, on left bank of outlet channel, 2,500 ft (762 m) downstream from axis of Prado Dam, and 4.5 mi (7.2 km) west of Corona.

DRAINAGE AREA.--1,490 mi² (3,859 km²), excludes 768 mi² (1,989 km²) above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft (136.9 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.--Records fair. Flow regulated since 1941 by Prado Reservoir, capacity, 201,200 acre-ft (248 hm³). Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. California Water Project released 1,770 acre-ft (2.18 hm³) to basin (station 11073360). See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft³/s (164 m³/s) Jan. 26, 1969, gage height, 5.75 ft (1.753 m); minimum daily 2.4 ft³/s (0.068 m³/s) July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 100,000 ft³/s (2,830 m³/s), by slope-area measurement at site 2.5 mi (4.0 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Mar. 9, gage height, 4.34 ft (1.323 m), maximum gage height 4.88 ft (1.487 m) Feb. 10, before flashboards washed out on subsequent high flows; minimum daily discharge, 2.4 ft³/s (0.068 m³/s) July 29 to Aug. 3, Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	68	73	462	261	358	667	207	315	380	2.4	68
2	48	66	71	428	231	1890	678	207	315	384	2.4	68
3	51	67	68	268	207	2230	667	202	315	387	2.4	68
4	53	68	66	285	204	2180	518	202	315	387	67	67
5	49	71	68	421	203	2420	235	202	315	387	105	66
6	48	74	67	357	150	2470	504	202	355	398	104	88
7	51	72	70	293	165	2400	690	202	380	406	103	170
8	51	71	69	287	228	1690	690	200	380	402	101	211
9	50	67	68	282	539	2380	690	197	480	404	99	201
10	52	62	69	302	1070	2440	690	197	409	401	98	184
11	54	62	68	503	1130	2270	790	197	405	396	97	111
12	60	66	72	571	590	2230	887	219	402	394	97	85
13	60	68	73	550	635	1380	887	234	350	387	93	83
14	56	70	71	454	858	930	887	234	287	373	91	82
15	54	66	71	429	814	2200	887	237	319	375	89	86
16	56	64	71	551	596	1380	887	238	339	371	86	75
17	59	66	69	962	458	62	1010	248	331	356	81	75
18	62	68	149	1210	630	54	1180	254	324	342	79	35
19	63	69	112	598	612	47	1170	254	325	319	76	2.7
20	62	70	79	553	587	158	1170	254	325	302	74	2.4
21	62	72	76	453	317	373	1160	254	326	280	69	150
22	62	71	85	445	197	690	1150	278	325	245	65	133
23	62	75	86	393	196	242	1150	298	325	127	66	60
24	63	76	92	344	204	448	1140	315	325	75	65	56
25	61	74	86	339	196	644	1130	326	326	69	63	56
26	61	71	180	336	195	633	1130	325	327	88	63	162
27	64	71	245	333	195	938	1120	324	327	76	64	188
28	66	72	302	291	139	928	857	321	361	43	64	193
29	68	68	428	269	---	656	207	319	380	2.4	63	194
30	70	71	504	267	---	656	207	316	380	2.4	64	198
31	70	---	492	265	---	667	---	315	---	2.4	67	---
TOTAL	1798	2076	4100	13501	11807	38044	25035	7778	10388	8561.2	2260.2	3218.1
MEAN	58.0	69.2	132	436	422	1227	835	251	346	276	72.9	107
MAX	70	76	504	1210	1130	2470	1180	326	480	406	105	211
MIN	48	62	66	265	139	47	207	197	287	2.4	2.4	2.4
AC-FT	3570	4120	8130	26780	23420	75460	49660	15430	20600	16980	4480	6380
CAL YR 1977	TOTAL	36022.0	MEAN	98.7	MAX	504	MIN	31	AC-FT	71450		
WTR YR 1978	TOTAL	128566.5	MEAN	352	MAX	2470	MIN	2.4	AC-FT	255000		

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.
 CHEMICAL ANALYSES: Water years 1967 to current year.
 BIOLOGICAL DATA: Water years 1975 to current year.
 SPECIFIC CONDUCTANCE: Water years 1970 to current year.
 WATER TEMPERATURES: Water years 1970 to current year.
 SEDIMENT RECORDS: Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
 CHLORIDE: October 1970 to September 1971.
 SPECIFIC CONDUCTANCE: October 1969 to current year.
 WATER TEMPERATURES: October 1969 to current year.
 SEDIMENT RECORDS.--October 1973 to current year.

INSTRUMENTATION.--Water-quality monitor October 1970 to September 1971. Specific-conductance recorder since October 1969. Temperature recorder since October 1969.

COOPERATION.--Pesticide samples were collected by U.S. Geological Survey and analyzed by Environmental Protection Agency. The letter "A" following a date indicates chemical-quality data furnished by California Department of Water Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,830 micromhos Apr. 30, 1971; minimum recorded, 220 micromhos Feb. 20, 1978.

WATER TEMPERATURES: Maximum recorded, 36.0°C Sept. 4, 1972; minimum recorded, 2.5°C Dec. 30, 1969.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,950 mg/L Feb. 11, 1978; minimum daily mean, 6 mg/L July 3-5, 1978.

SEDIMENT DISCHARGE: Maximum daily, 18,900 tons (17,100 metric tons) Mar. 5, 1978; minimum daily, 0.58 tons (0.53 metric tons) Sept. 20, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,650 micromhos July 24; minimum recorded, 220 micromhos Feb. 20.

WATER TEMPERATURES: Maximum recorded, 28.0°C July 26, 27; minimum recorded, 10.5°C Nov. 20, 22, Dec. 14, 19, 20.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,950 mg/L Feb. 11; minimum daily mean, 6 mg/L July 3-5.

SEDIMENT DISCHARGE: Maximum daily, 18,900 tons (17,100 metric tons) Mar. 5; minimum daily, 0.58 tons (0.53 metric tons) Sept. 20.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT												
05...	1030	54	--	--	17.5	--	--	--	--	--	--	--
20...	1230	69	1130	7.5	17.5	25	--	7.3	37	K260	1800	320
31...A	1230	74	1210	7.8	17.0	15	--	7.6	--	--	--	330
NOV												
02...	0915	63	1140	--	13.5	--	--	--	--	--	--	--
17...	1130	71	1180	--	13.0	--	--	--	--	--	--	--
17...	1230	72	1150	8.0	14.0	15	--	8.0	46	350	830	350
DEC												
01...A	1815	71	1200	7.9	16.0	10	--	6.4	--	--	--	350
02...	1205	72	1180	--	12.5	--	--	--	--	--	--	--
15...	1405	73	1200	--	13.5	--	--	--	--	--	--	--
23...	1245	86	1230	8.0	15.0	20	--	7.6	35	K190	1900	360
JAN												
03...	1250	306	1380	--	12.5	--	--	--	--	--	--	--
05...	1100	414	545	7.8	12.0	300	--	8.6	71	--	--	160
06...A	1610	292	630	7.3	13.0	130	--	8.5	--	--	--	180
11...	1100	597	549	8.0	13.5	290	--	--	--	--	--	150
19...	1415	606	491	--	13.0	--	--	--	--	--	--	--
24...	1240	342	562	8.1	12.5	130	--	8.2	--	1000	K6500	170
FEB												
01...	1000	258	838	--	11.5	--	--	--	--	--	--	--
02...A	1615	223	890	7.7	12.0	15	--	7.2	--	--	--	280
07...	1130	1490	478	8.1	16.0	850	--	--	84	--	--	150
28...	1450	63	750	--	13.0	--	--	--	--	--	--	--
MAR												
01...A	1640	485	780	7.6	13.0	25	--	8.6	--	--	--	170
02...	1200	2050	675	--	14.0	55	--	8.4	60	K650	>10000	210
05...	1100	2440	308	--	14.0	--	--	--	--	--	--	--
05...	1115	2440	350	--	14.0	1600	--	--	210	--	--	120
14...	1445	25	485	--	18.0	--	--	--	--	--	--	--
21...	1030	472	730	--	13.5	--	--	--	--	--	--	--
22...	1200	472	623	7.0	14.0	35	--	9.1	64	<1	3800	190
23...A	1650	332	620	7.9	13.0	40	--	8.5	--	--	--	200
APR												
07...	0930	690	549	--	15.5	--	--	--	--	--	--	--
25...	1230	1140	577	7.7	18.5	6	--	--	49	K35	K200	190
27...A	1520	1120	660	7.7	18.0	4	--	8.4	--	--	--	180
MAY												
02...	1205	202	683	--	18.0	--	--	--	--	--	--	--
25...	1240	326	809	8.1	20.0	--	2.5	8.7	29	340	K47	260

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

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
05...	--	--	--	--	--	--	--	--	--	--	--	--
20...	99	92	22	100	40	2.4	10	270	0	220	14	110
31...A	100	89	27	110	41	2.0	9.0	280	0	230	7.1	120
NOV												
02...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	110	100	25	110	40	2.6	9.0	300	0	250	4.8	120
DEC												
01...A	100	91	29	110	40	2.6	8.0	300	0	246	6.0	130
02...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
23...	120	100	27	110	39	2.5	11	290	0	240	4.6	140
JAN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
05...	32	44	11	45	37	1.6	8.6	150	0	120	3.8	53
06...A	41	53	11	55	39	2.0	10	170	0	139	14	60
11...	33	41	11	45	37	1.6	13	140	0	110	2.2	50
19...	--	--	--	--	--	--	--	--	--	--	--	--
24...	41	49	12	43	34	1.4	11	160	0	130	2.0	57
FEB												
01...	--	--	--	--	--	--	--	--	--	--	--	--
02...A	50	75	22	76	35	2.0	21	280	0	230	8.9	91
07...	39	40	11	37	34	1.3	7.8	130	0	110	1.7	50
28...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
01...A	13	52	11	42	31	1.0	19	200	0	164	8.0	54
02...	51	58	15	48	31	1.5	20	190	--	160	--	65
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	0	36	7.2	23	28	.9	8.0	150	--	120	--	28
14...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	48	52	14	42	30	1.3	18	170	0	140	27	68
23...A	55	57	15	46	30	1.0	20	180	0	148	3.6	76
APR												
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	43	55	13	40	30	1.3	12	180	0	150	5.7	59
27...A	33	53	12	42	32	1.0	12	180	0	148	5.7	56
MAY												
02...	--	--	--	--	--	--	--	--	--	--	--	--
25...	63	74	19	65	34	1.7	12	--	--	200	--	100
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT												
05...	--	--	--	716	--	--	--	--	--	--	--	--
20...	130	.8	30	689	628	--	--	--	--	--	--	--
31...A	120	.7	--	756	669	--	13	57	.09	.30	--	5.0
NOV												
02...	--	--	--	709	--	--	--	--	--	--	--	--
17...	--	--	--	744	--	--	--	--	--	--	--	--
17...	130	.8	28	713	671	--	--	--	--	--	8.3	4.7
DEC												
01...A	130	.9	--	728	696	14	12	53	.11	.35	--	5.8
02...	--	--	--	744	--	--	--	--	--	--	--	--
15...	--	--	--	700	--	--	--	--	--	--	--	--
23...	150	.8	27	747	709	--	--	--	--	--	4.7	5.8
JAN												
03...	--	--	--	861	--	--	--	--	--	--	--	--
05...	54	.4	9.7	322	300	--	--	--	--	--	--	--
06...A	67	.5	--	396	353	248	3.6	16	.03	.11	2.0	1.1
11...	59	.3	11	319	299	--	--	--	--	--	--	1.4
19...	--	--	--	264	--	--	--	--	--	--	--	--
24...	53	.4	12	329	317	--	--	--	--	--	--	--
FEB												
01...	--	--	--	492	--	--	--	--	--	--	--	--
02...A	98	.7	--	516	530	48	2.2	9.6	.06	.21	--	--
07...	48	.4	8.3	288	267	--	--	--	--	--	3.0	2.8
28...	--	--	--	449	--	--	--	--	--	--	--	.31
MAR												
01...A	51	.4	--	348	327	31	.18	.80	.01	.04	--	2.6
02...	67	.5	15	394	382	--	--	--	--	--	1.2	2.8
05...	--	--	--	156	--	--	--	--	--	--	--	--
05...	26	.5	11	209	214	--	--	--	--	--	1.1	.85
14...	--	--	--	295	--	--	--	--	--	--	--	--
21...	--	--	--	336	--	--	--	--	--	--	--	--
22...	58	.4	17	385	353	--	--	--	--	--	2.1	2.5
23...A	61	.6	--	462	387	39	5.0	22	.07	.25	--	2.4
APR												
07...	--	--	--	236	--	--	--	--	--	--	--	--
25...	52	.5	17	358	338	--	--	--	--	--	2.2	1.3
27...A	48	.6	--	368	325	4	2.9	13	.09	.31	--	.98
MAY												
02...	--	--	--	404	--	--	--	--	--	--	--	--
25...	78	.6	16	477	485	--	--	--	--	--	2.2	1.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

		NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
DATE												
OCT												
05...		--	--	--	--	--	--	--	--	--	--	--
20...		--	--	--	7.9	--	--	6.5	5.3	2.5	--	--
31...A		.93	--	--	6.6	--	--	4.2	--	--	--	4.0
NOV												
02...		--	--	--	--	--	--	--	--	--	--	--
17...		--	--	--	--	--	--	--	--	--	--	--
17...		.70	5.4	--	5.1	14	61	4.9	3.7	4.4	--	--
DEC												
01...A		.98	--	--	6.8	--	--	3.8	--	--	--	3.5
02...		--	--	--	--	--	--	--	--	--	--	--
15...		--	--	--	--	--	--	--	--	--	--	--
23...		.40	6.2	--	5.4	11	48	4.4	4.4	4.0	--	--
JAN												
03...		--	--	--	--	--	--	--	--	--	--	--
05...		2.0	3.1	--	3.1	5.1	23	1.8	.93	.82	.93	2.9
06...A		1.3	--	--	2.7	--	--	.98	--	--	--	.48
11...		--	--	--	--	--	--	2.2	1.5	--	--	--
19...		--	--	--	--	--	--	--	--	--	--	--
24...		--	--	--	--	--	--	.89	.68	--	--	--
FEB												
01...		--	--	--	--	--	--	--	--	--	--	--
02...A		1.8	--	--	4.6	--	--	2.0	--	--	--	2.0
07...		2.1	2.4	.30	2.1	5.4	24	2.5	.60	.57	--	--
28...		--	--	--	--	--	--	--	--	--	--	--
MAR												
01...A		1.7	--	--	4.3	--	--	1.7	--	--	--	1.2
02...		3.1	5.9	1.2	4.7	7.1	31	2.1	2.0	1.4	--	--
05...		--	--	--	--	--	--	--	--	--	--	--
05...		1.1	1.9	.90	1.0	3.0	13	4.0	.49	.44	--	--
14...		--	--	--	--	--	--	--	--	--	--	--
21...		--	--	--	--	--	--	--	--	--	--	--
22...		.90	3.4	.00	3.4	5.5	24	1.4	1.1	1.2	--	--
23...A		2.1	--	--	4.6	--	--	--	--	--	--	1.8
APR												
07...		--	--	--	--	--	--	--	--	--	--	--
25...		1.1	2.4	.20	2.2	4.6	20	1.6	1.3	1.1	--	--
27...A		.96	--	--	19	--	--	1.2	--	--	--	.90
MAY												
02...		--	--	--	--	--	--	--	--	--	--	--
25...		1.1	2.6	--	3.1	4.8	21	1.4	1.4	1.0	--	--
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
MAY												
30...A	1450	315	770	7.9	19.0	2	--	7.7	--	--	--	270
JUN												
02...	1045	315	822	--	20.0	--	--	--	--	--	--	--
06...A	1005	380	770	7.7	21.0	2	--	7.6	--	--	--	260
15...	1330	339	804	7.9	22.0	--	3.0	7.3	30	K19200	K60	260
27...A	1115	326	840	7.9	23.0	2	--	7.7	--	--	--	300
JUL												
19...	1345	130	1073	7.4	23.6	--	55	7.2	59	K150	K185	350
25...A	1015	78	1180	7.9	23.0	420	--	5.1	--	--	--	400
AUG												
03...	1120	2.4	1175	--	22.0	--	--	--	--	--	--	--
21...	1045	69	1190	7.4	20.0	--	110	6.8	47	1280	900	390
29...A	0945	63	1110	7.9	19.0	120	--	6.8	--	--	--	360
SEP												
06...	1115	90	1096	--	21.5	--	--	--	--	--	--	--
20...	1500	2.5	1505	7.7	18.7	--	2.6	8.9	36	700	215	500
26...	0940	175	860	7.8	19.0	120	--	7.6	--	--	--	250

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

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
MAY												
30...A	71	76	20	64	33	2.0	10	240	0	197	4.8	85
JUN												
02...	--	--	--	--	--	--	--	--	--	--	--	--
06...A	64	75	19	64	33	2.0	10	240	0	197	7.7	83
15...	61	73	19	65	34	1.8	13	--	--	200	--	84
27...A	79	84	21	74	34	1.9	11	270	0	221	5.4	100
JUL												
19...	97	96	26	100	37	2.3	15	--	--	250	--	140
25...A	--	110	30	110	37	2.4	9.0	--	--	--	--	160
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
21...	110	110	28	110	37	2.4	9.4	--	--	280	--	140
29...A	120	100	26	110	39	2.5	9.0	290	0	238	5.8	140
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	230	140	37	130	36	2.5	6.4	--	--	270	--	200
26...	--	71	18	92	43	2.5	9.0	--	--	--	--	130

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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
MAY												
30...A	82	--	--	507	475	--	4.1	18	.08	.28	--	.00
JUN												
02...	--	--	--	465	--	--	--	--	--	--	--	--
06...A	79	.6	--	506	467	--	3.6	16	--	--	--	--
15...	79	.6	23	482	477	--	--	--	--	--	2.2	1.1
27...A	90	.7	--	534	--	4	3.2	14	.04	.15	--	.29
JUL												
19...	120	.7	16	699	665	--	--	--	--	--	3.6	1.2
25...A	140	.9	--	804	--	1300	7.0	31	.15	.50	--	3.0
AUG												
03...	--	--	--	858	--	--	--	--	--	--	--	--
21...	140	.7	28	762	734	--	--	--	--	--	6.5	4.6
29...A	140	.7	--	821	--	24	7.9	35	.15	.50	--	1.7
SEP												
06...	--	--	--	709	--	--	--	--	--	--	--	--
20...	180	.6	27	956	883	--	--	--	--	--	8.5	.65
26...	110	.4	--	597	--	258	4.1	18	.09	.30	--	.76

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P04)
MAY											
30...A	.84	.64	--	--	.84	--	--	1.6	--	--	1.1
JUN											
02...	--	--	--	--	--	--	--	--	--	--	--
06...A	--	--	--	--	--	--	--	--	--	--	--
15...	.90	--	2.0	.00	2.1	4.2	19	1.9	1.8	--	--
27...A	.70	--	--	--	.99	--	--	1.5	--	--	.74
JUL											
19...	1.9	--	3.1	.10	3.0	6.7	30	2.2	1.8	2.1	--
25...A	1.1	--	--	--	--	--	--	.92	--	--	.83
AUG											
03...	--	--	--	--	--	--	--	--	--	--	--
21...	2.0	--	6.6	.70	5.9	13	58	4.1	3.4	--	--
29...A	.58	--	--	--	--	--	--	3.0	--	--	2.6
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
20...	1.7	--	2.3	.50	1.8	11	48	1.0	.77	--	--
26...	.60	--	--	--	--	--	--	1.0	--	--	.84

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC		ARSENIC		BARIUM,		BARIUM,		RORON, TOTAL RECOV- ERABLE (UG/L AS B)
						TOTAL (UG/L AS AS)	SUS- PENDE TOTAL (UG/L AS AS)	DIS- SOLVED (UG/L AS AS)	TOTAL RECOV- ERABLE (UG/L AS BA)	SUS- PENDE RECOV- ERABLE (UG/L AS BA)	DIS- SOLVED (UG/L AS BA)			
OCT														
20...	1230	69	1130	7.5	17.5	5	1	4	600	500	100	650		
31...	A 1230	74	1210	7.8	17.0	--	--	--	--	--	--	--		
DEC														
01...	A 1815	71	1200	7.9	16.0	--	--	--	--	--	--	--		
JAN														
05...	1100	414	545	7.8	12.0	7	4	3	100	0	100	220		
06...	A 1610	292	630	7.3	13.0	--	--	--	--	--	--	--		
24...	1240	342	562	8.1	12.5	4	1	3	100	0	100	200		
FEB														
02...	A 1615	223	890	7.7	12.0	--	--	--	--	--	--	--		
07...	1130	1490	478	8.1	16.0	9	4	5	300	300	0	220		
MAR														
01...	A 1640	485	780	7.6	13.0	--	--	--	--	--	--	--		
05...	1115	2440	350	--	14.0	10	7	3	0	0	--	150		
23...	A 1650	332	620	7.9	13.0	--	--	--	--	--	--	--		
APR														
25...	1230	1140	577	7.7	18.5	3	0	4	100	0	100	260		
27...	A 1520	1120	660	7.7	18.0	--	--	--	--	--	--	--		
MAY														
16...	A 1240	238	--	--	19.0	--	--	0	--	--	--	--		
30...	A 1450	315	770	7.9	19.0	--	--	--	--	--	--	--		
JUN														
06...	A 1005	380	770	7.7	21.0	--	--	--	--	--	--	--		
27...	A 1115	326	840	7.9	23.0	--	--	--	--	--	--	--		
JUL														
19...	1345	130	1073	7.4	23.6	9	2	7	200	100	70	530		
25...	A 1015	75	1180	7.9	23.0	--	--	--	--	--	--	--		
AUG														
29...	A 0945	63	1110	7.9	19.0	--	--	--	--	--	--	--		
SEP														
26...	0940	175	860	7.8	19.0	--	--	--	--	--	--	--		

[illegible]

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AROCLOR TOT. IN BOT MAT 1242 PCB SERIES (UG/KG)	AROCLOR TOT. IN BOT MAT 1254 PCB SERIES (UG/KG)
OCT							
20...	1230	69	1130	7.5	17.5	--	--
25...A	1810	57	--	--	19.5	--	--
NOV							
17...	1230	72	1150	8.0	14.0	38	39
DEC							
01...A	1815	71	1200	7.9	16.0	--	--
23...	1245	86	1230	8.0	15.0	--	--
JAN							
05...	1100	414	545	7.8	12.0	--	--
06...A	1610	292	630	7.3	13.0	--	--
11...	1100	597	549	8.0	13.5	--	--
24...	1240	342	562	8.1	12.5	--	--
FEB							
02...A	1615	223	890	7.7	12.0	--	--
07...	1130	1490	478	8.1	16.0	--	--
MAR							
01...A	1640	485	780	7.6	13.0	--	--
02...	1200	2050	675	--	14.0	--	--
05...	1115	2440	350	--	14.0	--	--
22...	1200	472	623	7.0	14.0	--	--
23...A	1650	332	620	7.9	13.0	--	--
APR							
25...	1230	1140	577	7.7	18.5	--	--
27...A	1520	1120	660	7.7	18.0	--	--
MAY							
25...	1240	326	809	8.1	20.0	--	--
25...A	1720	326	--	--	19.0	--	--
JUN							
15...	1330	339	804	7.9	22.0	--	--
27...A	1115	326	840	7.9	23.0	--	--
JUL							
19...	1345	130	1073	7.4	23.6	--	--
25...A	1015	78	1180	7.9	23.0	--	--
AUG							
21...	1045	69	1190	7.4	20.0	--	--
21...	1120	68	1190	7.4	20.0	--	--
29...A	0945	63	1110	7.9	19.0	--	--
SEP							
20...	1500	2.5	1505	7.7	18.7	--	--
26...	0940	175	860	7.8	19.0	--	--

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PCB, TOTAL (UG/L)
OCT						
20...A	--	7.6	3.0	.02	.20	--
25...	14	--	--	--	.72	--
NOV						
17...	7.8	--	--	--	--	ND
DEC						
01...A	--	--	--	--	.52	--
23...	8.6	--	--	--	--	--
JAN						
05...	17	4.3	--	--	.10	--
06...A	--	--	--	--	.38	--
11...	22	--	--	--	--	--
24...	--	--	.3	--	.10	--
FEB						
02...A	--	--	--	--	.62	--
07...	--	--	--	.00	.10	--
MAR						
01...A	--	--	--	--	.44	--
02...	14	--	--	--	--	--
05...	54	--	--	.01	.10	ND
22...	12	--	--	--	--	--
23...A	--	--	--	--	.22	--
APR						
25...	--	8.4	.3	.00	.10	--
27...A	--	--	--	--	.19	--
MAY						
25...	8.6	--	--	--	--	ND
25...A	7.6	--	--	--	26	--
JUN						
15...	8.8	--	--	--	--	--
27...	--	--	--	--	.15	--
JUL						
19...	--	8.2	1.2	.00	.30	--
25...A	--	--	--	--	.57	--
AUG						
21...	13	--	--	--	--	--
21...	--	--	--	--	--	ND
29...A	--	--	--	--	.60	--
SEP						
20...	4.4	--	--	--	--	--
26...	--	--	--	--	.24	--

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ATRA-ZINE, TOTAL (UG/L)	ATRA-ZINE, IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, IN BOT-TOM MA-TERIAL (UG/KG)
NOV											
17...	1230	72	1150	8.0	14.0	ND	ND	ND	ND	ND	ND
MAR											
05...	1115	2440	350	--	14.0	--	--	ND	--	ND	--
MAY											
25...	1240	326	809	8.1	20.0	ND	--	ND	--	ND	--
AUG											
21...	1120	68	1190	7.4	20.0	ND	--	ND	--	ND	--

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL (UG/L)	DI-ELDRIN, IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)
NOV											
17...	ND	ND	ND	ND	ND	ND	.15	ND	ND	ND	ND
MAR											
05...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY											
25...	ND	--	ND	--	ND	--	--	--	ND	--	ND
AUG											
21...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

ND Material specifically analyzed for but not detected.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 17...	ND	ND	ND	ND	ND	ND	ND	.02	ND	ND	ND
MAR 05...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 25...	--	--	--	ND	--	ND	--	ND	--	--	--
AUG 21...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/KG)	SIMA- ZINE TOTAL COUL- SON COND. (UG/L)	SIMA- ZINE IN BOTTOM MATERI- AL (UG/ KG DRY SOLIDS)
NOV 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 05...	ND	--	ND	--	ND	--	ND	--	--	--
MAY 25...	ND	--	--	--	--	--	--	--	ND	--
AUG 21...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TOTAL TRI- THION (UG/KG)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 05...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 25...	ND	--	--	--	--	--	--	--	--	--
AUG 21...	ND	--	ND	--	--	--	--	--	--	--

ND Material specifically analyzed for but not detected.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	OCT 20,77 1230	NOV 17,77 1230	DEC 23,77 1245	JAN 24,78 1240	MAR 2,78 1200	MAR 22,78 1200				
TOTAL CELLS/ML	1300	2600	3100	550	1600	14				
DIVERSITY: DIVISION	1.6	1.0	1.7	0.9	1.6	0.0				
..CLASS	1.6	1.0	1.7	0.9	1.6	0.0				
..ORDER	1.7	1.6	2.0	1.5	2.3	0.0				
...FAMILY	1.9	2.2	2.2	1.5	2.4	0.0				
....GENUS	2.1	2.2	0.0	1.8	2.4	0.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE	--	-	--	-	--	-	--	-	--	-
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
....MICRACTINIACEAE	--	-	250	10	--	-	--	-	--	-
....MICRACTINIUM	--	-			--	-	--	-	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	46	4	--	-	78	3	--	-	14	1
....CHLORELLA	31	2	--	-	--	-	--	-	--	-
....CHODATELLA	--	-	63	2	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	17	1	--	-	--	-
....SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	200	6	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	350#	64	--	-
....SCENEDESMUS	31	2	1400#	54	310	10	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
..CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	--	-	250	10	120	4	44	8	--	-
...CHLOROGONIUM	--	-	--	-	*	0	44	8	--	-
..PHACOTACEAE										
...PTEROMONAS	--	-	--	-	35	1	--	-	--	-
..SPONDYLOMORACEAE										
...PYROBOTRYS	--	-	--	-	--	-	--	-	330#	20
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...PENNALES										
....NAVICULACEAE										
....ENTOMONEIS	15	1	--	-	--	-	--	-	--	-
...CENTRALES										
....COSCINODISCAEAE										
....CYCLOTELLA	15	1	250	10	340	11	--	-	14	1
....MELOSIRA	--	-	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-
....FRAGILIARIACEAE										
....SYNEDRA	--	-	--	-	--	-	--	-	--	-
...GOMPHONEMATAEAE										
....GOMPHONEMA	--	-	--	-	*	0	--	-	27	2
....NAVICULACEAE										
....NAVICULA	110	8	--	-	35	1	--	-	14	1
....NITZSCHIAEAE										
....NITZSCHIA	140	11	130	5	52	2	--	-	68	4
....SURIARELLACEAE										
....SURIARELLA	--	-	63	2	17	1	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
....CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	61	2	--	-	110	7
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCOCCOCCALES										
....CHROCOCCOCCAEAE										
....AGMENELLUM	730#	58	--	-	--	-	--	-	600#	37
....ANACYSTIS	--	-	--	-	--	-	44	8	--	-
...HORMOGONALES										
....OSCILLATORIACEAE	--	-	--	-	1700#	54	--	-	--	-
....LYNGBYA	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	--	-	410#	25

See footnotes at end of table.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	OCT 20,77 1230		NOV 17,77 1230		DEC 23,77 1245		JAN 24,78 1240		MAR 2,78 1200		MAR 22,78 1200	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA	140	11	190	7	70	2	--	-	14	1	--	-
....LEPOCINCLIS	--	-	--	-	26	1	--	-	--	-	--	-
....PHACUS	15	1	--	-	44	1	44	8	27	2	--	-
....TRACHELOMONAS	--	-	--	-	--	-	22	4	14	1	--	-
DATE TIME	APR 25,78 1230		MAY 25,78 1240		JUN 15,78 1330		JUL 19,78 1345		AUG 21,78 1045		SEP 20,78 1500	
TOTAL CELLS/ML	3100		7700		9900		7500		920		590	
DIVERSITY: DIVISION	1.7		0.5		0.3		1.8		1.9		2.0	
..CLASS	1.7		0.5		0.3		1.8		1.9		2.0	
...ORDER	2.3		0.6		0.6		1.9		2.1		2.3	
....FAMILY	2.6		0.8		0.7		2.2		2.2		2.8	
....GENUS	2.6		0.8		0.7		2.5		2.3		2.8	
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
...SCHROEDERIA	--	-	6700#	87	8800#	89	110	1	--	-	14	2
...MICRACTINIACEAE												
...MICRACTINIUM	--	-	--	-	--	-	500	7	--	-	--	-
...OOCYSTACEAE												
...ANKISTRODESMUS	--	-	--	-	--	-	--	-	--	-	--	-
...CHLORELLA	--	-	--	-	--	-	--	-	--	-	--	-
...CHODATELLA	--	-	--	-	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	110	1	--	-	--	-
...OOCYSTIS	--	-	* 0		--	-	--	-	--	-	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
...ACTINASTRUM	--	-	--	-	--	-	220	3	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-	--	-	--	-	--	-
...SCENEDESMUS	--	-	170	2	--	-	110	1	97	11	130#	22
...TETRASPORALES												
...COCCOMYXACEAE												
...ELAKATOTHRIX	--	-	--	-	--	-	170	2	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
...CHLAMYDOMONAS	550#	18	--	-	590	6	110	1	--	-	--	-
...CHLOROGONIUM	--	-	--	-	--	-	--	-	--	-	--	-
...PHACOTACEAE												
...PTEROMONAS	--	-	--	-	--	-	--	-	--	-	--	-
...SPONDYLOMORACEAE												
...PYROBOTRYX	--	-	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...PENNALES												
...NAVICULACEAE												
...ENTOMONEIS	--	-	--	-	--	-	--	-	--	-	--	-
...CENTRALES												
...COSCINODISCACEAE												
...CYCLOTELLA	120	4	--	-	99	1	660	9	--	-	43	7
...MELOSIRA	--	-	--	-	--	-	1200#	16	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-	110	11	--	-
...PENNALES												
...ACHNANTHACEAE												

See footnotes at end of table.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	APR 25,78 1230		MAY 25,78 1240		JUN 15,78 1330		JUL 19,78 1345		AUG 21,78 1045		SEP 20 78 1500	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-	14	2
....FRAGILARIACEAE												
....SYNEDRA	300	10	--	-	--	-	--	-	--	-	--	-
....GOMPHONEMACEAE												
....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-	--	-
....NAVICULACEAE												
....NAVICULA	120	4	50	1	300	3	--	-	24	3	29	5
....NITZSCHIA												
....NITZSCHIA	180	6	*	0	99	1	--	-	120	13	160#	27
....SURIPELLACEAE												
....SURIPELLA	--	-	--	-	--	-	--	-	--	-	14	2
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
..CRYPTOMONIDAE												
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	170	2	--	-	43	7
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
..CHROCOCCALES												
...CHROCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	--	-	120#	20
....ANACYSTIS	490#	16	220	3	--	-	--	-	--	-	--	-
....HORMOGONALES												
....OSCILLATORIACEAE	--	-	--	-	--	-	--	-	--	-	--	-
....LYNGBYA	1100#	37	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	500	7	--	-	3700#	50	210#	23	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	170	2	360#	39	29	5
....LEPOCINCLIS	--	-	--	-	--	-	--	-	--	-	--	-
....PHACUS	120	4	--	-	--	-	110	1	--	-	--	-
....TRACHELOMONAS	61	2	--	-	--	-	110	1	8	1	--	-

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

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

PERIPHYTON

DATE	TIME	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
SEP 20...	1500	4.83	1.07	20.2	17.5	63

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1150	1130	1140	1160	1110	1130	1180	1160	1170	891	633	775
2	1150	1130	1140	1160	1130	1140	1210	1180	1190	1110	892	1010
3	1150	1110	1130	1150	1140	1150	1230	1200	1210	1420	1080	1240
4	1130	1100	1110	1150	1140	1140	1240	1230	1230	981	743	796
5	1150	1130	1140	1160	1140	1150	1230	1190	1210	724	538	596
6	1150	1110	1130	1170	1140	1150	1210	1190	1200	690	586	619
7	1130	1110	1120	1150	1120	1130	1260	1220	1230	713	645	674
8	1150	1100	1120	1150	1120	1130	1220	1210	1220	865	687	785
9	1160	1110	1120	1150	1130	1140	1220	1200	1210	1070	875	967
10	1130	1090	1100	1170	1120	1140	1210	1200	1210	1060	672	857
11	1140	1100	1120	1170	1130	1150	1220	1210	1210	676	504	572
12	1120	1100	1100	1170	1150	1150	1220	1180	1190	517	471	492
13	1120	1080	1100	1190	1170	1170	1210	1180	1190	550	454	502
14	1150	1090	1110	1190	1150	1160	1230	1210	1220	711	523	645
15	1150	1130	1140	1170	1140	1150	1220	1200	1210	812	594	736
16	1130	1110	1120	1200	1150	1170	1250	1190	1200	753	669	713
17	1120	1090	1100	1210	1170	1180	1250	1220	1230	672	488	551
18	1120	1080	1100	1190	1160	1170	1480	1040	1220	505	463	489
19	1120	1110	1110	1200	1170	1180	1310	1210	1280	510	474	489
20	1170	1100	1130	1200	1180	1190	1280	1230	1250	518	400	487
21	1170	1110	1130	1200	1150	1170	1260	1230	1240	516	490	502
22	1130	1110	1120	1200	1160	1180	1260	1230	1250	576	488	530
23	1130	1100	1110	1200	1180	1190	1290	1150	1240	574	474	553
24	1110	1080	1100	1240	1200	1230	1290	1210	1240	570	422	515
25	1140	1100	1110	1220	1180	1200	1240	1220	1230	---	---	---
26	1160	1100	1120	1210	1180	1190	1290	755	1070	---	---	---
27	1150	1120	1130	1210	1200	1200	955	755	824	---	---	---
28	1140	1120	1130	1200	1150	1170	848	706	788	---	---	---
29	1160	1120	1140	1180	1140	1160	688	446	551	---	---	---
30	1160	1120	1140	1180	1160	1170	639	471	571	---	---	---
31	1140	1110	1120	---	---	---	621	559	582	---	---	---
MONTH	1170	1080	1120	1240	1110	1160	1480	446	1120	---	---	---

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	522	478	498	750	672	698
2	---	---	---	---	---	---	533	479	507	734	692	714
3	---	---	---	---	---	---	526	486	506	778	704	735
4	---	---	---	---	---	---	547	505	525	786	738	762
5	---	---	---	---	---	---	582	538	557	826	778	797
6	---	---	---	---	---	---	609	517	566	820	766	789
7	---	---	---	---	---	---	594	542	570	820	756	781
8	---	---	---	---	---	---	607	549	575	810	746	774
9	---	---	---	---	---	---	572	530	547	800	748	774
10	740	422	619	---	---	---	571	523	545	806	764	786
11	402	236	314	---	---	---	568	496	537	826	768	797
12	336	272	299	---	---	---	594	552	573	830	772	796
13	298	246	280	---	---	---	599	571	584	822	758	789
14	314	270	294	---	---	---	608	558	581	832	768	793
15	316	300	309	384	348	369	607	547	576	834	780	797
16	340	318	332	542	378	404	598	552	576	842	766	792
17	356	300	336	806	570	693	605	579	594	806	732	759
18	334	232	285	822	672	762	606	532	561	784	748	769
19	250	228	241	892	742	820	541	517	531	784	754	770
20	252	220	235	910	768	825	538	508	526	790	748	768
21	262	232	249	788	618	703	546	524	530	786	756	770
22	284	254	274	634	498	575	557	533	544	798	756	775
23	312	282	301	897	565	705	564	540	552	816	756	785
24	344	314	325	662	510	590	575	545	561	824	766	789
25	374	348	361	555	513	531	580	548	564	814	758	787
26	376	366	372	544	496	522	578	550	565	822	764	791
27	376	362	368	549	465	499	575	553	567	832	766	796
28	368	342	354	520	460	484	647	551	591	852	764	812
29	---	---	---	529	475	492	707	621	670	814	766	794
30	---	---	---	512	466	486	729	671	702	830	784	803
31	---	---	---	511	461	489	---	---	---	816	776	798
MONTH	---	---	---	---	---	---	729	478	563	852	672	779

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	820	776	793	948	918	933	---	---	---	1190	1130	1160
2	802	766	784	934	906	920	1540	1340	1430	1180	1120	1150
3	798	764	778	932	896	913	1510	1510	1420	1160	1100	1130
4	806	762	782	948	908	927	1470	1290	1390	1150	1090	1130
5	804	766	787	952	914	939	1280	1180	1240	1340	1090	1150
6	834	774	807	966	924	946	1220	1130	1180	1230	966	1080
7	822	768	793	960	924	940	1220	1090	1150	1150	986	1050
8	816	776	793	964	920	940	1200	1080	1130	1100	944	1010
9	818	770	792	958	916	936	1190	1060	1130	1040	946	991
10	808	774	795	972	918	941	1170	1030	1120	1130	990	1050
11	808	772	787	978	934	952	1170	1050	1120	1160	1120	1140
12	806	760	781	990	938	964	1180	1090	1130	1210	1110	1140
13	812	758	794	998	954	972	1180	1090	1130	1270	1180	1220
14	828	780	813	988	956	967	1180	1090	1130	1310	1260	1280
15	842	772	806	988	962	977	1190	1100	1140	1310	1240	1280
16	830	786	808	1040	992	1010	1190	1100	1160	1240	1220	1230
17	850	804	823	1060	1000	1030	1210	1140	1170	1210	1120	1150
18	882	818	843	1100	1020	1050	1200	1150	1180	---	---	---
19	878	838	869	1130	1020	1070	1190	1140	1180	---	---	---
20	886	846	868	1160	1020	1070	1180	1130	1160	---	---	---
21	878	842	856	1170	1020	1070	1220	1150	1190	---	---	---
22	890	852	869	1250	1060	1130	1190	1170	1180	1180	1010	1070
23	916	868	885	1400	1280	1320	1190	1150	1170	1170	1130	1150
24	912	880	895	1650	1310	1430	1190	1140	1170	1130	1110	1120
25	908	876	896	1410	1170	1380	1200	1170	1180	1130	1070	1100
26	922	884	902	1200	1160	1180	1200	1130	1170	1040	756	846
27	936	886	906	1190	1150	1180	1190	1110	1160	782	726	759
28	932	892	908	---	---	---	1170	1110	1150	764	690	730
29	940	890	911	---	---	---	1190	1130	1160	740	692	716
30	968	912	930	---	---	---	1210	1160	1190	754	692	721
31	---	---	---	---	---	---	1220	1110	1170	---	---	---
MONTH	968	758	835	1650	896	1040	1540	1030	1190	1340	690	1060
YEAR	1650	220	902									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	50	140	19	68	88	16	73	50	9.9			
2	48	130	17	66	78	14	71	51	9.8			
3	51	120	17	67	74	13	68	52	9.5			
4	53	115	16	68	69	13	66	53	9.4			
5	49	125	17	71	66	13	68	54	9.9			
6	48	120	16	74	63	13	67	56	10			
7	51	116	16	72	60	12	70	58	11			
8	51	118	16	71	56	11	69	60	11			
9	50	119	16	67	54	9.8	68	62	11			
10	52	120	17	62	53	8.9	69	65	12			
11	54	121	18	62	52	8.7	68	68	12			
12	60	123	20	66	52	9.3	72	70	14			
13	60	110	18	68	53	9.7	73	73	14			
14	56	101	15	70	54	10	71	70	13			
15	54	101	15	66	54	9.6	71	66	13			
16	56	101	15	64	54	9.3	71	65	12			
17	59	101	16	66	54	9.6	69	60	11			
18	62	101	17	68	55	10	149	208	96			
19	63	95	16	69	53	9.9	112	139	48			
20	62	90	15	70	51	9.6	79	82	17			
21	62	86	14	72	49	9.5	76	77	16			
22	62	82	14	71	45	8.6	85	72	17			
23	62	79	13	75	46	9.3	86	67	16			
24	63	86	15	76	46	9.4	92	75	19			
25	61	84	14	74	47	9.4	86	110	26			
26	61	80	13	71	47	9.0	180	388	223			
27	64	75	13	71	47	9.0	245	282	176			
28	66	73	13	72	48	9.3	302	300	245			
29	68	78	14	68	48	8.8	428	336	376			
30	70	80	15	71	49	9.4	504	230	313			
31	70	88	17	---	---	---	492	170	226			
TOTAL	1798	---	487	2076	---	311.1	4100	---	2006.5			
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	462	150	187	261	50	35	358	175	169			
2	428	140	162	231	43	27	1890	327	1640			
3	268	148	105	207	35	20	2230	650	3900			
4	285	381	321	204	40	22	2180	1150	6740			
5	421	413	469	203	40	22	2420	2870	18900			
6	357	380	366	150	245	67	2470	1420	9450			
7	293	360	285	165	1070	653	2400	405	2620			
8	287	340	263	228	230	142	1690	330	1550			
9	282	335	255	539	200	328	2380	295	1900			
10	302	410	334	1070	2130	7420	2440	257	1700			
11	503	428	559	1130	2950	9350	2270	265	1630			
12	571	280	432	590	1850	4020	2230	272	1640			
13	550	233	346	635	2400	4180	1380	280	4180			
14	454	220	270	858	1200	3530	930	292	624			
15	429	270	312	814	300	834	2200	295	1750			
16	551	340	506	596	200	386	1380	293	1080			
17	962	579	1560	458	183	209	62	291	47			
18	1210	397	1350	630	192	327	54	260	38			
19	598	245	396	612	200	331	47	230	29			
20	553	192	287	587	209	333	158	180	77			
21	453	165	202	317	218	201	373	147	149			
22	445	150	180	197	208	111	690	130	197			
23	393	140	149	196	198	105	242	125	82			
24	344	128	119	204	187	103	448	121	145			
25	339	118	108	196	181	96	644	117	202			
26	336	108	98	195	175	92	633	114	196			
27	333	99	89	195	169	89	938	111	263			
28	291	89	70	139	162	61	928	108	256			
29	269	80	58	---	---	---	656	105	186			
30	267	70	50	---	---	---	656	101	180			
31	265	60	43	---	---	---	667	98	176			
TOTAL	13501	---	9931	11807	---	33094	38044	---	61696			

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	667	88	159	207	81	45	315	16	14
2	678	78	142	207	90	50	315	17	14
3	667	68	123	202	93	51	315	19	16
4	518	57	80	202	96	52	315	21	18
5	235	47	30	202	100	55	315	23	20
6	504	37	50	202	103	56	355	26	25
7	690	27	49	202	106	58	380	28	29
8	690	27	50	200	109	59	380	30	31
9	690	27	50	197	112	60	480	32	48
10	690	27	50	197	116	62	409	28	31
11	790	27	57	197	119	63	405	25	27
12	887	27	65	219	122	72	402	22	24
13	887	27	65	234	125	79	350	18	17
14	887	27	65	234	128	81	287	14	11
15	887	27	65	237	132	84	319	11	9.5
16	887	27	65	238	135	87	339	11	10
17	1010	27	72	248	138	92	331	10	8.9
18	1180	35	112	254	141	97	324	10	8.7
19	1170	35	111	254	144	99	325	10	8.8
20	1170	34	107	254	148	101	325	10	8.8
21	1160	34	106	254	151	104	326	10	8.8
22	1150	33	102	278	154	116	325	9	7.9
23	1150	33	102	298	100	80	325	9	7.9
24	1140	32	98	315	50	43	325	9	7.9
25	1130	32	98	326	8	7.0	326	8	7.0
26	1130	40	121	325	9	7.9	327	8	7.1
27	1120	49	148	324	10	8.7	327	8	7.1
28	857	57	112	321	11	9.5	361	8	7.8
29	207	65	36	319	13	11	380	8	8.2
30	207	73	41	316	14	12	380	7	7.2
31	---	---	---	315	15	13	---	---	---
TOTAL	25035	---	2531	7778	---	1815.1	10388	---	456.6
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	380	7	7.2	2.4	185	1.2	68	280	51
2	384	7	7.3	2.4	192	1.2	68	280	51
3	387	6	6.3	2.4	204	1.3	68	280	51
4	387	6	6.3	67	207	37	67	280	51
5	387	6	6.3	105	213	60	66	280	50
6	398	7	7.5	104	217	61	88	393	94
7	406	9	9.9	103	220	61	170	380	174
8	402	11	12	101	226	62	211	360	205
9	404	12	13	99	230	61	201	310	168
10	401	14	15	98	235	62	184	260	129
11	396	17	18	97	239	63	111	240	72
12	394	20	21	97	242	63	85	195	45
13	387	25	26	93	245	62	83	170	38
14	373	34	34	91	249	61	82	150	33
15	375	40	40	89	251	60	86	140	33
16	371	50	50	86	252	59	75	125	25
17	356	60	58	81	254	56	75	117	24
18	342	70	65	79	258	55	35	108	10
19	319	79	68	76	262	54	2.7	102	.74
20	302	86	70	74	270	54	2.4	90	.58
21	280	91	69	69	276	51	150	87	35
22	245	98	65	65	278	49	133	84	30
23	127	105	36	66	280	50	60	81	13
24	75	112	23	65	280	49	56	78	12
25	68	119	22	63	280	48	56	76	11
26	88	126	30	63	280	48	162	74	32
27	76	136	28	64	280	48	188	72	37
28	43	147	17	64	280	48	193	70	36
29	2.4	155	1.0	63	280	48	194	70	37
30	2.4	165	1.1	64	280	48	198	70	37
31	2.4	180	1.2	67	280	51	---	---	---
TOTAL	8561.2	---	834.1	2260.2	---	1532.7	3218.1	---	1585.32
YEAR	128566.5		116280.4						

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
OCT									
20...	1230	17.5	69	216	40	--	--	--	--
NOV									
02...	1045	14.0	72	78	15	--	--	--	--
17...	1230	14.0	72	127	25	--	--	--	--
DEC									
02...	1020	11.5	72	51	9.9	--	--	--	--
06...	0945	--	69	56	10	--	--	--	--
09...	0945	--	69	62	12	--	--	--	--
13...	1000	--	75	73	15	--	--	--	--
16...	1015	--	75	66	13	--	--	--	--
20...	1230	--	82	82	18	--	--	--	--
27...	0930	--	180	259	126	--	--	--	--
28...	1230	15.5	297	220	176	47	64	64	67
30...	1130	--	510	224	308	82	90	90	91
JAN									
03...	1045	--	335	124	112	--	--	--	--
20...	1030	--	615	192	319	91	97	97	97
24...	1240	12.5	342	124	115	--	--	--	--
FEB									
07...	1100	15.5	167	1670	753	--	97	99	99
07...	1420	--	170	683	313	--	--	--	--
10...	1715	--	1480	3540	14100	--	--	--	--
28...	1450	13.0	63	68	12	--	--	--	--
MAR									
05...	1115	14.0	2440	3400	22400	--	52	71	88
14...	1430	18.0	25	292	20	--	--	--	--
22...	1200	14.0	472	75	96	--	--	--	--
APR									
07...	1115	15.5	690	27	50	--	--	--	--
18...	1315	--	1180	35	112	--	--	--	--
MAY									
02...	1145	18.0	207	90	50	--	--	--	--
22...	0945	19.0	265	154	110	--	--	--	--
25...	1200	20.0	332	8	7.2	--	--	--	--
JUN									
02...	1200	20.0	315	17	14	--	--	--	--
15...	1335	22.0	339	11	10	--	--	--	--
JUL									
05...	1030	22.0	387	6	6.3	--	--	--	--
AUG									
03...	1130	22.0	2.4	204	1.3	--	--	--	--
21...	1120	20.0	68	276	51	--	--	--	--
SEP									
06...	1200	21.5	90	349	85	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
OCT								
20...	--	--	33	--	--	--	--	--
NOV								
02...	--	--	81	--	--	--	--	--
17...	--	--	58	--	--	--	--	--
DEC								
02...	--	--	91	--	96	--	98	100
06...	--	--	72	--	--	--	--	--
09...	--	--	89	--	--	--	--	--
13...	--	--	90	--	--	--	--	--
16...	--	--	91	--	--	--	--	--
20...	--	--	91	--	--	--	--	--
27...	--	--	95	--	--	--	--	--
28...	74	--	82	--	90	--	96	100
30...	94	--	96	--	99	--	100	--
JAN								
03...	--	--	98	--	--	--	--	--
20...	97	--	98	--	99	--	100	--
24...	--	--	88	--	--	--	--	--
FEB								
07...	100	--	--	--	--	--	--	--
07...	--	--	96	--	--	--	--	--
10...	--	--	90	--	--	--	--	--
28...	--	--	93	--	--	--	--	--
MAR								
05...	94	97	--	98	--	100	--	--
14...	--	--	76	--	--	--	--	--
22...	--	--	82	--	--	--	--	--
APR								
07...	--	--	86	--	--	--	--	--
18...	--	--	71	--	--	--	--	--
MAY								
02...	--	--	83	--	--	--	--	--
22...	--	--	91	--	--	--	--	--
25...	--	--	84	--	--	--	--	--
JUN								
02...	--	--	73	--	--	--	--	--
15...	--	--	61	--	--	--	--	--
JUL								
05...	--	--	78	--	--	--	--	--
AUG								
03...	--	--	77	--	--	--	--	--
21...	--	--	99	--	--	--	--	--
SEP								
06...	--	--	95	--	--	--	--	--

11075600 SANTA ANA RIVER AT IMPERIAL HIGHWAY, NEAR ANAHEIM, CA

LOCATION.--Lat 33°51'23", long 117°47'23", in Canon De Santa Ana, Orange County, on right bank 500 ft (150 m) upstream from State Highway 91, and 0.4 mi (0.6 km) south of Orangethorpe Avenue, and 9 mi (14 km) east of Anaheim, and 9.8 mi (15.8 km) downstream from Prado Dam.

DRAINAGE AREA.--1,544 mi² (3,999 km²), excludes 768 mi² (1,989 km²) above Lake Elsinore.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 282 ft (86.0 m), from topographic map. Prior to June 4, 1975, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records poor. Natural flow affected by ground-water withdrawals, diversions, importation from Metropolitan Water District and California Aqueduct, municipal use, return flow from irrigation, Prado flood-control reservoir, capacity, 201,200 acre-ft (248 hm³) since 1940. See schematic diagram of Santa Ana River Basin.

COOPERATION.--Five discharge measurements were furnished by Orange County Environmental Management Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Mar. 4, 1978, estimated; gage height unknown, maximum gage height, 5.22 ft (1.591 m) Dec. 4, 1974, datum then in use; minimum daily discharge, 10 ft³/s (0.28 m³/s) Sept. 20, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s (113 m³/s) Mar. 4, estimated, gage height unknown, minimum daily, 10 ft³/s (0.28 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	54	63	380	340	1300	690	250	330	380	225	155
2	44	52	67	374	305	2600	700	250	330	385	225	150
3	46	51	68	336	285	2700	690	252	330	385	100	200
4	49	52	67	294	280	3200	550	245	305	385	160	200
5	47	56	67	380	280	3100	240	240	310	385	200	150
6	48	59	67	359	450	3000	520	240	375	390	190	100
7	49	59	68	284	300	2900	725	240	395	400	185	130
8	52	58	69	274	380	2150	720	235	400	400	185	200
9	49	54	69	293	800	2800	720	235	410	400	185	190
10	51	49	69	475	1600	2800	740	235	410	400	185	170
11	54	47	68	560	1800	2570	800	245	415	395	180	100
12	59	52	70	645	1200	2550	905	260	407	395	180	160
13	61	54	72	615	1500	1850	905	270	375	390	180	220
14	57	60	71	605	1700	700	905	275	285	370	175	220
15	52	60	71	555	1600	2400	905	280	320	375	175	223
16	54	60	72	630	1300	1500	905	280	330	370	170	215
17	57	63	70	1400	1100	160	1030	290	320	325	165	215
18	59	67	125	1600	1300	130	1200	295	315	330	165	175
19	60	68	137	715	950	90	1190	290	315	315	160	130
20	62	70	96	685	850	200	1190	290	320	290	160	10
21	57	70	95	535	500	400	1180	295	320	270	155	130
22	57	69	99	500	350	730	1170	305	325	280	150	145
23	55	73	102	465	350	270	1170	310	325	250	150	60
24	56	73	102	415	325	470	1160	320	325	290	150	55
25	53	72	98	410	325	665	1150	325	325	290	150	55
26	51	70	244	400	300	650	1150	330	325	295	150	150
27	50	69	225	390	300	930	1140	330	325	310	150	175
28	52	70	296	365	320	970	900	330	360	260	150	180
29	53	59	379	345	---	680	250	330	380	225	150	200
30	55	59	393	340	---	680	250	330	380	225	150	210
31	55	---	386	340	---	690	---	325	---	225	150	---
TOTAL	1648	1829	3945	15964	21090	45835	25750	8727	10387	10355	5205	4673
MEAN	53.2	61.0	127	515	753	1479	858	282	346	334	168	156
MAX	62	73	393	1600	1800	3200	1200	330	415	400	225	223
MIN	44	47	63	274	280	90	240	235	285	225	100	10
AC-FT	3270	3630	7820	31660	41830	90910	51080	17310	20600	20540	10320	9270
CAL YR 1977 TOTAL	35242			MEAN 96.6	MAX 393	MIN 29	AC-FT 69900					
WTR YR 1978 TOTAL	155408			MEAN 426	MAX 3200	MIN 10	AC-FT 308300					

11075600 SANTA ANA RIVER AT IMPERIAL HIGHWAY, NEAR ANAHEIM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to 1978 (discontinued).

SEDIMENT RECORDS: October 1977 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1972 to September 1977.

SEDIMENT RECORDS: October 1972 to September 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,870 mg/L Feb. 11, 1973; minimum daily mean, 20 mg/L on several days in 1973.

SEDIMENT DISCHARGE: Maximum daily, 22,400 tons (20,300 metric tons) Jan. 8, 1974; minimum daily, 0.01 tons (0.01 metric tons) on several days in 1973.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
OCT											
03...	1115	20.5	50	221	30	40	49	59	68	73	--
10...	1630	--	59	101	16	--	--	--	--	--	--
21...	1430	20.0	63	48	8.2	--	--	--	--	--	--
NOV											
02...	1115	17.0	56	104	16	--	--	--	--	--	--
DEC											
01...	1145	15.0	63	27	4.6	--	--	--	--	--	--
14...	1030	12.5	74	53	11	--	--	--	--	--	--
28...	1430	--	270	462	337	--	--	--	--	--	--
JAN											
03...	1050	--	350	145	137	--	--	--	--	--	--
08...	1445	11.5	177	513	245	46	53	55	59	65	--
FEB											
05...	1315	--	270	339	247	--	--	--	--	--	--
10...	1110	--	1290	11700	40800	--	--	--	--	--	--
11...	1600	14.5	2040	5790	31900	--	18	18	23	29	34
MAR											
01...	1200	15.0	E1300	16700	--	--	50	61	76	87	90
05...	1445	15.5	E3250	10900	--	--	35	44	57	67	75
14...	1045	17.0	190	123	63	--	--	--	--	--	--
APR											
07...	1240	15.5	E700	456	--	--	--	--	--	--	--
MAY											
03...	1030	18.5	252	156	106	--	--	--	--	--	--
JUN											
12...	1415	28.0	400	92	99	--	--	--	--	--	--
AUG											
07...	1045	26.5	186	70	35	--	--	--	--	--	--
SEP											
07...	1145	23.5	88	299	71	--	--	--	--	--	--
22...	1100	19.5	167	193	87	--	--	--	--	--	--
29...	1115	25.0	186	378	190	--	--	--	--	--	--

E Estimated

11075600 SANTA ANA RIVER AT IMPERIAL HIGHWAY, NEAR ANAHEIM, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAM. % FINER THAN 2.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT											
03...	74	--	86	--	100	--	--	--	--	--	--
10...	57	--	--	--	--	--	--	--	--	--	--
21...	75	--	94	--	100	--	--	--	--	--	--
NOV											
02...	46	--	--	--	--	--	--	--	--	--	--
DEC											
01...	42	--	--	--	--	--	--	--	--	--	--
14...	71	--	--	--	--	--	--	--	--	--	--
28...	85	--	--	--	--	--	--	--	--	--	--
JAN											
03...	66	--	69	--	76	--	93	--	100	--	--
08...	70	--	76	--	87	--	95	--	99	--	100
FEB											
05...	52	--	--	--	--	--	--	--	--	--	--
10...	87	--	--	--	--	--	--	--	--	--	--
11...	--	42	--	53	--	79	--	99	--	100	--
MAR											
01...	--	97	--	99	--	100	--	--	--	--	--
05...	--	86	--	95	--	99	--	100	--	--	--
14...	80	--	--	--	--	--	--	--	--	--	--
APR											
07...	31	--	45	--	69	--	94	--	100	--	--
MAY											
03...	64	--	--	--	--	--	--	--	--	--	--
JUN											
12...	34	--	--	--	--	--	--	--	--	--	--
AUG											
07...	86	--	--	--	--	--	--	--	--	--	--
SEP											
07...	55	--	--	--	--	--	--	--	--	--	--
22...	78	--	--	--	--	--	--	--	--	--	--
29...	83	--	--	--	--	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	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
SEP											
22...	1030	21.5	7	167	1	2	14	56	89	98	100

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY NEAR ANAHEIM, CA

LOCATION.--Lat 33°51'23", long 117°48'00", in Canon De Santa Ana, Orange County, on diversion channel, 100 ft (30 m) downstream from diversion point, 0.1 mi (0.2 km) south of La Palma Avenue, 0.6 mi (1.0 km) west of Imperial Highway, and 7.8 mi (12.6 km) east of Anaheim.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1974 to current year. Records prior to Sept. 30, 1976, in files of Laguna Niguel Subdistrict.

GAGE.--Water-stage recorder and Parshall flume control. Altitude of gage is 262 ft (80 m), from topographic map.

REMARKS.--Records poor. Water is diverted from Santa Ana River at diversion point 100 ft (30 m) upstream, for recharging to spreading basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 431 ft³/s (12.2 m³/s) Jan. 14, 1978; no flow for some periods in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 431 ft³/s (12.2 m³/s) Jan. 14; no flow Oct. 1 to Dec. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	346	287	73	69	238	310	345	225	155
2			0	327	264	84	57	235	318	345	225	150
3			0	319	228	71	64	230	318	343	100	200
4			0	248	221	43	63	225	314	343	160	200
5			0	396	238	26	159	220	315	341	200	150
6			0	319	89	61	255	215	320	338	190	100
7			0	252	34	70	187	215	321	335	185	130
8			0	244	211	44	225	215	320	333	185	200
9			0	316	124	100	206	210	320	333	185	190
10			0	340	35	111	206	210	323	327	185	170
11			0	319	68	112	171	210	319	325	180	100
12			36	424	45	87	59	215	336	323	180	160
13			66	410	41	69	111	225	355	316	180	220
14			66	431	107	19	105	235	288	309	175	220
15			65	419	85	80	79	238	298	307	175	223
16			67	403	75	71	51	240	320	304	170	215
17			64	116	50	87	68	249	315	297	165	215
18			68	106	88	97	69	251	315	286	165	175
19			94	110	80	81	51	250	314	279	160	130
20			79	355	84	123	60	250	314	274	160	10
21			79	399	62	270	88	254	314	263	155	130
22			83	360	239	228	118	280	312	244	150	145
23			86	375	235	87	124	300	311	171	150	60
24			88	360	230	187	121	310	311	196	150	55
25			89	355	228	215	146	321	312	298	150	55
26			91	350	225	207	167	316	312	310	150	150
27			112	345	220	148	169	321	309	307	150	175
28			232	315	220	92	166	324	323	250	150	180
29			177	288	---	108	213	320	350	225	150	200
30			338	298	---	104	247	316	348	225	150	210
31		---	346	291	---	71	---	308	---	225	150	---
TOTAL	0	0	2326	9936	4113	3226	3874	7946	9555	9117	5205	4673
MEAN	0	0	75.0	321	147	104	129	256	319	294	168	156
MAX	0	0	346	431	287	270	255	324	355	345	225	223
MIN	0	0	0	106	34	19	51	210	288	171	100	10
AC-FT	0	0	4610	19710	8160	6400	7680	15760	18950	18080	10320	9270
CAL YR 1977	TOTAL	15967.62	MEAN	43.7	MAX	346	MIN	0	AC-FT	31670		
WTR YR 1978	TOTAL	59971.00	MEAN	164	MAX	431	MIN	0	AC-FT	119000		

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY, NEAR ANAHEIM, CA--Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1975 to current year.

SPECIFIC CONDUCTANCE: Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to current year.

INSTRUMENTATION.--Specific-conductance recorder since July 1974.

REMARKS.--Missing specific-conductance data for October through February and other periods due to fouling of probe or no flow.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,640 micromhos Sept. 21, 1978; minimum recorded, 178 micromhos Mar. 13, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,640 micromhos Sept. 21; minimum recorded, 178 micromhos Mar.13.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC					
14...	1200	67	1180	14.5	758
JAN					
03...	1315	323	1180	13.5	798
FEB					
06...	1230	12	462	14.5	255
MAR					
08...	1215	10	707	17.0	311
21...	0945	255	1040	13.5	639
APR					
07...	1300	213	577	16.0	275
MAY					
01...	1355	234	894	21.5	501
19...	1410	2250	853	26.8	513
JUN					
09...	1520	345	836	28.0	578
AUG					
07...	1600	191	1010	30.0	734
SEP					
07...	1300	253	1150	28.5	748
29...	1300	216	870	27.0	523

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY, NEAR ANAHEIM, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1				---	---	---	518	492	507	---	---	---
2				---	---	---	530	436	471	---	---	---
3				---	---	---	450	408	429	---	---	---
4				---	---	---	430	418	421	---	---	---
5				---	---	---	726	418	563	---	---	---
6				---	---	---	726	548	649	---	---	---
7				---	---	---	608	450	579	---	---	---
8				---	---	---	632	578	615	---	---	---
9				---	---	---	656	602	621	898	856	871
10				444	184	358	624	592	604	914	886	902
11				446	194	374	624	484	565	936	888	910
12				198	184	191	---	---	---	932	886	905
13				214	178	185	---	---	---	916	872	892
14				480	210	322	---	---	---	908	858	883
15				434	188	243	---	---	---	896	852	870
16				196	186	192	---	---	---	898	842	867
17				512	196	365	---	---	---	888	798	840
18				556	518	537	---	---	---	838	790	821
19				580	552	570	---	---	---	856	808	826
20				1300	554	748	---	---	---	850	804	825
21				1030	764	938	---	---	---	850	814	825
22				846	274	626	---	---	---	848	808	822
23				1040	274	525	---	---	---	830	802	819
24				802	626	760	---	---	---	840	804	822
25				618	582	599	---	---	---	846	798	820
26				606	568	584	---	---	---	844	734	818
27				580	476	541	---	---	---	854	808	830
28				510	466	487	---	---	---	870	814	841
29				530	470	500	---	---	---	868	834	851
30				484	440	457	---	---	---	868	846	854
31				522	468	493	---	---	---	860	840	849
MONTH				---	---	---	---	---	---	---	---	---
JUNE				JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	854	824	839	996	960	969	1110	1080	1100	---	---	---
2	850	818	832	972	942	956	1110	1090	1090	---	---	---
3	844	808	821	976	938	954	1100	1080	1090	---	---	---
4	828	804	817	968	948	958	---	---	---	---	---	---
5	844	808	828	974	946	963	---	---	---	---	---	---
6	864	828	846	974	954	962	---	---	---	---	---	---
7	858	806	833	978	942	962	---	---	---	---	---	---
8	844	822	834	994	962	975	1200	1050	1110	1190	1050	1110
9	842	820	831	994	954	969	1150	1060	1090	1150	1040	1090
10	858	824	838	992	952	969	---	---	---	1200	1080	1140
11	850	826	836	1000	962	977	---	---	---	1280	1200	1240
12	856	826	841	1000	966	982	---	---	---	1290	1150	1210
13	856	822	836	1010	974	986	---	---	---	1170	1150	1160
14	870	844	862	1010	980	997	---	---	---	1170	1110	1160
15	900	836	873	1020	1000	1010	---	---	---	1160	1150	1150
16	858	836	849	1040	1000	1010	---	---	---	1160	1150	1150
17	874	854	863	1060	1010	1030	---	---	---	1150	1150	1150
18	894	868	879	1100	1020	1050	---	---	---	1310	1150	1210
19	924	892	913	1120	1030	1070	---	---	---	1480	1320	1420
20	930	900	919	1150	1040	1080	---	---	---	1480	1280	1380
21	914	888	902	1150	1040	1080	---	---	---	1640	1260	1360
22	932	902	916	1140	1040	1090	---	---	---	1300	1110	1210
23	944	914	923	1200	1120	1150	---	---	---	1340	1280	1310
24	958	928	942	1210	1090	1180	---	---	---	1310	1290	1300
25	948	918	933	1100	996	1020	---	---	---	1310	1250	1280
26	946	920	936	1110	1040	1090	---	---	---	1270	924	1100
27	956	904	927	1110	1090	1100	---	---	---	1060	877	905
28	934	888	910	1110	1080	1100	---	---	---	892	860	874
29	954	906	932	1090	914	1060	---	---	---	898	851	856
30	970	942	957	1100	1060	1080	---	---	---	908	870	888
31	---	---	---	1100	1080	1090	---	---	---	---	---	---
MONTH	970	804	876	1210	914	1030	---	---	---	---	---	---
YEAR	1640	178	872									

11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA

LOCATION.--Lat 33°54'40", long 117°50'29", in SW¼NE¼ sec.17, T.3 S., R.9 W., Orange County, on right wall of outlet channel 250 ft (76 m) downstream from toe of Carbon Canyon Dam, and 2.4 mi (3.9 km) northwest of Yorba Linda.

DRAINAGE AREA.--19.5 mi² (50.5 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 396.29 ft (120.789 m) Corps of Engineers datum. Prior to Dec. 3, 1971, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair. Flow regulated by Carbon Canyon flood-control reservoir, capacity, 6,610 acre-ft (8.15 hm³). No diversion above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--17 years, 0.70 ft³/s (0.020 m³/s), 507 acre-ft/yr (625,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 446 ft³/s (12.6 m³/s) Feb. 25, 1969, gage height, 4.64 ft (1.414 m), present datum, from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of computation of flow in concrete-lined channel at gage heights 6.18 ft (1.884 m) and 4.12 ft (1.256 m); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 394 ft³/s (11.2 m³/s) Feb. 10, gage height, 4.38 ft (1.335 m), from rating curve extended as explained above; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.01	30	2.0	.55	.03			
2			0	0	0	138	2.0	.55	.03			
3			0	0	0	91	1.6	.41	0			
4			0	0	0	133	1.8	.57	0			
5			0	0	0	250	3.1	.55	0			
6			0	0	0	212	1.7	.48	0			
7			0	0	0	73	1.8	.38	0			
8			0	0	15	14	1.8	.25	0			
9			0	24	47	11	1.8	.23	0			
10			0	44	252	9.6	1.8	.23	0			
11			0	3.0	16	7.9	1.8	.23	0			
12			0	.22	46	8.8	1.8	.25	0			
13			0	.41	52	8.3	1.6	.25	0			
14			0	10	23	6.5	1.5	.25	0			
15			0	50	4.0	5.0	1.5	.23	0			
16			0	13	2.5	3.8	1.5	.23	0			
17			0	31	1.5	3.0	1.5	.13	0			
18			0	1.3	1.0	3.0	1.5	.13	0			
19			0	7.6	.60	3.0	1.4	.13	0			
20			0	1.2	.35	2.7	1.2	.13	0			
21			0	.23	.24	2.7	1.2	.13	0			
22			0	.11	.28	3.6	1.1	.13	0			
23			0	0	.26	4.8	.99	.13	0			
24			0	0	.28	4.2	.99	.13	0			
25			0	0	.23	3.5	.80	.13	0			
26			0	0	.23	2.9	.76	.03	0			
27			0	0	.48	2.7	.76	.03	0			
28			.01	0	12	2.4	.76	.03	0			
29			34	0	---	2.1	.62	.03	0			
30			.81	0	---	1.5	.55	.03	0			
31		---	0	0	---	2.0	---	.03	---			---
TOTAL	0	0	34.82	186.07	474.96	1046.0	43.23	6.99	.06	0	0	0
MEAN	0	0	1.12	6.00	17.0	33.7	1.44	.23	.002	0	0	0
MAX	0	0	34	50	252	250	3.1	.57	.03	0	0	0
MIN	0	0	0	0	0	1.5	.55	.03	0	0	0	0
AC-FT	0	0	69	369	942	2070	86	14	.1	0	0	0

CAL YR 1977 TOTAL 53.94 MEAN .15 MAX 34 MIN 0 AC-FT 107
WTR YR 1978 TOTAL 1792.13 MEAN 4.91 MAX 252 MIN 0 AC-FT 3550

SANTA ANA RIVER BASIN

11075755 SANTA ANA RIVER AT BALL ROAD, IN ANAHEIM, CA

LOCATION (REVISED).--Lat 33°49'00", long 117°52'17", in SE¼SW¼SE¼ sec.24, T.4 S., R.10 W., Orange County, 350 ft (110 m) south of Ball Road, 0.6 mi (1.0 km) west of Batavia Street, and 1.0 mi (1.6 km) east of State College Boulevard in Anaheim, and 16 mi (26 km) downstream from Prado Dam.

DRAINAGE AREA.--1,587 mi² (4,110 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder with concrete cut-off wall. Altitude of gage is 170 ft (51.8 m), from topographic map.

REMARKS.--Records poor. River flow is regulated by Prado Dam, infiltration ponds and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 4, 1978, gage height, 4.92 ft (1.500 m); no flow for many months each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 4, gage height, 4.92 ft (1.500 m); no flow for many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	3360	663	.04				
2			0	0	0	3880	645	0				
3			0	0	7.6	3410	486	0				
4			0	1.2	22	5610	393	0				
5			0	3.2	13	4990	26	0				
6			0	9.4	1140	3570	83	0				
7			0	1.0	1050	3500	566	0				
8			0	0	299	2570	295	0				
9			0	.92	2770	3130	315	0				
10			0	21	3030	3110	347	0				
11			0	7.9	1720	3150	457	0				
12			0	0	1600	3130	846	0				
13			0	0	1300	2650	701	0				
14			0	10	2100	473	645	0				
15			0	346	2000	2660	645	0				
16			0	325	1800	2340	701	0				
17			0	483	1500	90	545	0				
18			0	745	1400	2.2	964	0				
19			0	806	1000	2.2	1040	0				
20			0	264	750	2.2	915	0				
21			0	10	450	3.7	892	0				
22			0	4.2	250	143	939	0				
23			0	20	150	133	1010	0				
24			0	0	125	27	1240	0				
25			0	0	175	290	1040	0				
26			83	20	150	369	868	0				
27			21	37	150	569	760	0				
28			14	42	500	994	661	0				
29			150	32	---	393	59	0				
30			0	0	---	453	.04	0				
31		---	0	0	---	740	---	0	---			---
TOTAL	0	0	268	3188.82	25451.6	55744.3	18747.04	.04	0	0	0	0
MEAN	0	0	8.65	103	909	1798	625	.001	0	0	0	0
MAX	0	0	150	806	3030	5610	1240	.04	0	0	0	0
MIN	0	0	0	0	0	2.2	.04	0	0	0	0	0
AC-FT	0	0	532	6330	50480	110600	37180	.08	0	0	0	0
CAL YR 1977	TOTAL	353.49	MEAN	.97	MAX	150	MIN	0	AC-FT	701		
WTR YR 1978	TOTAL	103399.80	MEAN	283	MAX	5610	MIN	0	AC-FT	205100		

SANTA ANA RIVER BASIN

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11075755 SANTA ANA RIVER AT BALL ROAD, IN ANAHEIM, CA

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to current year.

SEDIMENT RECORDS: October 1976 to current year.

REMARKS.--Sediment table omitted for no flow periods July to September.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 28,000 mg/L Feb. 10, 1978; minimum daily mean, no flow on many days.

SEDIMENT DISCHARGE: Maximum daily, 285,000 tons (259,000 metric tons) Mar. 4, 1978; minimum daily, 0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 28,000 mg/L Feb. 10; minimum daily mean, no flow on many days.

SEDIMENT DISCHARGE: Maximum daily, 285,000 tons (259,000 metric tons) Mar. 4; minimum daily, 0 tons on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	---	---	---	---					
2		---	---	---	---	---	---					
3		---	---	---	---	---	---					
4		---	---	---	---	---	---					
5		---	---	---	15.5	---	---					
6		---	---	---	---	---	---					
7		---	---	---	---	---	16.0					
8		---	---	---	---	---	---					
9		---	---	---	15.5	---	---					
10		---	---	---	---	---	---					
11		---	---	12.5	14.5	---	---					
12		---	---	---	---	---	---					
13		---	---	---	---	---	---					
14		---	---	---	---	19.5	---					
15		---	---	---	---	---	---					
16		---	---	---	---	---	---					
17		---	---	---	---	18.5	---					
18		---	---	---	---	---	---					
19		---	---	---	---	---	---					
20		---	---	---	---	---	---					
21		---	---	---	---	---	21.0					
22		---	---	---	---	---	---					
23		---	---	---	---	---	---					
24		---	---	---	---	---	---					
25		---	---	---	---	---	---					
26		---	14.5	---	---	---	---					
27		---	18.5	---	---	---	---					
28		---	---	---	---	---	---					
29		---	19.0	---	---	---	---					
30		---	---	---	---	---	---					
31		---	---	---	---	---	---					
MONTH		---	---	---	---	---	---					

SANTA ANA RIVER BASIN

11075755 SANTA ANA RIVER AT BALL ROAD, IN ANAHEIM, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	0	0
2							0	0	0
3							0	0	0
4							0	0	0
5							0	0	0
6							0	0	0
7							0	0	0
8							0	0	0
9							0	0	0
10							0	0	0
11							0	0	0
12							0	0	0
13							0	0	0
14							0	0	0
15							0	0	0
16							0	0	0
17							0	0	0
18							0	0	0
19							0	0	0
20							0	0	0
21							0	0	0
22							0	0	0
23							0	0	0
24							0	0	0
25							0	0	0
26							83	2030	2510
27							21	2230	236
28							14	663	182
29							150	2830	4010
30							0	0	0
31							0	0	0
TOTAL	0	0	0	0	0	0	268.00	---	6938.00
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	0	0	0	0	0	0	3360	15700	180000
2	0	0	0	0	0	0	3880	15000	157000
3	0	0	0	7.6	46	2.8	3410	10000	92100
4	1.2	100	.32	22	42	2.7	5610	16400	285000
5	3.2	172	172	13	56	3.0	4990	9060	121000
6	9.4	417	417	1140	8190	66200	3570	5000	48200
7	1.0	50	.14	1050	5680	46500	3500	4000	37800
8	0	0	0	299	3590	6380	2570	2500	17300
9	.92	75	.19	2770	14000	102000	3130	3500	29600
10	21	884	122	3030	28000	229000	3110	3200	26900
11	7.9	558	33	1720	5240	26400	3150	2800	23800
12	0	0	0	1600	4200	18100	3130	2500	21100
13	0	0	0	1300	3500	12300	2650	2000	14300
14	10	584	47	2100	4000	22700	473	800	1020
15	346	3540	5150	2000	3000	16200	2660	2000	14400
16	325	2540	9290	1800	2800	13600	2340	1700	10700
17	483	2600	4440	1500	2200	8910	90	100	24
18	745	1620	4010	1400	2000	7560	2.2	30	.18
19	806	2000	4890	1000	1500	4050	2.2	40	.24
20	264	631	585	750	1000	2030	2.2	40	.24
21	10	178	7.2	450	700	850	3.7	150	1.5
22	4.2	231	15	250	520	351	143	752	565
23	20	371	47	150	350	142	133	644	370
24	0	0	0	125	300	101	27	375	27
25	0	0	0	175	300	142	290	581	452
26	20	415	40	150	250	101	369	350	349
27	37	261	29	150	250	101	569	416	815
28	42	325	37	500	---	8000	994	580	1630
29	32	200	15	---	---	---	393	275	292
30	0	0	0	---	---	---	453	623	996
31	0	0	0	---	---	---	740	750	1500
TOTAL	3188.82	---	29346.85	25451.60	---	591726.5	55744.3	---	1087242

11075755 SANTA ANA RIVER AT BALL ROAD, IN ANAHEIM, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL				MAY			JUNE	
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	663	650	1160	.04	10				
2	645	600	1040	0	0				
3	486	520	682	0	0				
4	393	470	499	0	0				
5	26	140	9.8	0	0				
6	83	529	349	0	0				
7	566	686	1280	0	0				
8	295	470	374	0	0				
9	315	310	264	0	0				
10	347	250	234	0	0				
11	457	310	383	0	0				
12	846	1500	3430	0	0				
13	701	900	1700	0	0				
14	645	610	1060	0	0				
15	645	490	853	0	0				
16	701	420	795	0	0				
17	545	400	589	0	0				
18	964	1500	3900	0	0				
19	1040	1200	3370	0	0				
20	915	1050	2590	0	0				
21	892	950	2290	0	0				
22	939	870	2210	0	0				
23	1010	1000	2730	0	0				
24	1240	1200	4020	0	0				
25	1040	680	1910	0	0				
26	868	460	1080	0	0				
27	760	350	718	0	0				
28	661	300	535	0	0				
29	59	100	16	0	0				
30	.04	30	0	0	0				
31	---	---	---	0	0				
TOTAL	18747.04	---	40070.80	.04	---	0	0	0	0
YEAR	103400		1755300						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	0.0	0.0	0	0
NOVEMBER ...	0.0	0.0	0	0
DECEMBER ...	268.00	6938.00	129	7070
JANUARY 1978	3188.82	29346.85	4650	34000
FEBRUARY ...	25451.60	591726.50	92100	684000
MARCH	55744.30	1087242.16	341000	1430000
APRIL	18747.04	40070.80	25200	65300
MAY	0.04	0.0	0	0
JUNE	0.0	0.0	0	0
JULY	0.0	0.0	0	0
AUGUST	0.0	0.0	0	0
SEPTEMBER ..	0.0	0.0	0	0
TOTAL	103399.80	1755324.31	461079	2220370

SANTA ANA RIVER BASIN

11075755 SANTA ANA RIVER AT BALL ROAD, IN ANAHEIM, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPERATURE (DEG C)	STREAM-FLOW, INSTANTANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	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
DEC										
26...	0930	14.5	1.0	34	.09	--	--	--	--	--
29...	1430	19.0	3.0	554	4.5	--	--	--	--	--
FEB										
05...	1420	15.5	18	77	3.7	--	--	--	--	--
09...	1415	15.5	510	7830	10800	34	43	52	59	71
10...	0940	--	3020	35200	287000	38	53	67	78	--
11...	1040	14.5	1860	6910	34700	34	37	47	58	67
MAR										
04...	1515	16.0	6430	20600	358000	16	18	23	30	--
05...	1345	--	14200	13700	525000	31	42	52	63	73
17...	1030	18.5	115	109	34	--	--	--	--	--
APR										
07...	1445	16.0	266	485	348	--	--	--	--	--

[illegible]

SANTA ANA RIVER BASIN

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11075800 SANTIAGO CREEK AT MODJESKA, CA

LOCATION.--Lat 33°42'32", long 117°38'05", in SE¼SE¼NW¼ sec.29, T.5 S., R.7 W., Orange County, on right bank at Santiago Canyon road bridge, 0.3 mi (0.5 km) west of Modjeska, and 0.4 mi (0.6 km) downstream from Harding Creek.

DRAINAGE AREA.--12.5 mi² (32.4 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,254.35 ft (382.326 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 10, 1969, at datum 4.42 ft (1.347 m) higher.

REMARKS.--Records poor. Slight regulation by Modjeska Reservoir on Harding Creek. No diversion above station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--17 years, 7.31 ft³/s (0.207 m³/s), 5,300 acre-ft/yr (6.54 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft³/s (185 m³/s) Feb. 25, 1969, gage height, 10.50 ft (3.200 m), present datum, from rating curve extended above 840 ft³/s (23.8 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in each year.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 10	2200	144	4.08	4.00	1.219	Feb. 9	1430	*1550	43.9	6.70	2.042
Jan. 15	0300	972	27.5	5.82	1.774	Mar. 1	Unknown	1500	42.5	Unknown	
Jan. 19	0900	348	9.86	4.57	1.393						

Minimum daily discharge, no flow Oct. 1 to Dec. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	10	8.1	900	25	13	5.8	1.9	.80	.40
2			0	7.6	6.6	600	24	13	5.6	1.8	.78	.39
3			0	7.6	7.1	700	24	13	5.3	1.8	.76	.39
4			0	23	6.6	500	23	13	5.1	1.7	.74	.38
5			0	82	7.1	350	22	13	4.9	1.7	.71	.37
6			0	85	9.2	235	22	13	4.7	1.6	.70	.37
7			0	59	20	144	21	13	4.5	1.6	.68	.36
8			0	40	48	112	21	13	4.3	1.5	.66	.35
9			0	37	938	72	20	13	4.1	1.5	.64	.35
10			0	80	512	41	20	13	4.0	1.5	.62	.34
11			0	104	360	44	19	12	3.8	1.4	.60	.34
12			0	80	210	44	19	12	3.7	1.4	.59	.33
13			0	68	130	38	18	12	3.5	1.4	.58	.33
14			0	74	80	39	18	11	3.3	1.3	.56	.32
15			0	624	69	34	18	11	3.2	1.3	.54	.32
16			0	463	63	31	17	12	3.1	1.2	.53	.31
17			0	332	50	28	17	11	3.0	1.2	.52	.30
18			.15	156	27	26	17	11	2.9	1.2	.51	.30
19			.09	87	19	26	16	10	2.7	1.1	.50	.29
20			.08	39	17	26	16	9.5	2.6	1.1	.49	.29
21			.07	32	15	24	16	9.2	2.5	1.1	.48	.28
22			.07	25	14	27	15	8.7	2.4	1.0	.47	.28
23			.06	21	13	28	15	8.4	2.3	1.0	.47	.27
24			.06	16	12	25	15	8.0	2.2	.99	.46	.27
25			.08	15	11	22	15	7.8	2.2	.97	.45	.26
26			.18	12	10	22	14	7.5	2.1	.94	.45	.26
27			.16	11	21	22	14	7.1	2.1	.92	.44	.25
28			10	10	39	24	14	6.8	2.0	.89	.43	.25
29			30	9.2	---	24	14	6.6	2.0	.86	.42	.24
30			18	8.6	---	24	14	6.3	1.9	.84	.41	.24
31		---	12	8.1	---	28	---	6.0	---	.82	.41	---
TOTAL	0	0	71.00	2626.1	2722.7	4260	543	323.9	101.8	39.53	17.40	9.43
MEAN	0	0	2.29	84.7	97.2	137	18.1	10.4	3.39	1.28	.56	.31
MAX	0	0	30	624	938	900	25	13	5.8	1.9	.80	.40
MIN	0	0	0	7.6	6.6	22	14	6.0	1.9	.82	.41	.24
AC-FT	0	0	141	5210	5400	8450	1080	642	202	78	35	19
CAL YR 1977	TOTAL	243.96	MEAN	.67	MAX	30	MIN	0	AC-FT	484		
WTR YR 1978	TOTAL	10714.86	MEAN	29.4	MAX	938	MIN	0	AC-FT	21250		

SANTA ANA RIVER BASIN

11077500 SANTIAGO CREEK AT SANTA ANA, CA

LOCATION.--Lat 33°46'13", long 117°53'01", in NW¼SW¼NW¼ sec.1, T.5 S., R.10 W., Orange County, on left bank 127 ft (39 m) upstream from Bristol Street bridge at Santa Ana, and 1,700 ft (520 m) upstream from mouth at Santa Ana River.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--98.6 mi² (255.4 km²).

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1315-B.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 105.00 ft (32.004 m) Orange County Environmental Management Agency datum. Prior to Sept. 8, 1969, at site 0.1 mi (0.2 km) upstream at different datum. Prior to July 21, 1976, at site 127 ft (39 m) downstream at datum 2.66 ft (0.811 ft) lower.

REMARKS.--Records fair. Flow regulated by Santiago Reservoir, capacity, 25,000 acre-ft (30.8 hm³), since January 1963 by Villa Park flood-control reservoir, capacity, 15,500 acre-ft (19.1 hm³), and affected by intervening gravel pits. Diversions above station by Irvine Co. and Serrano and Carpenter Irrigation Districts. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--50 years, 5.25 ft³/s (0.149 m³/s), 3,800 acre-ft/yr (4.69 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,600 ft³/s (187 m³/s) Feb. 25, 1969, gage height, 9.10 ft (2.774 m), site and datum then in use; maximum gage height, 9.85 ft (3.002 m) Jan. 16, 1952; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) Mar. 4, gage height, 6.80 ft (2.073 m); no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	0	0	0	0	531	0	0			0	0
2	.61	0	0	0	0	1360	.46	0			0	0
3	0	0	0	19	0	1170	0	0			0	0
4	0	0	0	24	0	1480	4.7	0			0	0
5	0	0	0	59	17	1570	0	0			0	8.5
6	0	0	0	42	31	692	30	0			0	.05
7	0	0	0	0	37	89	13	0			0	0
8	0	0	0	0	24	.02	.73	0			0	0
9	0	0	0	35	115	8.5	0	0			0	0
10	0	0	0	50	93	269	0	0			0	0
11	0	0	0	0	0	210	0	0			0	0
12	0	0	0	0	43	332	0	0			.06	0
13	0	0	0	0	17	106	0	0			0	0
14	0	0	0	56	0	11	0	0			0	0
15	0	0	0	40	105	0	1.3	0			0	0
16	.07	0	0	96	104	0	.03	0			0	0
17	0	0	0	4.0	2.2	0	0	0			0	0
18	0	0	2.9	0	0	0	0	0			0	0
19	0	0	0	39	0	0	0	.06			0	0
20	0	0	0	0	0	0	0	0			0	0
21	0	0	0	0	0	0	0	0			0	0
22	0	.26	0	0	0	8.8	0	0			0	0
23	0	0	0	0	0	0	0	.03			0	0
24	0	0	0	0	0	0	0	.05			0	0
25	0	0	.56	0	0	0	0	.12			0	0
26	0	0	28	0	.40	0	0	.21			0	0
27	0	0	0	0	.02	0	0	.17			0	0
28	0	0	13	0	73	0	0	.05			0	0
29	0	0	74	0	---	0	0	0			0	0
30	0	0	0	0	---	0	0	0			0	0
31	0	---	0	0	---	8.7	---	0	---		0	---
TOTAL	.77	.26	118.46	464.0	661.62	7846.02	50.22	.69	0	0	.06	8.55
MEAN	.025	.009	3.82	15.0	23.6	253	1.67	.022	0	0	.002	.29
MAX	.61	.26	74	96	115	1570	30	.21	0	0	.06	8.5
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	1.5	.5	235	920	1310	15560	100	1.4	0	0	.1	17
CAL YR 1977	TOTAL	311.52	MEAN	.85	MAX	74	MIN	0	AC-FT	618		
WTR YR 1978	TOTAL	9150.65	MEAN	25.1	MAX	1570	MIN	0	AC-FT	18150		

11077500 SANTIAGO CREEK AT SANTA ANA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

SEDIMENT RECORDS: Water year 1974 to September 1978, partial-record station (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC								
26...	1015	15.5	63	154	26	--	--	--
26...	1330	16.5	12	26	.84	--	--	--
29...	1115	--	8.1	184	4.0	--	--	--
FEB								
06...	0940	15.5	119	201	65	--	--	--
06...	1020	15.5	156	261	110	33	44	53
MAR								
03...	1540	16.0	1190	1610	5170	14	17	22

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
DEC								
26...	--	--	53	72	75	96	100	--
26...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
FEB								
06...	--	--	--	--	--	--	--	--
06...	63	73	83	90	90	98	99	100
MAR								
03...	27	34	40	48	60	81	96	99

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NUMBER OF SAM- PLING POINTS	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
JUL										
17...	1140	3	.00	2	4	10	27	61	91	100

SANTA ANA RIVER BASIN

11078000 SANTA ANA RIVER AT SANTA ANA, CA

LOCATION.--Lat 33°44'56", long 117°54'30", in NW¼SW¼SE¼ sec.10, T.5 S., R.10 W., Orange County, on pier of Fifth Street Bridge in Santa Ana, 1.8 mi (2.9 km) downstream from Santiago Creek.

DRAINAGE AREA.--1,700 mi² (4,403 km²), excludes 768 mi² (1,989 km²) above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1923 to current year.

REVISED RECORDS.--WDR CA-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.20 ft (21.702 m) Orange County datum. Jan. 3, 1923, to Jan. 24, 1929, at same site at different datum. Jan. 25, 1929, to June 20, 1948, at site 450 ft (137 m) upstream at different datum. June 21, 1948, to May 2, 1960, at same site at different datum. Feb. 28, 1961, to Oct. 1, 1961, at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair above 100 ft³/s (2.83 m³/s) and poor below. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, return flow from irrigation. Since 1940, natural flow affected by Prado flood-control reservoir, capacity, 201,200 acre-ft (248 hm³), three small flood-control reservoirs, combined capacity, 31,900 acre-ft (39.3 hm³), Big Bear Lake (station 11049000), and Santiago Reservoir, capacity, 25,000 acre-ft (30.8 hm³). Discharge up to 100 ft³/s (2.83 m³/s) can be diverted from Carbon Creek to Coyote Creek 1.5 mi (2.4 km) upstream from mouth of Carbon Creek. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--17 years (water years 1924-40), 23.4 ft³/s (0.663 m³/s), 16,940 acre-ft/yr (20.9 hm³/yr); 38 years (unadjusted for storage since 1940) 34.4 ft³/s (0.974 m³/s) 24,910 acre-ft/yr (30.7 hm³/yr).

COOPERATION.--Four discharge measurements were furnished by Orange County Environmental Management Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,300 ft³/s (1,310 m³/s) Mar. 3, 1938, gage height, 10.20 ft (3.109 m), site and datum then in use, on basis of slope-area measurement of maximum flow; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,100 ft³/s (456 m³/s) Mar. 4, gage height, 6.47 ft (1.972 m); no flow many days during the year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	4.0	.59	4100	549	7.7	.04	.03		
2			0	2.0	.48	6000	589	5.0	.04	.03		
3			0	.79	.40	4508	475	3.0	.04	.03		
4			0	109	.40	6330	462	2.0	.04	.02		
5			0	148	92	6170	40	1.0	.04	.02		
6			0	126	760	3960	110	.50	.04	.02		
7			0	7.2	767	3450	645	.20	.04	.02		
8			0	.16	597	2660	348	.10	.03	.01		
9			0	127	2130	2940	300	.05	.03	.01		
10			0	212	3300	3400	333	.04	.03	.01		
11			0	21	2550	3630	412	.04	.03	.01		
12			0	.32	2390	3620	744	.04	.03	.01		
13			0	.16	2060	2730	613	.04	.03	.01		
14			0	150	2040	490	573	.04	.03	.01		
15			0	288	2100	2980	699	.04	.03	0		
16			0	252	1920	2340	655	.04	.03	0		
17			0	432	1320	90	647	.04	.03	0		
18			17	477	1350	2.0	873	.04	.03	0		
19			0	470	1000	2.0	894	.04	.03	0		
20			0	176	700	2.0	873	.04	.03	0		
21			0	5.0	400	3.8	735	.04	.03	0		
22			0	4.5	200	145	772	.04	.03	0		
23			0	7.2	125	130	831	.04	.03	0		
24			0	.84	110	30	898	.04	.03	0		
25			3.5	.48	150	290	831	.04	.03	0		
26			207	3.9	125	339	717	.04	.03	0		
27			54	11	125	471	772	.04	.03	0		
28			21	10	600	894	716	.04	.03	0		
29			372	14	---	482	50	.04	.03	0		
30			15	3.3	---	454	10	.04	.03	0		
31		---	8.0	1.0	---	759	---	.04	---	0	---	---
TOTAL	0	0	697.5	3142.06	26912.87	63393.8	17166	20.43	.97	.24	0	0
MEAN	0	0	22.5	101	961	2045	572	.66	.032	.008	0	0
MAX	0	0	372	477	3300	6330	898	7.7	.04	.03	0	0
MIN	0	0	0	.16	.40	2.0	10	.04	.03	0	0	0
AC-FT	0	0	1380	6230	53380	125700	34050	41	1.9	.5	0	0
CAL YR 1977	TOTAL	1936.75	MEAN	5.31	MAX	372	MIN	0	AC-FT	3840		
WTR YR 1978	TOTAL	111333.87	MEAN	305	MAX	6330	MIN	0	AC-FT	220800		

11078000 SANTA ANA RIVER AT SANTA ANA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1967 to September 1969, October 1970 to September 1971, October 1972 to current year.

SEDIMENT RECORDS: October 1967 to September 1971, October 1972 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 78,000 mg/L Feb. 25, 1969; minimum daily mean, no flow for many days each year.

SEDIMENT DISCHARGE: Maximum daily, 2,670,000 tons (2,420,000 metric tons) Feb. 25, 1969; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 25,800 mg/L Feb. 10; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 295,000 tons (268,000 metric tons) Mar. 4; minimum daily, 0 tons on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	---	---	---	21.0				
2			---	---	---	15.5	---	---				
3			---	---	---	15.0	---	---				
4			---	---	---	---	---	---				
5			---	---	---	15.5	---	---				
6			---	---	---	---	---	---				
7			---	---	---	17.0	---	---				
8			---	---	---	---	---	---				
9			---	14.5	16.0	16.0	---	---				
10			---	---	13.5	---	18.0	---				
11			---	---	---	---	---	---				
12			---	---	---	14.5	---	---				
13			---	---	---	---	---	---				
14			---	---	---	---	---	---				
15			---	---	---	14.0	---	---				
16			---	---	14.0	---	---	---				
17			---	17.5	---	14.0	---	---				
18			---	14.5	---	---	---	---				
19			---	14.0	---	---	---	---				
20			---	---	---	---	---	---				
21			---	---	---	---	---	---				
22			---	---	---	---	---	---				
23			---	---	---	---	---	---				
24			---	---	---	---	---	---				
25			---	---	---	---	---	---				
26			16.5	---	---	---	---	---				
27			16.0	---	---	---	---	---				
28			---	---	---	---	---	---				
29			18.0	---	---	---	---	---				
30			---	---	---	---	---	---				
31			---	---	---	---	---	---				
MONTH			---	---	---	---	---	---				

SANTA ANA RIVER BASIN

11078000 SANTA ANA RIVER AT SANTA ANA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

OCTOBER				NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	0	0
2							0	0	0
3							0	0	0
4							0	0	0
5							0	0	0
6							0	0	0
7							0	0	0
8							0	0	0
9							0	0	0
10							0	0	0
11							0	0	0
12							0	0	0
13							0	0	0
14							0	0	0
15							0	0	0
16							0	0	0
17							0	0	0
18							17	1270	163
19							0	0	0
20							0	0	0
21							0	0	0
22							0	0	0
23							0	0	0
24							0	0	0
25							3.5	157	24
26							207	3780	3240
27							54	1280	390
28							21	200	11
29							372	2640	5500
30							15	650	26
31							8.0	400	8.6
TOTAL	0			0			697.50	---	9362.60

JANUARY				FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.0	200	2.2	.59	25	.04	4100	---	120000
2	2.0	100	.54	.48	20	.03	6000	8290	134000
3	79	4000	1840	.40	15	.02	4500	8200	90000
4	109	3300	1710	.40	10	.01	6330	14300	295000
5	148	3090	3380		1860	1560	6170	11100	191000
6	126	1860	1860	760	6600	28500	3960	6300	67400
7	7.2	500	9.7	767	4950	16300	3450	6000	55900
8	.16	100	.04	597	3920	8920	2660	4600	38400
9	127	3020	2760	2130	11400	73200	2940	11700	93000
10	212	4060	3470	3300	25800	280000	3400	8200	75300
11	21	1500	85	2550	8110	58300	3630	7340	74700
12	.32	100	.09	2390	5800	37400	3620	8000	78200
13	.16	25	.01	2060	5000	27800	2730	4860	38300
14	150	3560	3240	2040	4300	23700	490	1400	1850
15	288	5410	6000	2100	4200	23800	2980	4500	36200
16	252	4640	8740	1920	4100	21300	2340	3700	23400
17	432	5040	5880	1320	2900	10300	90	1400	340
18	477	6810	9170	1350	3200	11700	2.0	200	1.1
19	470	5250	7610	1000	2200	5940	2.0	100	.54
20	176	1020	627	700	1100	2080	2.0	50	.27
21	5.0	100	1.4	400	720	778	3.8	50	.51
22	4.5	75	.91	200	520	281	145	---	700
23	7.2	75	1.5	125	320	108	130	---	500
24	.84	25	.06	110	250	74	30	---	100
25	.48	25	.03	150	300	121	290	---	1000
26	3.9	100	1.1	125	250	84	339	---	1200
27	11	200	5.9	125	250	84	471	1120	1890
28	10	200	5.4	600	---	10300	894	1750	4220
29	14	200	7.6	---	---	---	482	1100	1430
30	3.3	100	.89	---	---	---	454	1000	1230
31	1.0	50	.14	---	---	---	759	2300	4980
TOTAL	3142.06	---	56409.51	26912.87	---	642630.1	63393.8	---	1430242

11078000 SANTA ANA RIVER AT SANTA ANA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	549	1500	2220	7.7	70	1.5	.04		2
2	589	1300	2070	5.0	60	.81	.04		2
3	475	1200	1540	3.0	50	.41	.04		2
4	462	1530	2110	2.0	40	.22	.04		2
5	40	500	54	1.0	30	.08	.04		2
6	110	800	238	.50	25	.03	.04		2
7	645	1950	4660	.20	20	.01	.04		2
8	348	986	1110	.10	15	0	.03		2
9	300	500	405	.05	10	0	.03		2
10	333	350	315	.04	10	0	.03		2
11	412	391	478	.04	5	0	.03		2
12	744	1000	2010	.04	5	0	.03		2
13	613	750	1240	.04	5	0	.03		2
14	573	600	928	.04	5	0	.03		2
15	699	1440	3140	.04	5	0	.03		2
16	655	1100	1950	.04	5	0	.03		2
17	647	745	1310	.04	5	0	.03		2
18	873	3200	7540	.04	5	0	.03		2
19	894	3200	7720	.04	5	0	.03		2
20	873	3100	7310	.04	5	0	.03		2
21	735	3100	6150	.04	2	0	.03		2
22	772	3000	6250	.04	2	0	.03		2
23	831	3000	6730	.04	2	0	.03		2
24	898	3390	8290	.04	2	0	.03		2
25	831	3000	6730	.04	2	0	.03		2
26	717	3000	5810	.04	2	0	.03		2
27	772	3000	6250	.04	2	0	.03		2
28	716	2750	5600	.04	2	0	.03		2
29	50	200	27	.04	2	0	.03		2
30	10	100	2.7	.04	2	0	.03		2
31	---	---	---	.04	2	0	---	---	---
TOTAL	17166	---	100187.7	20.43	---	3.06	.97	---	0

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	.03	2							
2	.03	2							
3	.03	2							
4	.02	2							
5	.02	2							
6	.02	2							
7	.02	2							
8	.01	2							
9	.01	2							
10	.01	2							
11	.01	2							
12	.01	2							
13	.01	2							
14	.01	2							
15	0	0							
16	0	0							
17	0	0							
18	0	0							
19	0	0							
20	0	0							
21	0	0							
22	0	0							
23	0	0							
24	0	0							
25	0	0							
26	0	0							
27	0	0							
28	0	0							
29	0	0							
30	0	0							
31	0	0							
TOTAL	.24	---	0	0			0		

YEAR 111333.87

2238835.39

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	0.0	0.0	0	0
NOVEMBER ...	0.0	0.0	0	0
DECEMBER ...	697.50	9362.60	1790	11200
JANUARY 1978	3142.06	56409.51	8850	65300
FEBRUARY ...	26912.87	642630.10	162000	804000
MARCH	63393.80	1430242.42	412000	1840000
APRIL	17166.00	100187.70	20400	121000
MAY	20.43	3.06	0	3
JUNE	0.97	0.0	0	0
JULY	0.24	0.0	0	0
AUGUST	0.0	0.0	0	0
SEPTEMBER ..	0.0	0.0	0	0
TOTAL	111333.87	2238835.39	605040	2841503

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC											
26...	1300	--	334	4390	3960	--	11	14	18	24	--
27...	0950	16.0	28	1400	106	--	--	--	--	--	--
27...	1315	20.0	11	418	12	--	--	--	--	--	--
29...	1430	18.0	103	1410	392	--	--	--	--	--	--
JAN											
06...	1400	--	516	1090	1520	--	--	--	--	--	--
18...	1630	14.5	134	5970	2160	--	--	--	--	--	--
FEB											
05...	1530	--	58	972	152	--	--	--	--	--	--
10...	0815	13.5	3100	36000	301000	--	--	--	--	--	--
10...	0930	13.5	3200	36100	312000	--	39	53	68	80	--
16...	1745	14.0	1860	3820	19200	--	19	21	27	37	49
MAR											
03...	1220	17.0	3090	4580	38200	--	13	14	22	28	35
05...	0950	15.5	5260	7320	104000	--	19	26	33	42	53
05...	1015	15.0	5550	10700	160000	--	--	--	--	--	--
09...	1230	16.0	2830	12400	94700	--	--	--	--	--	--
09...	1720	14.5	2610	10900	76800	--	--	--	--	--	--
17...	0830	14.0	180	1370	666	--	--	--	--	--	--
APR											
10...	1350	18.0	339	347	318	26	34	43	56	69	--
MAY											
01...	1045	21.0	7.7	68	1.4	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

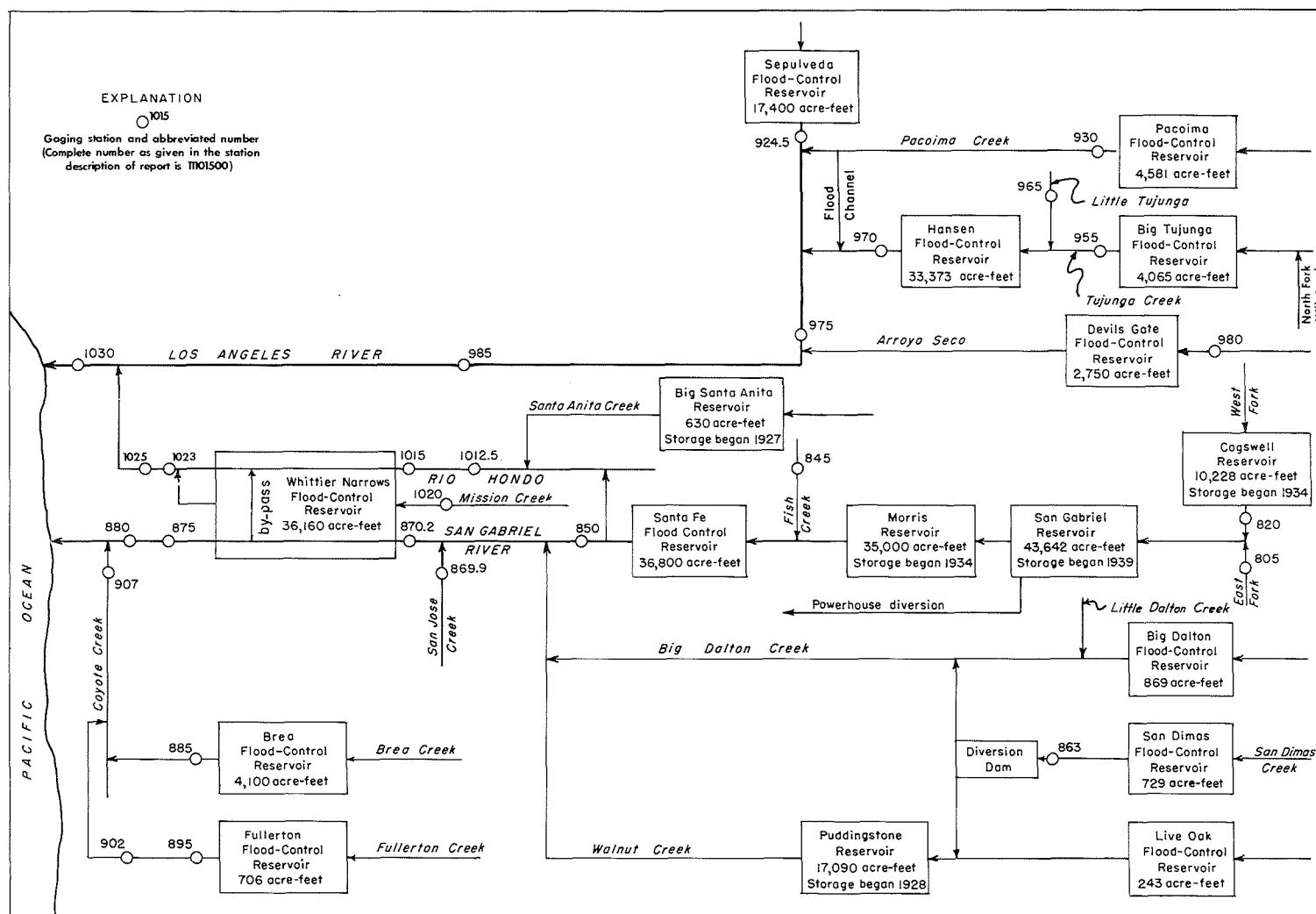


Figure 6.--Schematic diagram showing diversions and storage in San Gabriel and Los Angeles River basins.

LOCATION. --Lat 34°14'09", long 117°48'18", in NE¼NE¼ sec.27, T.2 N., R.9 W., Los Angeles County, on right bank 1,600 ft (490 m) upstream from mouth of Graveyard Canyon, 2.5 mi (4.0 km) upstream from confluence with West Fork, and 2.5 mi (4.0 km) west of Camp Bonita.

PERIOD OF RECORD.--December 1932 to current year. Prior to 1940, published as San Gabriel River near Camp Bonita.

REMARKS.--Records fair. No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 46,000 ft³/s (1,300 m³/s) Mar. 2, 1938, from rating curve extended above 21,300 ft³/s (603 m³/s), computed by Geological Survey; minimum 1.5 ft³/s (0.042 m³/s) Oct. 1, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,640 ft³/s (443 m³/s) estimated, Mar. 4, gage height, 16.49 ft (5.026 m); minimum daily, 11.0 ft³/s (0.31 m³/s) Dec. 5-11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	12	78	141	2380	677	403	255	138	83	47
2	14	14	12	66	119	3160	605	391	255	132	81	54
3	14	14	12	66	113	2200	539	390	274	125	81	58
4	14	14	12	150	105	5200	555	382	219	142	81	45
5	13	14	11	157	118	2970	534	387	242	149	81	54
6	13	14	11	121	113	2500	550	382	241	145	77	64
7	13	14	11	105	146	1870	580	359	241	142	70	54
8	13	13	11	93	235	1870	529	351	242	135	70	51
9	13	13	11	150	4070	1430	512	342	243	125	70	49
10	13	13	11	343	6360	1170	456	338	224	119	66	47
11	12	13	11	253	2060	1110	599	324	223	115	64	47
12	12	13	12	188	1390	1040	469	326	220	115	62	47
13	13	13	12	163	1200	895	420	326	213	112	62	47
14	12	13	12	353	916	813	430	327	211	112	62	45
15	12	13	12	1350	774	742	640	329	188	112	60	43
16	13	13	13	741	675	685	477	326	188	115	58	42
17	13	13	16	684	580	646	687	308	184	119	56	42
18	13	13	30	467	525	602	519	311	192	115	54	42
19	13	13	20	391	482	576	497	382	171	112	53	39
20	14	14	18	313	438	549	482	289	163	109	53	40
21	13	14	17	266	425	550	456	288	156	106	51	40
22	12	14	17	243	406	546	457	280	148	106	51	40
23	12	13	17	212	369	664	438	282	146	98	49	40
24	12	13	16	189	357	524	434	276	145	86	49	40
25	12	13	16	186	343	490	421	263	155	86	49	40
26	12	13	74	165	310	471	441	259	124	83	49	40
27	12	12	105	171	310	456	411	256	137	98	51	40
28	13	12	909	120	809	448	412	254	138	92	51	39
29	13	12	360	153	---	438	418	257	129	81	47	39
30	13	12	174	140	---	483	409	277	124	73	49	40
31	14	---	126	146	---	888	---	247	---	79	49	---
TOTAL	399	396	2101	8223	23889	38366	15054	9912	5791	3476	1889	1355
MEAN	12.9	13.2	67.8	265	853	1238	502	320	193	112	60.9	45.2
MAX	14	14	909	1350	6360	5200	687	403	274	149	83	64
MIN	12	12	11	66	105	438	409	247	124	73	47	39
AC-FT	791	785	4170	16310	47380	76100	29860	19660	11490	6890	3750	2690
CAL YR 1977	TOTAL	11658	MEAN	31.9	MAX	909	MIN 11	AC-FT	23120			
WTR YR 1978	TOTAL	110851	MEAN	304	MAX	6360	MIN 11	AC-FT	110800			

SAN GABRIEL RIVER BASIN

11082000 WEST FORK SAN GABRIEL RIVER AT CAMP RINCON, CA

LOCATION.--Lat 34°14'28", long 117°51'45", Los Angeles County, in Angeles National Forest, on right bank 0.2 mi (0.3 km) upstream from Camp Rincon, 0.5 mi (0.8 km) downstream from North Fork, and 6 mi (10 km) downstream from Cogswell Dam.

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--October 1927 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,474.94 ft (449.562 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to July 3, 1941.

REMARKS.--Records poor. Flow partly regulated by Cogswell flood-control reservoir since 1934, capacity, 9,339 acre-ft (11.5 hm³). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--51 years, 70.4 ft³/s (1.994 m³/s), 51,000 acre-ft/yr (62.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s (963 m³/s), estimated, Mar. 2, 1938; no flow at times in 1928-29.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft³/s (453 m³/s), estimated, Mar. 4, gage height, unknown; minimum daily, 7.7 ft³/s (0.22 m³/s) Dec. 8-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	9.2	59	110	3420	779	403	209	30	48	35
2	18	17	9.6	51	95	3980	699	389	209	30	46	42
3	18	17	9.2	50	90	2850	627	383	222	33	45	44
4	18	18	8.8	111	85	7260	635	380	182	36	43	48
5	18	18	8.1	116	95	4680	569	376	199	39	44	59
6	18	18	8.1	90	91	3440	585	366	200	43	43	67
7	18	18	8.1	79	114	2520	659	349	199	46	43	63
8	18	19	7.7	70	178	2020	581	339	188	48	43	63
9	18	18	7.7	112	3020	1530	543	331	180	54	43	72
10	18	18	7.7	252	6310	1210	523	352	167	59	42	72
11	18	18	7.7	191	2410	1160	695	335	167	63	40	73
12	18	18	7.7	150	1880	1080	490	337	164	66	42	96
13	18	18	7.7	133	1710	885	360	337	160	67	43	142
14	18	17	7.7	272	1240	606	449	338	158	66	43	183
15	18	17	7.7	991	910	530	743	358	142	73	43	181
16	18	17	7.7	652	638	479	648	370	142	84	42	180
17	17	17	9.2	842	427	447	702	356	140	72	42	172
18	17	16	22	770	388	429	560	357	146	70	40	163
19	18	10	12	711	357	410	529	395	130	67	39	163
20	18	10	10	642	325	411	509	421	125	65	38	159
21	17	10	9.6	593	316	409	485	420	120	62	37	157
22	17	10	9.6	553	302	607	479	407	114	60	36	157
23	17	10	9.6	509	276	595	490	406	113	57	36	157
24	16	9.6	9.6	462	267	545	442	397	112	54	35	154
25	16	9.6	9.6	350	257	550	466	381	116	53	35	136
26	16	9.2	69	208	234	495	454	371	97	52	35	67
27	17	9.2	96	130	234	468	421	366	106	49	35	113
28	17	8.8	746	94	1200	464	432	358	107	48	34	165
29	18	8.8	179	117	---	457	426	351	101	47	34	165
30	18	8.8	81	109	---	498	413	308	97	49	34	167
31	18	---	59	113	---	1110	---	206	---	51	34	---
TOTAL	545	430.0	1461.6	9582	23559	45545	16393	11243	4512	1693	1237	3515
MEAN	17.6	14.3	47.1	309	841	1469	546	363	150	54.6	39.9	117
MAX	18	19	746	991	6310	7260	779	421	222	84	48	183
MIN	16	8.8	7.7	50	85	409	360	206	97	30	34	35
AC-FT	1080	853	2900	19010	46730	90340	32520	22300	8950	3360	2450	6970
CAL YR 1977	TOTAL	8922.7	MEAN	24.4	MAX	746	MIN	7.7	AC-FT	17700		
WTR YR 1978	TOTAL	119715.6	MEAN	328	MAX	7260	MIN	7.7	AC-FT	237500		

11082800 SAN GABRIEL RIVER AT AZUSA POWERHOUSE, AT AZUSA, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 34°09'18", long 117°54'26', in NE¼SE¼ sec.22, T.1 N., R.10 W., Los Angeles County, at tailrace of Azusa Powerhouse, and 1.0 mi (1.6 km) north of Azusa.

PERIOD OF RECORD.--Water years 1908 to 1909, 1967 to current year.

CHEMICAL ANALYSES: Water years 1908 to 1909, 1967 to current year.

COOPERATION.--Chemical-quality records were furnished by California Department of Water Resources; records of discharge were furnished by Los Angeles County Flood Control District.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT									
21...	1335	56	360	8.2	20.0	0	8.8	160	8
DEC									
02...	1525	59	360	8.1	13.0	1	10.5	170	4
JAN									
05...	1705	35	320	8.3	12.0	1	10.6	140	7
FEB									
03...	1415	70	320	8.2	11.0	40	10.8	160	12
MAR									
24...	1000	71	270	8.4	12.0	13	11.3	130	9
APR									
28...	1450	70	280	8.6	13.0	2	10.4	140	6
JUN									
05...	1520	73	280	8.3	16.0	1	9.7	140	4
26...	1740	77	310	8.4	19.0	0	8.8	150	11
JUL									
28...	1435	75	310	8.4	23.0	0	8.0	160	--
AUG									
28...	0115	73	290	8.2	19.5	2	8.7	170	0
SEP									
25...	1635	76	340	8.2	18.0	1	9.1	160	4

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CAC03)
OCT									
21...	46	12	12	13	.4	3.0	190	0	156
DEC									
02...	51	11	11	12	.4	3.0	200	0	164
JAN									
05...	42	8.0	9.0	12	.3	2.0	160	0	131
FEB									
03...	46	10	9.0	11	.3	2.0	180	0	148
MAR									
24...	40	7.9	8.0	11	.3	3.0	150	0	123
APR									
28...	41	8.6	9.0	12	.3	3.0	160	1	133
JUN									
05...	40	9.7	9.0	12	.3	2.0	170	0	139
26...	45	9.4	8.0	10	.3	2.0	170	0	139
JUL									
28...	46	11	8.0	10	.3	3.0	--	--	--
AUG									
28...	51	11	10	11	.3	3.0	210	0	172
SEP									
25...	47	10	11	13	.4	3.0	190	0	156

11082800 SAN GABRIEL RIVER AT AZUSA POWERHOUSE, AT AZUSA, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
OCT								
21...	1.9	26	3.0	.3	223	197	.14	.60
DEC								
02...	2.5	24	2.5	.4	147	203	.09	.40
JAN								
05...	1.3	22	2.0	.4	178	168	.86	3.8
FEB								
03...	1.8	24	3.0	.6	155	184	.70	3.1
MAR								
24...	1.0	17	3.7	.4	176	160	1.4	6.3
APR								
28...	.7	17	2.0	.3	147	164	.86	3.8
JUN								
05...	1.4	18	2.4	.4	176	165	.41	1.8
26...	1.1	18	3.6	.4	183	172	.41	1.8
JUL								
28...	--	19	3.2	.4	176	--	.54	2.4
AUG								
28...	2.1	23	2.2	.2	214	--	.27	1.2
SEP								
25...	1.9	18	3.4	.2	210	--	.23	1.0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)
OCT							
21...	1335	56	360	8.2	20.0	--	110
DEC							
02...	1525	59	360	8.1	13.0	--	40
JAN							
05...	1705	35	320	8.3	12.0	--	60
FEB							
03...	1415	70	320	8.2	11.0	--	40
MAR							
24...	1000	71	270	8.4	12.0	--	0
APR							
28...	1450	70	280	8.6	13.0	--	0
MAY							
16...	0935	70	--	--	--	0	--
JUN							
05...	1520	73	280	8.3	16.0	--	0
26...	1740	77	310	8.4	19.0	--	0
JUL							
28...	1435	75	310	8.4	23.0	--	0
AUG							
28...	0115	73	290	8.2	19.5	--	0
SEP							
25...	1635	76	340	8.2	18.0	--	0

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT						
21...	--	--	--	--	--	--
DEC						
02...	--	--	--	--	--	--
JAN						
05...	--	--	--	--	--	--
FEB						
03...	--	--	--	--	--	--
MAR						
24...	--	--	--	--	--	--
APR						
28...	--	--	--	--	--	--
MAY						
16...	0	0	0	0	.0	10
JUN						
05...	--	--	--	--	--	--
26...	--	--	--	--	--	--
JUL						
28...	--	--	--	--	--	--
AUG						
28...	--	--	--	--	--	--
SEP						
25...	--	--	--	--	--	--

11084500 FISH CREEK NEAR DUARTE, CA

LOCATION.--Lat 34°09'57", long 117°55'24", in SW¼SW¼SW¼ sec.15, T.1 N., R.10 W., Los Angeles County, on left bank 0.8 mi (1.3 km) upstream from mouth of canyon, and 3.2 mi (5.1 km) northeast of Duarte.

DRAINAGE AREA.--6.36 mi² (16.47 km²).

GAGE.--Water-stage recorder. Broad-crested weir since July 1917, restored in December 1938. Datum of gage is 905.9 ft (276.12 m) National Geodetic Vertical Datum of 1929. See WSP 1315-B for history of changes prior to Dec. 7, 1938. Dec. 7, 1938, to Oct. 3, 1951, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair. No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--61 years (water years 1918-78), 4.64 ft³/s (0.131 m³/s), 3,360 acre-ft/yr (4.14 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Jan. 25, 1969, gage height, 11.98 ft (3.652 m), from inside gage, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurement of maximum flow; maximum gage height, about 14.5 ft (4.42 m) Feb. 11, 16, 1959 (from debris wave); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Feb. 10, gage height, 5.87 ft (1.789 m); minimum daily, 0.13 ft³/s (0.004 m³/s) Oct. 5-15, Nov. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.19	.76	4.0	6.2	269	29	19	8.5	4.4	2.4	1.9
2	.17	.19	.76	4.1	4.4	324	27	18	8.1	4.1	2.5	1.9
3	.17	.29	.91	4.0	3.7	115	23	17	8.1	4.1	2.6	1.9
4	.15	.34	1.1	10	3.5	349	29	16	7.4	4.1	2.8	1.8
5	.13	.34	.76	7.4	4.3	147	24	16	7.2	4.1	2.6	4.2
6	.13	.34	.39	12	7.4	95	17	15	7.2	3.7	2.8	5.8
7	.13	.24	.39	12	10	75	13	14	6.2	3.7	2.6	4.1
8	.13	.17	.44	11	12	63	7.6	14	6.6	3.7	2.6	3.4
9	.13	.17	.44	19	287	54	7.6	13	6.6	3.7	2.6	3.1
10	.13	.15	.44	49	386	49	8.5	13	6.4	3.1	2.6	3.0
11	.13	.13	.48	31	71	46	9.4	14	6.4	3.0	2.6	3.0
12	.13	.13	.53	16	52	43	10	12	5.8	2.9	2.5	3.0
13	.13	.15	.53	15	65	43	11	11	5.8	3.1	2.5	3.0
14	.13	.17	.53	35	54	42	11	11	5.8	3.1	2.5	3.1
15	.13	.15	.53	128	35	42	30	11	5.8	3.1	2.4	2.9
16	.15	.15	.58	69	29	44	27	10	5.8	2.9	2.4	2.8
17	.17	.15	.76	70	28	42	20	8.9	5.8	2.9	2.3	2.8
18	.17	.19	2.8	40	31	38	17	8.2	5.8	2.9	2.2	2.6
19	.17	.29	1.1	29	30	34	16	7.7	5.8	3.1	2.2	2.2
20	.17	.29	.83	23	28	31	16	7.8	5.2	3.1	2.1	2.0
21	.17	.24	.83	19	27	34	17	7.6	5.2	3.0	2.1	1.9
22	.17	.24	.99	15	27	44	19	7.2	5.2	3.0	2.1	1.8
23	.17	.24	1.2	14	26	34	18	7.4	5.2	2.9	2.1	1.8
24	.17	.19	1.1	13	25	28	18	6.6	4.8	2.9	2.0	1.6
25	.17	.19	.99	13	24	25	19	6.4	4.8	2.9	1.9	1.5
26	.17	.19	9.1	11	24	26	21	6.6	4.6	2.8	1.9	1.5
27	.17	.17	7.0	10	24	26	21	9.6	4.6	2.8	1.9	1.4
28	.19	.17	68	9.2	41	24	21	10	4.6	2.8	1.9	1.5
29	.19	.17	6.2	8.3	---	22	21	9.4	4.6	2.6	1.9	1.5
30	.19	.17	5.6	7.4	---	24	20	8.1	4.4	2.6	1.9	1.5
31	.19	---	4.1	6.8	---	41	---	8.1	---	2.8	1.9	---
TOTAL	4.94	6.19	120.17	715.2	1365.5	2273	548.1	343.6	178.3	99.9	71.4	74.5
MEAN	.16	.21	3.88	23.1	48.8	73.3	18.3	11.1	5.94	3.22	2.30	2.48
MAX	.24	.34	68	128	386	349	30	19	8.5	4.4	2.8	5.8
MIN	.13	.13	.39	4.0	3.5	22	7.6	6.4	4.4	2.6	1.9	1.4
AC-FT	9.8	12	238	1420	2710	4510	1090	682	354	198	142	148
CAL YR 1977 TOTAL	458.60			MEAN 1.26	MAX 68	MIN 0	AC-FT 910					
WTR YR 1978 TOTAL	5800.80			MEAN 15.9	MAX 386	MIN .13	AC-FT 11510					

SAN GABRIEL RIVER BASIN

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA

LOCATION.--Lat 34°06'44", long 117°58'07", in SE&NE&SW¼ sec.6, T.1 S., R.10 W., Los Angeles County, on left bank at stilling basin of outlet of Santa Fe flood-control dam, 500 ft (150 m) downstream from axis of dam, and 1.7 mi (2.7 km) north of Baldwin Park.

DRAINAGE AREA.--236 mi² (611 km²).

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft (121.920 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair. Flow regulated by Cogswell and San Gabriel flood-control reservoirs, combined capacity, 53,870 acre-ft (66.4 hm³), Morris Reservoir, capacity, 35,000 acre-ft (43.2 hm³), and Santa Fe flood-control reservoir, capacity, 32,640 acre-ft (40.2 hm³). Diversions above station for irrigation, power development, and ground-water replenishment. At times water diverted from side of stilling basin to headwaters of Rio Hondo; 40,700 acre-ft (50.2 hm³) were diverted during current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversions to Rio Hondo were furnished by Los Angeles County Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,900 ft³/s (875 m³/s) Jan. 26, 1969, gage height, 22.20 ft (6.767 m); no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,200 ft³/s (402 m³/s) Mar. 5, gage height, 18.22 ft (5.553 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	2.2	689	5580	2630	226	232	.70		0
2			0	.28	400	7100	2120	232	214	.70		0
3			0	0	0	6790	689	232	192	.11		0
4			0	0	0	8510	197	226	175	.15		0
5			0	0	181	12800	232	226	159	.22		0
6			0	0	197	8510	246	220	139	.05		0
7			0	0	380	4360	726	220	135	.02		3.0
8			0	0	250	3910	1020	220	250	0		5.0
9			0	0	0	3530	1010	220	450	0		5.0
10			0	12	140	1950	534	214	430	0		5.0
11			0	9.4	2220	941	203	197	130	0		.40
12			0	0	4460	1010	203	170	50	0		0
13			0	0	4460	1140	197	135	20	0		0
14			0	0	4430	1250	186	6.6	8.0	0		0
15			0	0	3260	1260	600	1.7	3.0	0		0
16			0	0	1340	888	1420	144	1.5	0		0
17			0	0	347	511	652	144	.70	0		0
18			0	17	421	518	238	119	.70	0		0
19			2.8	42	373	503	261	98	.70	0		0
20			0	154	380	487	380	85	.70	0		0
21			0	186	421	472	534	74	.70	0		0
22			0	160	421	393	866	82	.70	0		0
23			0	291	495	267	825	140	.70	0		0
24			0	297	495	244	575	160	.70	0		0
25			0	386	495	203	360	80	.70	0		0
26			0	428	495	181	373	150	.70	0		0
27			0	414	495	165	321	285	.70	0		0
28			0	457	1810	149	279	279	.70	0		0
29			0	503	---	149	309	255	.70	0		0
30			1.3	626	---	428	285	238	.70	0		0
31		---	5.1	698	---	2210	---	238	---	0		---
TOTAL	0	0	9.2	4682.88	29055	76409	18471	5317.3	2598.30	1.95	0	18.40
MEAN	0	0	.30	151	1038	2465	616	172	86.6	.063	0	.61
MAX	0	0	5.1	698	4460	12800	2630	285	450	.70	0	5.0
MIN	0	0	0	0	0	149	186	1.7	.70	0	0	0
AC-FT	0	0	18	9290	57630	151600	36640	10550	5150	3.9	0	36

CAL YR 1977 TOTAL 110.77 MEAN .30 MAX 21 MIN 0 AC-FT 220
WTR YR 1978 TOTAL 136563.03 MEAN 374 MAX 12800 MIN 0 AC-FT 270900

11086300 SAN DIMAS CREEK BELOW SAN DIMAS DAM, CA

LOCATION.--Lat 34°09'10", long 117°46'18", in SW¼SE¼ sec.24, T.1 N., R.9 W., Los Angeles County, on left bank 1,000 ft (305 m) downstream from San Dimas Dam, and 3.7 mi (6.0 km) northeast of San Dimas.

DRAINAGE AREA.--16.3 mi² (42.2 km²).

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1956 monthly discharge only, published in WSP 1735.

GAGE.--Water-stage recorder and low-flow concrete control. Datum of gage is 1,325.0 ft (403.86 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District).

REMARKS.--Records fair. Flow regulated by San Dimas flood-control reservoir, capacity, 756 acre-ft (932,000 m³) and at times by old water tunnel 150 ft (45 m) upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft³/s (121 m³/s) Jan. 25, 1969, gage height, 6.98 ft (2.128 m), from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of computation of maximum flow over dam; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 933 ft³/s (26.4 m³/s) Mar. 4, gage height, 3.16 ft (0.963 m); no flow Dec. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.16	.54	.16	8.1	174	75	43	.82	.36	.40	.96
2	.28	.16	.54	.16	.32	413	35	42	.40	.36	.28	.96
3	.16	.17	.54	.28	.28	313	28	42	.32	17	.28	.96
4	.20	.17	.40	.68	.28	575	48	41	.32	24	.28	9.8
5	.16	.18	.40	.20	.28	703	17	41	.32	23	.28	6.1
6	.16	.18	.36	.20	.28	459	14	40	4.2	32	.28	3.8
7	.16	.19	.36	.16	.32	297	48	40	4.0	32	.28	4.1
8	.16	.20	.36	.16	.32	227	48	40	1.1	32	.28	4.1
9	.20	.21	.36	.32	2.6	112	48	33	.82	32	.28	4.1
10	.24	.22	.40	.32	339	.54	42	46	.82	30	.28	4.4
11	.16	.23	.40	5.1	230	.20	38	46	.82	30	.28	4.8
12	.12	.25	.36	41	90	.20	38	31	.82	27	.28	4.8
13	.11	.26	.36	39	90	31	38	47	.82	28	.28	5.1
14	.09	.28	.40	6.8	90	51	40	47	.82	18	.28	5.6
15	.08	.33	.40	18	58	51	56	32	.96	.32	.28	5.6
16	.08	.50	.40	40	20	52	72	32	.82	.36	.28	6.1
17	.08	6.8	1.2	40	.28	40	48	32	.68	.36	.28	6.1
18	.16	.96	6.0	40	20	33	35	32	.68	.32	.96	5.1
19	.24	.82	.96	40	37	33	35	44	.68	.36	1.5	9.3
20	.36	.82	.68	21	37	53	35	46	.68	.36	1.1	14
21	.40	.82	.36	26	36	68	37	46	.82	.36	1.1	14
22	.32	.68	.28	25	12	65	42	45	.82	.36	1.1	14
23	.24	.68	.24	8.3	32	65	42	45	.82	.36	1.1	14
24	.28	.68	.32	30	61	51	42	42	.82	.36	1.1	14
25	.28	.68	.32	45	60	40	42	41	.96	.36	1.1	14
26	.36	.68	.32	28	58	40	43	35	.96	.36	1.1	14
27	.24	.68	.28	17	57	34	42	33	.54	.36	1.1	13
28	.24	.68	.36	14	56	42	43	32	.32	.36	1.1	13
29	.28	.68	.16	14	---	40	43	31	.32	.36	1.1	12
30	.24	.68	0	14	---	56	43	22	.36	.36	.96	12
31	.16	---	0	14	---	114	---	22	---	.36	.96	---
TOTAL	6.52	20.03	18.06	528.84	1396.06	4232.94	1257	1191	27.64	331.76	20.26	239.78
MEAN	.21	.67	.58	17.1	49.9	137	41.9	38.4	.92	10.7	.65	7.99
MAX	.40	6.8	6.0	45	339	703	75	47	4.2	32	1.5	14
MIN	.08	.16	0	.16	.28	.20	14	22	.32	.32	.28	.96
AC-FT	13	40	36	1050	2770	8400	2490	2360	55	658	40	476
CAL YR 1977 TOTAL	559.81			MEAN 1.53	MAX 26	MIN 0	AC-FT 1110					
WTR YR 1978 TOTAL	9269.89			MEAN 25.4	MAX 703	MIN 0	AC-FT 18390					

SAN GABRIEL RIVER BASIN

11086990 SAN JOSE CREEK NEAR EL MONTE, CA

LOCATION.--Lat 34°01'55", long 118°00'40", in El Monte Grant, Los Angeles County, on right bank of San Jose flood channel, 1,650 ft (503 m) upstream from Workman Mill Road, and 2.7 mi (4.3 km) southeast of El Monte.

DRAINAGE AREA, --87.8 mi² (227.4 km²).

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

GAGE.--Water-stage recorder. Channel lined in 1974 water year. Datum of gage is 248.52 ft (75.749 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District).

REMARKS.--Records poor. No regulation above station. One small diversion for ground-water recharge. At times effluent from city of Pomona's sewage reclamation plant is released to creek above Spadra and at Lemon Street. Bypass to the original San Jose Creek channel has been closed since Oct. 1, 1964. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--14 years, 35.5 ft³/s (1,005 m³/s), 25,720 acre-ft/yr (31.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) Mar. 4, 1978, gage height, 9.28 ft (2.829 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft³/s (314 m³/s) Mar. 4, gage height, 9.28 ft (2.829 m); minimum daily, 3.5 ft³/s (0.099 m³/s) Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	7.0	3.5	13	8.6	2610	33	20	9.4	11	12	12
2	8.0	7.0	6.3	13	8.6	1140	38	17	8.6	11	10	13
3	8.0	7.0	6.3	47	8.6	135	20	16	9.4	11	11	13
4	8.0	8.0	7.8	944	8.6	2740	42	15	10	11	10	13
5	7.0	28	7.8	40	131	883	20	16	10	10	12	188
6	5.0	13	7.0	201	42	119	64	15	7.8	10	13	47
7	7.0	10	7.8	16	378	63	126	15	9.4	9.4	13	22
8	9.0	10	8.6	13	401	46	26	15	9.4	9.4	11	19
9	10	10	7.8	371	2250	33	21	15	9.4	11	12	15
10	9.0	10	8.6	879	901	28	20	14	12	12	12	13
11	8.0	11	9.4	21	25	81	19	13	11	11	13	11
12	8.0	10	8.6	11	1020	33	19	13	10	11	13	10
13	8.0	10	7.0	9.4	149	25	19	13	9.4	10	12	10
14	9.0	11	6.3	864	15	25	17	13	8.8	9.4	12	10
15	9.0	10	7.0	509	11	23	223	13	9.4	11	10	10
16	9.0	10	7.8	1120	10	22	30	13	9.4	10	10	10
17	9.0	10	82	57	8.6	21	20	13	10	8.6	10	11
18	7.0	10	233	13	7.0	21	17	12	10	9.4	10	11
19	9.0	11	11	120	7.0	21	17	11	9.4	9.4	11	10
20	9.0	10	7.8	12	6.3	21	17	12	8.6	9.4	11	10
21	10	9.0	18	-10	7.0	36	17	12	8.6	10	10	9.4
22	9.0	9.0	9.4	9.4	6.3	328	17	12	9.1	10	9.4	8.6
23	10	9.0	23	8.6	6.3	23	17	12	9.6	11	8.6	10
24	10	10	10	7.0	6.3	21	16	10	10	10	10	11
25	8.0	9.0	52	8.6	6.3	21	17	11	11	8.6	12	9.4
26	9.0	9.0	832	8.6	6.3	20	16	11	11	9.4	11	7.8
27	8.0	9.0	117	7.8	24	20	16	11	11	11	11	8.6
28	9.0	9.0	1330	8.6	1040	21	16	11	11	12	11	7.8
29	9.0	8.0	37	8.6	---	21	17	10	11	13	9.4	8.6
30	9.0	9.0	26	8.6	---	35	17	9.4	11	14	10	9.4
31	10	---	13	11	---	140	---	11	---	13	11	---
TOTAL	265.0	303.0	2918.8	5370.2	6498.8	8776	974	404.4	294.7	327.0	341.4	548.6
MEAN	8.55	10.1	94.2	173	232	283	32.5	13.0	9.82	10.5	11.0	18.3
MAX	10	28	1330	1120	2250	2740	223	20	12	14	13	188
MIN	5.0	7.0	3.5	7.0	6.3	20	16	9.4	7.8	8.6	8.6	7.8
AC-FT	526	601	5790	10650	12890	17410	1930	802	585	649	677	1090
CAL YR 1977	TOTAL	9992.4	MEAN	27.4	MAX	1330	MIN	3.0	AC-FT	19820		
WTR YR 1978	TOTAL	27021.9	MEAN	74.0	MAX	2740	MIN	3.5	AC-FT	53600		

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°02'00", long 118°02'14", in La Puente Grant, Los Angeles County, on downstream side of bridge near center on Peck Road, 0.8 mi (1.3 km) downstream from San Jose flood channel, 1.2 mi (1.9 km) upstream from axis of Whittier Narrows Dam, and 1.8 mi (2.9 km) south of El Monte.

DRAINAGE AREA.--353 mi² (914 km²).

PERIOD OF RECORD.--October 1955 to September 1957, October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 220 ft (67 m), from topographic map.

REMARKS.--Records poor. Flow regulated by San Gabriel, Cogswell, and Santa Fe flood-control reservoirs, combined capacity, 90,670 acre-ft (112 hm³), several small flood-control reservoirs, combined capacity, 19,100 acre-ft (23.6 hm³), and Morris Reservoir, capacity, 35,000 acre-ft (43.2 hm³). Many diversions above station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at a site 14.9 mi (24.0 km) upstream from gage, at Metropolitan Water District aqueduct crossing on San Dimas Creek for ground-water replenishment. 40,700 acre-ft (50.2 hm³) were diverted by Los Angeles County Flood Control District from San Gabriel River below Santa Fe Dam to Rio Hondo during current year. 24,900 acre-ft (30.7 hm³) were released from Puddingstone Reservoir during current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion to Rio Hondo and from Puddingstone Reservoir were furnished by Los Angeles County Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,600 ft³/s (1,320 m³/s) Jan. 25, 1969, gage height, 10.90 ft (3.322 m); no flow for part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,800 ft³/s (873 m³/s) Mar. 4, gage height, 9.66 ft (2.944 m); no flow Oct. 1 to Dec. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	33	27	13700	2450	150	24	139	119	206
2			0	21	27	12700	2050	160	24	139	119	207
3			0	20	27	10700	1050	158	23	139	101	204
4			0	20	27	23000	190	156	23	139	64	200
5			0	120	476	17000	210	150	26	139	68	633
6			0	137	151	10500	240	150	26	139	68	215
7			0	106	990	7160	390	148	26	139	68	210
8			0	102	764	5440	1120	145	26	139	72	206
9			0	149	5770	3400	993	140	26	134	72	207
10			0	184	2960	1900	676	115	26	134	72	209
11			0	74	1920	1350	220	89	26	134	76	212
12			0	106	7510	980	212	68	26	134	76	211
13			0	102	6190	740	204	50	26	134	76	215
14			0	2600	5400	580	750	42	50	134	81	73
15			0	1890	3820	540	1550	37	72	134	120	210
16			0	3600	1430	520	1150	35	110	129	170	219
17			100	694	280	500	600	32	154	129	190	212
18			400	107	260	495	160	30	147	129	190	199
19			30	348	240	475	190	28	144	129	190	188
20			26	44	225	465	270	27	144	129	193	173
21			24	37	210	440	400	26	143	129	195	172
22			23	35	200	980	580	25	139	129	197	169
23			22	33	195	520	460	25	139	129	198	171
24			21	32	190	330	310	25	139	124	199	169
25			21	30	190	200	245	24	139	124	200	163
26			1700	30	190	175	250	24	139	124	200	161
27			100	29	279	160	220	24	139	124	202	161
28			3500	29	4540	140	190	24	139	124	202	165
29			250	29	---	140	205	24	139	124	202	190
30			110	28	---	300	180	24	139	124	205	207
31		---	60	28	---	2150	---	24	---	120	205	---
TOTAL	0	0	6387	10797	44488	117680	17715	2179	2543	4070	4390	6137
MEAN	0	0	206	348	1589	3796	591	70.3	84.8	131	142	205
MAX	0	0	3500	3600	7510	23000	2450	160	154	139	205	633
MIN	0	0	0	20	27	140	160	24	23	120	64	73
AC-FT	0	0	12670	21420	88240	233400	35140	4320	5040	8070	8710	12170
CAL YR 1977	TOTAL	14572.48	MEAN	39.9	MAX	3500	MIN	0	AC-FT	28900		
WTR YR 1978	TOTAL	216386.00	MEAN	593	MAX	23000	MIN	0	AC-FT	429200		

SAN GABRIEL RIVER BASIN

11087040 SAN GABRIEL RIVER AT WHITTIER NARROWS, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 34°01'25", long 118°03'11", in sec.5, T.2 S., R.11 W., Los Angeles County, 200 ft (60 m) southeast from end of San Gabriel Boulevard (Siphon Road), 1,000 ft (300 m) upstream from Whittier Narrows Dam, and 2.5 mi (4.0 km) northeast of Montebello.

PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES: Water years 1967 to current year.

REMARKS.--Records of discharge are given for San Gabriel River above Whittier Narrows Dam (station 11087020), 1.2 mi (1.9 km) upstream.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
JAN 05...	1610	108	510	8.2	14.0	150	9.4	150	93	63	342
FEB 03...	1305	14	650	8.5	18.0	25	10.2	210	110	66	455
MAR 02...	1420	13500	230	8.4	13.0	1250	11.1	100	19	1.7	150
24...	1105	--	370	8.7	17.0	180	9.9	160	48	16	223
APR 28...	1400	--	360	9.1	21.0	2	11.5	160	35	3.5	216
JUN 05...	1710	34	620	9.8	28.0	2	17.4	220	140	58	486
26...	1635	139	290	9.7	25.5	10	9.8	86	33	23	163
JUL 28...	1310	124	350	9.2	27.0	8	10.7	100	45	40	244
AUG 28...	1220	98	440	9.2	25.0	3	11.2	110	49	65	269
SEP 25...	1540	160	510	9.0	25.0	4	8.4	130	57	80	323

11087500 SAN GABRIEL RIVER AT PICO, CA

LOCATION.--Lat 34°00'47", long 118°03'48", in Paso de Bartolo Grant, Los Angeles County, on right levee 460 ft (140 m) downstream from San Gabriel River Parkway, 4,200 ft (1,280 m) downstream from axis of Whittier Narrows Dam, and 1.4 mi (2.3 km) northeast of Pico Rivera.

DRAINAGE AREA.--447 mi² (1,158 km²).

PERIOD OF RECORD.--October 1928 to current year. Since 1954 Colorado River water released to San Gabriel River above station. Since 1954 records not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 181.55 ft (55.336 m) National Geodetic Vertical Datum of 1929. See WSP 1735 for history of changes prior to Mar. 6, 1952. Mar. 6, 1952, to Aug. 9, 1968, at bridge 0.5 mi (0.8 km) downstream at datum 9.05 ft (2.758 m) lower.

REMARKS.--Records poor. Flow regulated by Cogswell Reservoir since 1934 and San Gabriel flood-control reservoir since 1939, combined capacity, 46,087 acre-ft (56.8 hm³), Morris Reservoir since 1934, capacity, 35,000 acre-ft (43.2 hm³), Santa Fe flood-control reservoir since October 1942, capacity, 36,800 acre-ft (45.4 hm³), Whittier Narrows flood-control reservoir since January 1956, capacity, 36,160 acre-ft (44.6 hm³), and several small flood-control reservoirs, combined capacity, 19,100 acre-ft (23.6 hm³). Diversions for irrigation, power development, and ground-water replenishment. For Colorado River water released to San Gabriel River for ground-water replenishment see station 11087020. During the current year, 40,700 acre-ft (50.2 hm³) was diverted from the San Gabriel River below Santa Fe Dam to Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s (643 m³/s) Mar. 2, 1938; no flow for periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,650 ft³/s (217 m³/s) Mar. 1, gage height, 6.26 ft (1.908 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	7.0	10	0	25	5890	2280	156	30	74	47	78
2	6.0	6.7	10	0	25	6160	2030	140	27	73	34	76
3	6.4	6.7	10	0	14	5990	737	140	26	116	5.0	78
4	8.1	7.0	10	50	15	6630	337	133	25	136	5.0	80
5	7.4	7.8	10	208	158	6290	235	136	26	129	4.5	480
6	6.7	13	10	168	109	5240	211	127	37	100	4.5	242
7	6.7	7.0	2.0	140	88	4350	773	120	47	96	4.0	90
8	6.7	7.0	0	20	142	4490	995	120	64	98	4.0	96
9	6.7	8.0	0	115	276	4210	1030	120	168	104	3.5	94
10	6.7	8.0	0	284	248	2730	748	112	156	64	5.0	92
11	6.7	8.1	0	119	1120	1770	186	84	179	78	25	94
12	6.7	8.2	0	11	4020	1660	176	57	184	73	25	90
13	6.7	8.3	0	0	4760	1500	167	26	102	74	25	90
14	6.7	8.4	0	85	4550	1450	160	11	80	73	26	49
15	6.7	8.5	0	228	3690	1430	719	7.4	67	62	37	64
16	6.7	8.6	0	352	1840	1230	1610	7.1	163	60	67	71
17	6.7	8.7	0	238	216	676	879	28	189	57	69	136
18	5.0	8.8	60	89	315	658	174	39	175	62	67	189
19	3.0	8.9	150	78	245	667	119	33	133	58	69	221
20	5.0	9.0	0	48	228	649	281	88	106	67	67	191
21	6.0	9.1	0	0	238	674	259	98	112	69	67	186
22	6.4	9.2	0	0	252	1390	800	98	98	67	62	165
23	6.7	9.3	0	0	175	312	780	52	92	65	73	177
24	6.7	9.4	0	0	152	252	618	38	80	65	80	191
25	6.7	9.5	0	0	149	214	249	17	80	74	78	189
26	7.0	9.7	35	0	147	186	238	16	80	50	76	181
27	7.0	9.8	235	4.0	156	172	237	15	96	37	80	170
28	7.0	9.9	132	2.8	1530	145	160	16	84	58	90	110
29	7.0	10	210	2.8	---	133	194	26	80	55	88	71
30	6.7	10	74	4.4	---	493	186	19	84	55	82	71
31	7.0	---	10	46	---	2220	---	24	---	60	84	---
TOTAL	201.9	259.6	968.0	2293.0	24883	69861	17568	2103.5	2870	2309	1453.5	4112
MEAN	6.51	8.65	31.2	74.0	889	2254	586	67.9	95.7	74.5	46.9	137
MAX	8.1	13	235	352	4760	6630	2280	156	189	136	90	480
MIN	3.0	6.7	0	0	14	133	119	7.1	25	37	3.5	49
AC-FT	400	515	1920	4550	49360	138600	34850	4170	5690	4580	2880	8160
CAL YR 1977	TOTAL	8789.26	MEAN	24.1	MAX	739	MIN	0	AC-FT	17430		
WTR YR 1978	TOTAL	128882.50	MEAN	353	MAX	6630	MIN	0	AC-FT	255600		

SAN GABRIEL RIVER BASIN

11088000 SAN GABRIEL RIVER AT SPRING STREET, NEAR LOS ALAMITOS, CA

LOCATION.--Lat 33°48'43", long 118°05'24", in SE¼SE¼NW¼ sec.24, T.4 S., R.12 W., Los Angeles County, on right levee 455 ft (140 m) upstream from Spring Street bridge, 1.3 mi (2.1 km) upstream from Coyote Creek, and 1.3 mi (2.1 km) northwest of Los Alamitos.

DRAINAGE AREA.--472 mi² (1,222 km²).

PERIOD OF RECORD.--October 1927 to September 1951, October 1952 September 1977. Monthly discharge only for October 1927 to September 1936, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 11.87 ft (3.618 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). Prior to October 1952, at datum 4.82 ft (1.469 m) higher and from October 1952 to Nov. 17, 1964, at datum 0.38 ft (0.116 m) higher.

REMARKS.--Records poor. Regulation and diversions same as station 11087500. Additional diversion to percolation basin near Washington Boulevard and percolation basins in streambed. AVERAGE DISCHARGE represents flow to ocean during period of record regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--49 years, 31.7 ft³/s (0.898 m³/s), 22,970 acre-ft/yr (28.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s), estimated, Mar. 2, 1938; no flow at times in some years.

NOTE.--Record for current year will not be published due to lack of data.

11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA

LOCATION.--Lat 33°53'16", long 117°55'32", in NE¼NE¼NE¼ sec.28, T.3 S., R.10 W., Orange County, on right bank 0.2 mi (0.3 km) downstream from Brea Dam, and 1 mi (2 km) north of Fullerton.

DRAINAGE AREA.--21.6 mi² (55.9 km²).

PERIOD OF RECORD.--January 1942 to current year.

GAGE.--Water-stage recorder. V-notch sharp-crested weir since October 1946. Datum of gage is 196.67 ft (59.945 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 4, 1964, at datum 1.03 ft (0.314 m) higher.

REMARKS.--Records poor. Flow regulated by Brea flood-control reservoir, capacity, 4,100 acre-ft (506 hm³). No diversion above station. Since August 1966 low flow mostly the result of irrigation waste water from golf course 0.8 mi (1.3 km) upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

AVERAGE DISCHARGE.--36 years, 1.65 ft³/s (0.047 m³/s), 1,200 acre-ft/yr (1.48 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) Mar. 4, 1978, gage height, 6.34 ft (1.932 m), from rating curve extended above 340 ft³/s (9.63 m³/s) on basis of slope-area measurement made at gage height 6.20 ft (1.890 m); no flow for parts of some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) Mar. 4, gage height, 6.34 ft (1.932 m), from rating curve extended above 340 ft³/s (9.63 m³/s) on basis of slope-area measurement made at 6.20 ft (1.890 m); minimum daily, 0.01 ft³/s (>0.001 m³/s) Sept. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.15	.20	.40	.16	495	7.0	2.9	.62	.31	.29	.02
2	.15	.28	.18	.35	.17	242	7.6	2.9	.76	.31	.26	.01
3	.14	.25	.21	.30	.17	85	4.3	2.6	.67	.33	.22	.01
4	.14	.22	.26	75	.15	718	9.3	1.9	.62	.40	.24	.01
5	.16	.20	.21	15	23	431	4.3	2.2	.67	.29	.31	9.9
6	.16	.18	.21	71	35	101	9.9	1.8	.58	.29	.26	5.9
7	.16	.18	.20	12	69	71	27	1.6	.53	.35	.21	5.0
8	.15	.17	.20	8.0	65	54	10	1.6	.49	.26	.18	.67
9	.15	.17	.20	55	507	34	3.9	1.6	.40	.22	.12	.76
10	.16	.15	.21	109	285	25	3.3	1.4	.42	.22	.16	.72
11	.14	.17	.26	10	46	13	3.3	1.3	.58	.24	.12	.67
12	.14	.17	.24	9.0	118	12	3.3	1.3	.53	.22	.18	.72
13	.17	.20	.24	8.0	72	11	3.3	1.4	.72	.24	.16	.76
14	.17	.24	.20	93	41	9.8	3.3	1.4	.58	.18	.15	.72
15	.16	.37	.21	191	27	9.7	33	1.2	.42	.15	.16	.72
16	.16	.18	.20	179	21	8.2	10	1.0	.42	.10	.16	1.5
17	.16	.20	3.0	46	14	7.6	4.3	.90	.42	.17	.16	.42
18	.15	.21	30	17	12	7.6	3.9	.90	.44	.22	.15	.33
19	.17	.17	15	41	11	7.6	3.3	.85	.44	.24	.12	.26
20	.14	.17	6.0	17	9.7	8.2	3.3	.85	.37	.20	.18	.42
21	.16	.17	2.3	10	9.1	11	2.9	.81	.37	.20	.21	.53
22	.13	.21	.84	7.0	8.4	36	2.9	.85	.35	.20	.16	.42
23	.13	.18	13	4.3	7.9	9.3	2.6	.85	.42	.18	.29	.37
24	.14	.18	1.1	2.9	7.6	8.2	2.6	.81	.40	.18	.24	.35
25	.14	.21	5.6	1.8	7.6	6.4	2.6	.76	.42	.15	.21	.31
26	.14	.21	200	1.2	7.6	5.9	2.6	.76	.35	.29	.16	.29
27	.15	.22	9.2	.84	11	5.3	2.6	.76	.29	.26	.17	.33
28	.14	.22	120	.50	168	5.3	2.6	.72	.29	.29	.15	.25
29	.13	.21	15	.32	---	5.3	2.9	.67	.35	.21	.15	.20
30	.13	.24	3.0	.21	---	6.4	2.9	.62	.29	.21	.02	.17
31	.13	---	.42	.16	---	27	---	.67	---	.26	.02	---
TOTAL	4.62	6.08	427.89	986.28	1583.55	2476.8	184.8	39.88	14.21	7.37	5.57	32.74
MEAN	.15	.20	13.8	31.8	56.6	79.9	6.16	1.29	.47	.24	.18	1.09
MAX	.17	.37	200	191	507	718	33	2.9	.76	.40	.31	9.9
MIN	.13	.15	.18	.16	.15	5.3	2.6	.62	.29	.10	.02	.01
AC-FT	9.2	12	849	1960	3140	4910	367	79	28	15	11	65
CAL YR 1977 TOTAL	932.86			2.56	200	.12	1850					
WTR YR 1978 TOTAL	5769.79			15.8	718	.01	11440					

11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA

LOCATION.--Lat 33°53'45", long 117°53'07", in NE¼NW¼SW¼ sec.24, T.3 S., R.10 W., Orange County, on left bank of outlet channel of Fullerton Dam, 1.6 mi (2.6 km) southeast of Brea.

DRAINAGE AREA.--4.94 mi² (12.79 km²).

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (76 m), from topographic map. V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956. Prior to Dec. 3, 1971, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Flow regulated by Fullerton flood-control reservoir, capacity, 706 acre-ft (870,000 m³). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River basins.

AVERAGE DISCHARGE.--13 years (water years 1942-54), 0.19 ft³/s (0.005 m³/s), 135 acre-ft/yr (166,000 m³/yr); 24 years (water years 1955-78), 0.73 ft³/s (0.021 m³/s), 529 acre-ft/yr (652,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 313 ft³/s (8.86 m³/s) Jan. 25, 1969, gage height, 7.32 ft (2.231 m), present datum; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 263 ft³/s (7.45 m³/s) Feb. 9, gage height, 7.31 ft (2.228 m); minimum daily, 0.07 ft³/s (0.002 m³/s) Oct. 24-25, Nov. 1-2, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.07	.11	.20	.16	135	.30	.39	.12	.26	.38	.36
2	.15	.07	.12	.16	.14	74	.20	.19	.32	.32	.39	.30
3	.15	.09	.12	6.3	.14	5.4	.15	.17	.51	.28	.39	.24
4	.15	.12	.10	38	.12	111	2.8	.16	.40	.29	.43	.31
5	.14	.20	.14	11	15	155	.58	.19	.44	.30	.41	11
6	.13	.18	.12	35	29	14	2.7	.16	.42	.32	.35	7.1
7	.12	.11	.13	1.5	46	1.6	13	.14	.34	.32	.34	.43
8	.13	.10	.15	.40	19	.88	6.8	.19	.32	.21	.39	.35
9	.13	.07	.14	19	160	1.1	.39	.18	.30	.23	.40	.74
10	.15	.08	.14	58	63	.85	.31	.17	.28	.23	.40	.26
11	.14	.12	.12	3.2	2.1	2.4	.30	.20	.30	.28	.53	.28
12	.10	.17	.13	.48	22	1.1	.28	.27	.30	.24	.44	.34
13	.13	.11	.15	.40	47	.39	.31	.24	.36	.24	.36	.32
14	.14	.13	.20	30	1.4	.32	.28	.22	.37	.27	.41	.35
15	.12	.11	.22	54	1.0	.39	13	.26	.29	.23	.47	.29
16	.10	.10	.15	60	1.1	.48	1.9	.24	.29	.22	.36	.26
17	.11	.13	1.3	9.2	.85	.27	1.7	.23	.25	.33	.41	.24
18	.11	.14	8.1	.45	.57	.28	.34	.19	.25	.38	.41	.24
19	.11	.12	.17	24	.49	.28	.32	.23	.24	.30	.39	.22
20	.09	.11	.13	1.0	.38	.30	.36	.24	.29	.36	.36	.17
21	.10	.14	.37	.32	.43	.34	.35	.24	.26	.40	.41	.22
22	.10	.12	.26	.22	.30	9.4	.24	.27	.29	.28	.37	.23
23	.08	.12	9.1	.19	.24	.32	.16	.24	.28	.25	.26	.23
24	.07	.14	.72	.17	.23	.24	.25	.43	.38	.27	.30	.19
25	.07	.11	40	.21	.24	.18	.35	.73	.31	.34	.34	.22
26	.08	.11	69	.20	.42	.19	.25	.60	.29	.27	.25	.26
27	.09	.12	26	.16	3.6	.22	.19	.61	.34	.32	.24	.24
28	.10	.15	77	.17	69	.21	.19	.43	.32	.33	.27	.27
29	.09	.11	22	.18	---	.25	.19	.28	.30	.29	.27	.30
30	.08	.10	1.1	.20	---	1.4	.27	.12	.28	.33	.27	.30
31	.08	---	.26	.22	---	4.5	---	.12	---	.35	.36	---
TOTAL	3.49	3.55	257.75	354.53	483.91	522.29	48.46	8.33	9.44	9.04	11.36	26.26
MEAN	.11	.12	8.31	11.4	17.3	16.8	1.62	.27	.31	.29	.37	.88
MAX	.15	.20	77	60	160	155	13	.73	.51	.40	.53	11
MIN	.07	.07	.10	.16	.12	.18	.15	.12	.12	.21	.24	.17
AC-FT	6.9	7.0	511	703	960	1040	96	17	19	18	23	52
CAL YR 1977	TOTAL	505.86	MEAN	1.39	MAX	77	MIN	.05	AC-FT	1000		
WTR YR 1978	TOTAL	1738.41	MEAN	4.76	MAX	160	MIN	.07	AC-FT	3450		

11090200 FULLERTON CREEK AT RICHMAN AVENUE, AT FULLERTON, CA

LOCATION.--Lat 33°51'45", long 117°55'55", in NW¼SW¼SE¼ sec.33, T.3 S., R.10 W., Orange County, on right bank 125 ft (38 m) east of Richman Avenue, at Fullerton.

DRAINAGE AREA.--12.1 mi² (31.3 km²).

PERIOD OF RECORD.--October 1959 to September 1977.

GAGE.--Water-stage recorder. Datum of gage is 126.4 ft (38.53 m) National Geodetic Vertical Datum of 1929. (levels by Orange County Environmental Management Agency).

REMARKS.--Flow regulated by Fullerton flood-control reservoir, capacity, 706 acre-ft (870,000 m³). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Orange County Environmental Management Agency.

AVERAGE DISCHARGE.--18 years (water years 1960-77), 2.06 ft³/s (0.058 m³/s), 1,490 acre-ft/yr (1.84 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) Jan. 25, 1969, gage height, 4.78 ft (1.457 m); no flow many days in each year.

NOTE.--Record for current year will not be published due to lack of data.

11090700 COYOTE CREEK AT LOS ALAMITOS, CA

LOCATION.--Lat 33°48'38", long 118°04'28", in NW¼NE¼SW¼ sec.19, T.4 S., R.11 W., Orange County, on right bank about 250 ft (76 m) downstream from Spring Street, 0.5 mi (0.8 km) northwest of Los Alamitos.

DRAINAGE AREA.--150 mi² (389 km²).

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

REVISED RECORDS.--WDR CA-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.37 ft (2.246 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District).

REMARKS.--Records poor. Flows up to 100 ft³/s (2.83 m³/s) can be diverted from present Carbon Creek channel to Coyote Creek through the original Carbon Creek channel. Flow partially regulated by Carbon Canyon, Brea and Fullerton flood-control reservoirs, combined capacity, 11,840 acre-ft (14.6 hm³). AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--15 years, 41.3 ft³/s (1.170 m³/s), 29,920 acre-ft/yr (36.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) Dec. 4, 1974, gage height, 7.25 ft (2.210 m), from outside gage; no flow Jan. 25, Feb. 15-17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft³/s (388 m³/s) Mar. 1, gage height, 6.73 ft (2.051 m), minimum daily, 1.5 ft³/s (0.042 m³/s) Nov. 22, Dec. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	2.8	2.3	6.1	4.9	3820	76	51	9.4	10	9.4	5.5
2	3.4	2.5	1.9	8.1	4.9	2050	55	11	11	11	9.4	4.6
3	3.4	2.3	1.9	195	6.1	259	17	11	10	11	5.2	4.0
4	2.8	2.8	3.1	1180	5.2	4400	96	11	10	10	7.4	4.6
5	2.5	8.7	1.9	212	741	1850	19	11	10	10	7.4	538
6	3.7	5.2	2.5	722	879	189	59	11	11	10	6.1	167
7	2.5	2.5	1.9	34	956	87	272	11	11	11	10	17
8	2.3	2.3	1.5	8.1	612	68	124	11	11	10	9.4	8.7
9	2.5	3.1	1.7	714	3430	118	19	11	11	10	13	7.4
10	2.5	3.1	1.9	1660	2240	50	15	11	10	10	12	7.4
11	1.7	3.4	2.5	117	94	143	15	11	9.4	10	6.8	8.1
12	2.3	4.0	2.1	19	1870	66	16	11	10	10	9.4	8.1
13	3.1	4.3	2.1	11	746	16	16	11	15	10	5.5	8.7
14	3.4	4.6	2.1	967	96	16	19	11	24	10	5.2	8.7
15	3.1	4.3	2.3	1210	35	24	451	11	13	11	6.8	8.1
16	3.4	6.8	2.3	1300	27	28	129	11	10	11	5.5	8.1
17	3.1	8.7	32	254	24	34	20	11	10	10	5.5	8.1
18	4.0	8.7	268	21	43	36	15	11	11	11	6.1	7.4
19	3.7	4.0	3.1	684	61	19	13	10	10	10	6.1	7.4
20	4.3	3.4	1.9	28	68	15	12	10	11	10	5.2	7.4
21	3.4	3.7	40	11	54	17	12	10	11	10	6.8	7.4
22	2.8	1.5	7.4	10	45	307	13	10	11	10	6.1	7.4
23	3.1	2.1	50	9.4	31	35	13	10	11	11	6.8	8.1
24	3.4	2.3	9.4	8.1	20	15	13	10	10	11	6.1	11
25	2.5	2.3	125	8.1	5.2	13	12	10	10	11	7.4	15
26	2.8	2.3	1670	5.2	6.1	13	12	10	10	10	5.5	15
27	2.8	2.5	248	5.5	59	13	11	10	10	10	5.2	15
28	2.5	3.4	1200	7.4	2330	15	10	10	10	10	5.2	15
29	2.5	2.5	1000	4.6	---	15	11	10	10	10	5.5	16
30	2.5	3.4	65	8.1	---	64	11	9.4	10	11	5.2	11
31	2.5	---	10	9.4	---	393	---	9.4	---	11	5.2	---
TOTAL	91.9	113.5	4763.8	9437.1	14493.4	14188	1576	366.8	330.8	321	216.4	965.2
MEAN	2.96	3.78	154	304	518	458	52.5	11.8	11.0	10.4	6.98	32.2
MAX	4.3	8.7	1670	1660	3430	4400	451	51	24	11	13	538
MIN	1.7	1.5	1.5	4.6	4.9	13	10	9.4	9.4	10	5.2	4.0
AC-FT	182	225	9450	18720	28750	28140	3130	728	656	637	429	1910
CAL YR 1977	TOTAL	17132.6	MEAN	46.9	MAX	4250	MIN	1.5	AC-FT	33980		
WTR YR 1978	TOTAL	46863.9	MEAN	128	MAX	4400	MIN	1.5	AC-FT	92950		

11092450 LOS ANGELES RIVER AT SEPULVEDA DAM, CA

LOCATION.--Lat 34°09'42", long 118°27'57", in Ex Mission de San Fernando Grant, Los Angeles County, on right bank of outlet channel of Sepulveda Dam, 200 ft (61 m) upstream from Sepulveda Boulevard in city of Los Angeles, and 1.8 mi (2.9 km) southwest of Van Nuys.

DRAINAGE AREA.--158 mi² (409 km²).

PERIOD OF RECORD.--January 1929 to February 1938, May 1938 to current year. See WSP 1315-B, 1735 for history of records prior to September 1950.

GAGE.--Water-stage recorder. Datum of gage is 652.7 ft (198.94 m) National Geodetic Vertical Datum of 1929. See WSP 1735 for history of changes prior to Aug. 29, 1953.

REMARKS.--Records fair. Flow regulated since December 1941 by Sepulveda flood-control reservoir, capacity, 17,400 acre-ft (21.5 hm³). Some diversion above station. At times, city of Los Angeles discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. During current year, no imported water was reported. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of released water from reservoirs were furnished by city of Los Angeles.

AVERAGE DISCHARGE.--48 years (water years 1930-37, 1939-78), 33.5 ft³/s (0.949 m³/s), 24,270 acre-ft/yr (29.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) Mar. 4, 1978, gage height, 12.04 ft (3.670 m); no flow Sept. 19, 20, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, estimated to be 12,000 ft³/s (340 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,700 ft³/s (416 m³/s) Mar. 4, gage height, 12.04 ft (3.670 m); minimum daily, 0.46 ft³/s (0.013 m³/s) Nov. 10 and 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.9	.60	2.4	1.1	5720	90	27	15	11	7.0	7.5
2	2.1	1.6	1.1	2.1	.94	1460	50	27	14	9.7	7.5	7.0
3	2.1	2.4	1.4	195	3.1	393	30	26	15	9.7	8.5	7.0
4	2.1	1.6	.94	980	3.1	9750	50	23	16	9.1	8.0	6.5
5	1.9	18	.76	80	800	2020	35	26	15	9.1	8.5	328
6	1.4	2.1	.76	660	340	412	60	24	14	9.7	9.1	79
7	1.9	.76	1.6	26	738	82	45	24	14	9.7	9.1	5.5
8	2.1	.94	1.1	6.0	705	68	40	23	14	9.7	8.5	3.8
9	1.6	.94	1.1	1650	5340	58	35	38	14	9.1	8.0	4.2
10	.94	.46	1.4	1550	3050	55	35	65	15	9.1	8.5	4.6
11	.94	.76	1.6	110	235	54	30	143	16	10	9.1	6.0
12	.76	.94	1.1	18	1630	54	29	229	16	11	8.0	6.5
13	.76	1.1	.76	6.5	567	50	28	28	17	10	8.5	6.0
14	.94	1.1	.94	1250	130	44	28	9.7	17	10	8.5	6.0
15	1.1	.76	.94	960	84	40	852	12	18	8.0	8.5	6.0
16	1.6	.94	.94	2000	79	38	72	7.5	17	8.0	8.0	7.0
17	1.4	1.1	72	300	52	35	39	10	17	7.5	7.5	6.5
18	1.1	1.4	74	90	34	33	39	13	17	7.5	7.5	6.5
19	1.1	1.1	2.7	310	28	31	37	11	16	7.0	7.0	6.0
20	1.1	.94	1.9	27	24	30	32	11	14	6.5	6.5	4.6
21	1.1	.94	15	17	26	494	32	12	12	6.0	6.5	5.0
22	.94	.94	16	8.6	26	1110	29	12	10	5.5	7.5	6.0
23	1.1	1.1	2.4	6.5	23	60	28	12	11	5.5	7.5	6.5
24	1.9	1.1	1.9	4.6	20	45	27	12	9.7	5.5	7.5	7.0
25	.94	1.1	60	3.8	18	40	52	12	9.1	5.0	7.0	7.5
26	.76	1.4	920	5.5	20	35	48	12	8.5	7.5	8.5	7.0
27	3.1	.76	260	2.4	34	30	39	13	9.1	14	9.1	7.5
28	1.6	.60	1720	2.1	2680	30	37	13	19	7.5	9.1	7.0
29	1.1	.46	30	1.6	---	30	28	13	21	7.0	9.1	6.5
30	1.4	.94	7.0	1.6	---	170	28	15	17	7.0	10	6.5
31	1.6	---	3.1	1.4	---	450	---	15	---	7.0	9.1	---
TOTAL	44.58	50.18	3203.04	10278.1	16691.24	22921	2004	918.2	437.4	258.9	252.7	580.7
MEAN	1.44	1.67	103	332	596	739	66.8	29.6	14.6	8.35	8.15	19.4
MAX	3.1	18	1720	2000	5340	9750	852	229	21	14	10	328
MIN	.76	.46	.60	1.4	.94	30	27	7.5	8.5	5.0	6.5	3.8
AC-FT	88	100	6350	20390	33110	45460	3970	1820	868	514	501	1150
CAL YR 1977	TOTAL	14990.98	MEAN	41.1	MAX	2110	MIN	.46	AC-FT	29730		
WTR YR 1978	TOTAL	57640.04	MEAN	158	MAX	9750	MIN	.46	AC-FT	114300		

11093000 PACOIMA CREEK NEAR SAN FERNANDO, CA

LOCATION.--Lat 34°20'07", long 118°23'50", in SE¼NE¼ sec.24, T.3 N., R.15 W., Los Angeles County, on right bank 500 ft (150 m) downstream from Pacoima Dam, 0.3 mi (0.5 km) upstream from mouth of canyon, and 4 mi (6 km) northeast of San Fernando.

DRAINAGE AREA.--28.3 mi² (73.3 km²).

PERIOD OF RECORD.--March to July 1916 (fragmentary), December 1916 to current year.

GAGE.--Water-stage recorder. Flume or weir control since June 1937. Altitude of gage is 1,650 ft (503 m), from topographic map. See WSP 1735 for history of changes prior to Feb. 1, 1935.

REMARKS.--Records poor. Flow regulated by Pacoima flood-control reservoir since February 1929, capacity, 3,841 acre-ft (4.74 hm³). Flow passing over Pacoima Dam spillway enters creek below station. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--61 years (water years 1918-78), 9.84 ft³/s (0.279 m³/s), 7,130 acre-ft/yr (8.79 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft³/s (69.1 m³/s) Mar. 3, 1938; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s (34.0 m³/s), estimated, Feb. 10, gage height unknown; no flow Oct. 1 to Jan. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	.10	393	130	57	60	6.0	6.0	6.0
2				0	.10	482	94	39	59	6.0	6.0	6.0
3				0	4.8	551	94	39	58	14	5.5	6.0
4				0	13	724	94	40	57	20	5.5	5.5
5				0	13	940	82	61	56	19	5.1	5.1
6				0	9.2	937	98	76	56	19	5.1	5.1
7				0	.10	544	98	76	56	9.4	5.1	5.1
8				0	.10	341	98	76	53	4.6	5.1	4.6
9				0	16	340	98	76	52	4.6	5.1	4.6
10				0	871	198	98	46	51	98	5.1	4.6
11				0	697	95	98	30	51	155	5.1	5.1
12				45	373	111	98	30	51	151	5.5	5.1
13				40	328	155	98	31	50	149	5.5	5.1
14				19	236	170	98	31	50	53	6.0	5.1
15				237	137	169	121	32	50	.30	6.0	5.5
16				140	113	169	100	33	50	.30	6.0	5.5
17				172	290	131	86	34	50	.30	6.0	5.5
18				131	98	94	88	33	50	4.6	6.0	5.5
19				111	98	94	88	34	21	8.9	5.5	5.5
20				65	98	94	88	34	6.6	8.2	5.5	5.5
21				70	81	94	88	35	12	7.7	5.5	5.5
22				70	64	94	88	35	12	8.2	6.0	5.5
23				51	64	94	88	36	12	8.2	6.0	5.5
24				37	78	94	88	36	11	8.9	6.0	5.1
25				26	100	92	88	37	9.5	8.8	6.0	4.6
26				.20	66	92	88	37	7.7	6.6	6.0	4.2
27				.20	79	92	88	37	7.7	6.6	6.0	4.2
28				.20	433	92	88	37	7.1	6.6	6.0	3.7
29				.20	---	92	88	37	6.6	6.6	5.0	3.3
30				.20	---	92	88	53	6.6	6.6	5.0	3.3
31		---		.20	---	154	---	60	---	6.6	5.0	---
TOTAL	0	0	0	1215.20	4360.40	7814	2827	1348	1079.8	812.60	173.2	150.9
MEAN	0	0	0	39.2	156	252	94.2	43.5	36.0	26.2	5.59	5.03
MAX	0	0	0	237	871	940	130	76	60	155	6.0	6.0
MIN	0	0	0	0	.10	92	82	30	6.6	.30	5.0	3.3
AC-FT	0	0	0	2410	8650	15500	5610	2670	2140	1610	344	299
CAL YR 1977	TOTAL	194.70	MEAN	.53	MAX	26	MIN	0	AC-FT	386		
WTR YR 1978	TOTAL	19781.10	MEAN	54.2	MAX	940	MIN	0	AC-FT	39240		

11095500 BIG TUJUNGA CREEK NEAR SUNLAND, CA

LOCATION.--Lat 34°18'02", long 118°16'04", in SW¼NW¼SW¼ sec.32, T.3 N., R.13 W., Los Angeles County, on left bank 1,000 ft (300 m) upstream from Gold Canyon, 2 mi (3 km) upstream from mouth of canyon, and 4 mi (6 km) north-east of Sunland.

DRAINAGE AREA.--106 mi² (275 km²).

PERIOD OF RECORD.--October 1916 to current year. Prior to October 1974, published as Tujunga Creek near Sunland.

GAGE.--Water-stage recorder. Datum of gage is 1,571.80 ft (479.085 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). Prior to Oct. 1, 1932, at site 1,000 ft (300 m) upstream at different datum.

REMARKS.--Records poor. Flow regulated since July 1931 by Big Tujunga flood-control reservoir, capacity, 3,819 acre-ft (4.71 hm³). Several small diversions above station for irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--60 years (water years 1918-77), 28.0 ft³/s (0.793 m³/s), 20,290 acre-ft/yr (25.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s (1,420 m³/s), estimated, Mar. 2, 1938; minimum, 0.10 ft³/s (0.003 m³/s) at times in some years.

NOTE.--Record for current year will not be published due to lack of data.

LOS ANGELES RIVER BASIN

11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA

LOCATION.--Lat 34°15'13", long 118°23'17", in Ex Mission San Fernando Grant, Los Angeles County, in city of Los Angeles, on left bank of outlet channel of Hansen Dam, 0.1 mi (0.2 km) upstream from Glen Oaks Boulevard, and 3 mi (5 km) southeast of San Fernando.

DRAINAGE AREA.--153 mi² (396 km²).

PERIOD OF RECORD.--May 1932 to February 1938, August 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 943.32 ft (287.524 m) Corps of Engineers datum. See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.--Records good. Flow regulated since July 1931 by Big Tujunga flood-control reservoir, capacity, 4,240 acre-ft (5.23 hm³) and since September 1940 by Hansen flood-control reservoir, capacity, 29,700 acre-ft (36.6 hm³). Several small diversions for domestic use and irrigation. Water reported herein is that which passed Hansen Dam. Los Angeles County Flood Control District diverts 0.3 mi (0.5 km) upstream from gage to spreading grounds. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion were furnished by Los Angeles County Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (340 m³/s) Feb. 10, 1978, gage height, 7.63 ft (2.326 m), from rating curve extended above 5,000 ft³/s (142 m³/s) on basis of gate openings at dam; no flow for all or parts of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s (1,530 m³/s), estimated, Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s (340 m³/s) Feb. 10, gage height, 7.63 ft (2.326 m), from rating curve extended above 5,000 ft³/s (142 m³/s) on basis of gate openings at dam; no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	1.9	0	2070	623	162	67	71	6.3	14
2			0	1.5	.10	2910	421	155	74	49	8.3	15
3			0	1.1	0	1520	261	146	73	40	8.7	14
4			0	2.0	0	4570	111	125	72	38	8.5	12
5			0		.44	4300	93	114	71	40	7.8	5.8
6			0	0	.10	1780	135	99	66	41	6.9	.50
7			0	0	.50	1710	305	103	66	37	5.7	.50
8			0	0	.80	1200	275	89	66	30	1.3	.14
9			0	.50	1050	901	238	234	66	25	1.0	.14
10			0	.50	7760	655	255	224	66	19	.50	.14
11			0	0	1010	443	190	47	62	16	.50	0
12			0	0	819	427	172	23	62	4.1	.50	0
13			0	0	440	376	184	12	57	39	.50	0
14			0	.20	321	352	202	5.7	53	1.9	.36	0
15			0	.10	355	340	329	4.8	49	1.5	.14	203
16			0	.50	321	300	559	18	45	1.5	.14	519
17			0	80	273	225	374	27	41	1.5	.14	91
18			0	61	220	192	289	34	41	.87	0	34
19			0	98	171	178	254	39	45	1.4	6.6	27
20			0	190	91	161	234	43	49	1.9	9.8	22
21			0	172	97	172	203	44	53	1.9	8.0	22
22			0	165	164	525	191	45	62	1.8	6.9	22
23			0	161	171	535	198	72	62	1.9	6.9	19
24			0	151	164	223	191	87	66	1.6	7.7	22
25			0	130	171	127	153	107	66	1.2	9.7	22
26			0	18	151	127	148	89	66	.72	11	22
27			0	0	144	115	147	42	71	.78	11	24
28			3.7	0	164	90	145	26	97	1.0	9.3	22
29			3.0	0	---	87	146	37	108	.83	9.6	22
30			2.7	0	---	223	153	31	97	.60	11	23
31		---	1.9	0	---	648	---	49	---	4.1	13	---
TOTAL	0	0	11.3	1234.30	14058.94	27482	7179	2333.5	1939	476.10	177.78	1178.22
MEAN	0	0	.36	39.8	502	887	239	75.3	64.6	15.4	5.73	39.3
MAX	0	0	3.7	190	7760	4570	623	234	108	71	13	519
MIN	0	0	0	0	0	87	93	4.8	41	.60	0	0
AC-FT	0	0	22	2450	27890	54510	14240	4630	3850	944	353	2340
CAL YR 1977 TOTAL	41.91		MEAN	.11	MAX	5.9	MIN 0	AC-FT	83			
WTR YR 1978 TOTAL	56070.14		MEAN	154	MAX	7760	MIN 0	AC-FT	111200			

11097500 LOS ANGELES RIVER AT LOS ANGELES, CA

LOCATION.--Lat 34°04'52", long 118°13'36", landline location not available, Los Angeles County, on right bank near Figueroa Street, Los Angeles, and 800 ft (240 m) upstream from Arroyo Seco.

DRAINAGE AREA.--514 mi² (1,331 km²).

PERIOD OF RECORD.--October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 292.58 ft (89.178 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). See WSP 1315-B for history of changes prior to Dec. 8, 1939.

REMARKS.--Records fair, except flows above 1,000 ft³/s (28.3 m³/s) which are poor. Flow regulated since September 1940 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir, combined capacity, 49,400 acre-ft (60.9 hm³) and several small flood-control reservoirs. At times city of Los Angeles discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. Excess treated sewage effluent from Los Angeles Bureau of Sanitation is released to channel about 8 mi (13 km) upstream. Many diversions above station for domestic use and irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--49 years, 82.9 ft³/s (2.348 m³/s), 60,060 acre-ft/yr (74.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,000 ft³/s (1,900 m³/s) Mar. 2, 1938; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52,700 ft³/s (1,490 m³/s) Feb. 10, gage height, 14.62 ft (4.456 m); minimum daily, 5.4 ft³/s (0.15 m³/s) Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	7.2	7.7	12	18	13100	819	265	23	33	14	53
2	9.2	7.7	7.2	11	18	6150	474	237	25	19	18	47
3	8.2	8.2	6.7	348	18	3330	350	246	24	20	20	43
4	6.7	7.7	7.2	2300	17	22700	379	228	30	17	31	55
5	7.7	27	7.2	169	1640	9940	150	256	34	23	18	617
6	7.7	43	8.7	1300	538	4350	517	284	31	23	12	330
7	7.7	9.2	8.7	66	1530	1150	773	265	22	22	14	61
8	7.7	7.2	7.7	25	1050	1050	350	237	22	19	12	39
9	7.2	7.2	7.2	1670	9810	1030	274	256	17	18	14	31
10	8.2	6.2	8.2	3590	17000	682	293	339	18	20	12	30
11	9.3	5.8	8.7	165	2410	540	246	88	20	41	12	34
12	6.2	5.8	8.7	48	4360	527	219	339	25	27	12	31
13	6.7	5.8	7.7	27	2180	474	209	70	25	71	12	19
14	6.2	5.8	7.7	2680	327	385	228	32	24	33	14	29
15	5.4	6.2	7.7	2480	316	373	2570	22	18	33	15	163
16	8.2	16	7.7	4660	316	350	819	21	16	27	27	540
17	9.2	6.2	130	740	304	339	448	17	20	33	31	218
18	7.7	6.7	455	220	304	327	350	22	19	31	32	89
19	7.7	5.8	22	769	293	316	316	34	21	18	33	70
20	7.2	5.8	8.2	74	293	304	284	32	21	17	42	58
21	6.7	6.7	11	39	293	2310	256	33	22	14	42	79
22	6.7	7.7	55	31	284	4340	237	32	18	13	38	78
23	6.7	7.7	32	31	284	899	228	31	18	12	33	79
24	7.2	7.7	35	28	284	448	237	35	17	14	30	86
25	7.2	7.2	177	30	284	362	394	200	14	15	38	62
26	8.2	7.7	3090	28	274	284	219	134	15	20	38	49
27	6.7	7.7	1210	26	284	219	200	27	14	28	42	50
28	7.2	8.2	5290	20	6160	159	209	62	18	32	42	56
29	7.2	7.7	161	19	---	130	200	97	24	25	48	59
30	6.7	8.2	50	19	---	480	219	62	23	14	46	70
31	7.2	---	18	37	---	1960	---	24	---	13	36	---
TOTAL	229.0	277.0	10868.9	21662	50889	79008	12467	4027	638	745	828	3225
MEAN	7.39	9.23	351	699	1817	2549	416	130	21.3	24.0	26.7	108
MAX	9.3	43	5290	4660	17000	22700	2570	339	34	71	48	617
MIN	5.4	5.8	6.7	11	17	130	150	17	14	12	12	19
AC-FT	454	549	21560	42970	100900	156700	24730	7990	1270	1480	1640	6400
CAL YR 1977 TOTAL	39799.9			MEAN 109	MAX 5290	MIN 1.6	AC-FT 78940					
WTR YR 1978 TOTAL	184863.9			MEAN 506	MAX 22700	MIN 5.4	AC-FT 366700					

LOS ANGELES RIVER BASIN

11098000 ARROYO SECO NEAR PASADENA, CA

LOCATION.--Lat 34°13'20", long 118°10'36", in NW¼NW¼NE¼ sec.31, T.2 N., R.12 W., Los Angeles County, on right bank, 0.7 mi (1.1 km) east of Angeles Crest Highway, 1.5 mi (2.4 km) upstream from Millard Canyon, and 5.5 mi (8.8 km) northwest of Pasadena.

DRAINAGE AREA.--16.0 mi² (41.4 km²).

PERIOD OF RECORD.--December 1910 to current year.

GAGE.--Water-stage recorder. Broad-crested weir since November 1938. Datum of gage is 1,397.88 ft (426.074 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft (1.219 m) lower.

REMARKS.--Records fair below 35 ft³/s (0.99 m³/s) and poor above. Minor regulation by debris dam 1.5 mi (2.4 km) upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

AVERAGE DISCHARGE.--64 years (water years 1914-15, 1917-78), 9.56 ft³/s (0.271 m³/s), 6,930 acre-ft/yr (8.54 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,620 ft³/s (244 m³/s) Mar. 2, 1938, gage height, 9.42 ft (2.871 m), present datum, on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) revised, and maximum (*) from rating curve extended above 1000 ft³/s (28.3 m³/s) on basis of slope-area measurements at gage heights 9.42 ft (2.871 m) and 7.86 ft (2.396 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0400	710 20.1	3.82 1.164	Mar. 4	1315	*5360 152	7.57 2.307
Jan. 15	0300	677 19.2	3.77 1.149	Apr. 15	1545	360 10.2	3.20 0.975
Feb. 10	0215	4570 129	7.05 2.149				

Minimum daily discharge, 0.17 ft³/s (0.005 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.35	.48	6.7	11	398	57	38	15	7.3	4.7	3.4
2	.19	.25	.50	6.1	10	439	53	35	15	7.0	4.7	3.4
3	.19	.22	.40	6.1	10	262	46	32	14	6.7	4.7	3.3
4	.20	.33	.29	26	10	1400	60	31	14	6.6	4.7	3.4
5	.19	.56	.28	19	15	638	50	29	13	6.3	4.5	4.4
6	.21	.49	.28	18	16	365	55	28	13	6.1	4.2	8.6
7	.24	.41	.32	11	21	225	85	27	12	5.9	4.0	5.2
8	.19	.48	.37	8.9	21	174	68	26	12	5.8	4.0	4.2
9	.22	.46	.36	17	644	174	59	26	12	5.8	4.4	4.0
10	.26	.44	.35	70	773	171	53	26	11	5.7	4.4	4.0
11	.31	.35	.37	27	190	168	50	25	11	5.7	4.4	3.9
12	.26	.24	.37	21	122	142	47	24	11	5.6	4.4	3.9
13	.27	.23	.35	17	106	122	47	23	11	5.3	4.5	4.0
14	.31	.24	.35	38	91	101	46	22	11	5.3	4.5	4.7
15	.26	.25	.37	268	78	91	139	22	11	5.3	4.4	4.2
16	.26	.32	.38	163	67	78	110	21	10	5.2	4.2	3.9
17	.26	.37	.60	136	58	68	73	20	10	5.5	4.2	4.1
18	.22	.37	6.6	46	52	60	68	20	9.6	5.9	4.2	4.1
19	.34	.30	1.1	40	45	56	63	19	9.4	6.2	4.1	3.6
20	.34	.30	.73	32	40	51	62	20	9.2	6.0	4.0	3.4
21	.32	.36	.74	28	35	50	59	19	8.7	6.2	4.0	3.5
22	.25	.32	.81	24	34	110	53	19	8.5	5.8	3.9	3.3
23	.18	.31	.81	20	31	73	52	20	8.3	5.8	3.9	3.2
24	.17	.26	.79	19	28	59	49	20	8.1	5.8	4.0	3.1
25	.18	.26	.86	17	26	51	55	19	7.8	5.8	3.9	3.0
26	.19	.27	9.9	16	24	47	47	19	7.9	5.8	4.0	3.0
27	.26	.34	13	15	23	46	43	18	8.4	5.8	4.0	2.9
28	.30	.39	276	14	115	45	41	18	8.4	5.8	3.9	2.9
29	.28	.46	23	13	---	44	41	17	8.0	5.6	3.9	2.8
30	.29	.49	14	12	---	47	40	16	7.7	5.2	3.7	2.9
31	.43	---	8.1	11	---	97	---	16	---	4.9	3.7	---
TOTAL	7.76	10.42	362.86	1165.8	2696	5852	1771	715	316.0	181.7	130.1	114.3
MEAN	.25	.35	11.7	37.6	96.3	189	59.0	23.1	10.5	5.86	4.20	3.81
MAX	.43	.56	276	268	773	1400	139	38	15	7.3	4.7	8.6
MIN	.17	.22	.28	6.1	10	44	40	16	7.7	4.9	3.7	2.8
AC-FT	15	21	720	2310	5350	11610	3510	1420	627	360	258	227
CAL YR 1977 TOTAL	1199.18			MEAN 3.29	MAX 276	MIN .14	AC-FT 2380					
WTR YR 1978 TOTAL	13322.94			MEAN 36.5	MAX 1400	MIN .17	AC-FT 26430					

11098500 LOS ANGELES RIVER NEAR DOWNEY, CA

LOCATION.--Lat 33°56'58", long 118°10'23", in San Antonio Grant, Los Angeles County, on right bank 400 ft (122 m) downstream from Firestone Boulevard bridge, 1 mi (2 km) upstream from Rio Hondo, 2.5 mi (4.0 km) west of Downey and 33 mi (53 km) downstream from Hansen flood-control reservoir.

DRAINAGE AREA.--599 mi² (1,551 km²).

PERIOD OF RECORD.--March 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 96.12 ft (29.297 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to Dec. 11, 1956.

REMARKS.--Records fair; poor above 1,000 ft³/s (28.3 m³/s). Flow regulated since September 1940 by Hansen flood-control reservoir, since December 1941 by Sepulveda flood-control reservoir, combined capacity, 49,400 acre-ft (60.9 hm³/yr), and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth Reservoirs and at times discharges imported water into Los Angeles River. Many diversions for domestic use and irrigation above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--50 years (water years 1929-78), 124 ft³/s (3.512 m³/s), 89,840 acre-ft/yr (111 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,700 ft³/s (2,260 m³/s) Mar. 2, 1938, on basis of slope-area measurement; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73,600 ft³/s (2,080 m³/s) Feb. 10, gage height 10.35 ft (3.155 m); minimum daily, 7.8 ft³/s (0.22 m³/s) Oct. 3, Nov. 12-15, Dec. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.4	12	18	27	17000	1320	248	38	37	28	75
2	9.0	8.4	11	15	30	8660	900	276	37	28	27	68
3	7.8	8.4	11	322	30	3850	700	248	35	30	27	58
4	9.0	8.4	11	2990	28	31900	651	229	38	30	40	66
5	11	46	9.8	328	2010	22100	295	205	40	33	25	646
6	11	51	11	1580	630	7340	469	267	38	35	19	490
7	11	14	9.8	99	1980	4980	971	238	33	35	17	79
8	11	11	8.4	34	1800	3190	344	238	31	31	15	45
9	11	9.0	7.8	1700	12700	1560	267	181	28	31	16	33
10	11	8.4	9.0	4650	24200	1220	267	286	27	28	15	27
11	12	8.4	9.8	254	13200	900	257	98	25	54	15	31
12	11	7.8	9.8	58	11900	820	229	196	25	40	16	30
13	9.8	7.8	11	35	3630	800	248	94	25	74	17	19
14	9.0	7.8	9.8	2780	1420	820	286	51	24	54	22	21
15	8.4	7.8	11	3690	996	780	3300	51	21	43	22	78
16	9.0	14	12	6330	780	700	943	49	21	45	28	480
17	9.8	8.4	236	1080	500	600	540	41	23	58	33	226
18	11	14	602	360	286	441	363	41	23	58	37	81
19	11	11	40	1080	195	305	295	43	26	41	38	54
20	11	11	30	189	176	286	286	41	27	37	43	41
21	9.8	9.8	27	46	161	579	276	49	30	35	47	54
22	11	9.8	63	32	152	3460	257	54	27	31	51	60
23	9.8	9.8	50	39	114	780	267	54	26	27	49	68
24	11	9.8	20	56	66	463	295	52	25	28	43	75
25	9.0	9.8	77	58	64	248	498	185	24	30	45	96
26	9.8	9.8	3310	27	68	238	286	176	23	34	49	90
27	9.0	11	670	26	205	229	257	61	23	37	51	83
28	8.4	11	6940	24	8090	161	257	66	25	64	56	85
29	8.4	11	306	24	---	152	248	119	25	54	62	81
30	8.4	12	100	26	---	307	248	88	24	41	68	81
31	9.0	---	23	39	---	2080	---	45	---	31	56	---
TOTAL	308.4	374.8	12658.2	27989	85438	116949	15820	4070	837	1234	1077	3421
MEAN	9.95	12.5	408	903	3051	3773	527	131	27.9	39.8	34.7	114
MAX	12	51	6940	6330	24200	31900	3300	286	40	74	68	646
MIN	7.8	7.8	7.8	15	27	152	229	41	21	27	15	19
AC-FT	612	743	25110	55520	169500	232000	31380	8070	1660	2450	2140	6790
CAL YR 1977 TOTAL	48467.0			MEAN 133	MAX 6940	MIN 1.8	AC-FT 96130					
WTR YR 1978 TOTAL	270176.4			MEAN 740	MAX 31900	MIN 7.8	AC-FT 535900					

LOS ANGELES RIVER BASIN

11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°03'32", long 118°04'13", in Potrero Grande Grant, Los Angeles County, on right bank 0.3 mi (0.5 km) downstream from Garvey Avenue, 0.4 mi (0.6 km) downstream from Rubio Wash, and 2.2 mi (3.5 km) west of El Monte.

DRAINAGE AREA.--91.2 mi² (236.2 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 217.8 ft (66.39 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs, combined capacity, 1,700 acre-ft (2.10 hm³) and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. 40,700 acre-ft (50.2 hm³) were diverted by Los Angeles County Flood Control District from San Gabriel River below Santa Fe Dam to Rio Hondo during current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion were furnished by the Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--22 years, 34.2 ft³/s (0.969 m³/s), 24,780 acre-ft/yr (30.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft³/s (501 m³/s) Jan. 25, 1969, gage height, 7.23 ft (2.204 m); no flow in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Dec. 28	1000	6670 189	4.49 1.369	Mar. 1	0345	12330 349	5.89 1.795
Jan. 4	1530	8280 234	4.88 1.487	Mar. 4	0810	8410 238	4.91 1.497
Jan. 10	0700	6090 172	4.34 1.323	Mar. 22	1015	3960 112	3.79 1.155
Jan. 16	1630	7600 215	4.72 1.439	Apr. 6	2245	3510 99.4	3.66 1.116
Feb. 10	0230	*16340 463	6.90 2.103	Apr. 15	1530	4970 141	4.05 1.234
Feb. 12	2000	9170 260	5.10 1.554				

Minimum daily discharge, 0.22 ft³/s (0.006 m³/s) Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.72	124	2.1	88	3340	101	150	76	5.0	2.3	2.5
2	.25	.35	130	2.0	89	1930	47	112	76	3.5	1.6	1.3
3	.45	.38	136	98	97	1030	46	112	76	3.3	2.1	.62
4	.93	.50	136	481	68	3780	239	112	76	3.5	2.2	.62
5	.62	23	136	14	221	2230	89	112	76	3.4	1.1	112
6	.38	1.1	88	112	104	1070	366	112	76	4.4	1.0	56
7	.38	.36	148	38	309	600	315	107	73	2.9	2.1	1.4
8	.25	.42	149	43	441	190	145	102	73	2.9	2.3	1.4
9	.25	.40	153	326	1910	180	115	102	56	2.6	3.1	1.4
10	.72	.24	157	541	2590	180	100	97	18	2.1	3.1	.72
11	.31	.49	157	4.3	503	184	92	92	11	2.6	3.4	1.9
12	.31	1.6	157	1.6	1050	150	81	21	3.3	2.6	1.9	1.9
13	.45	1.2	157	1.1	420	176	101	45	3.6	1.6	.62	3.8
14	1.1	.33	157	779	87	76	101	102	3.4	2.6	2.1	2.3
15	1.1	.37	157	445	63	115	995	97	3.7	2.5	1.7	2.5
16	.96	.31	157	1120	53	70	131	97	3.0	.97	1.3	2.5
17	1.3	.30	280	25	36	55	57	49	2.0	1.8	1.3	2.3
18	.39	.39	195	2.8	51	54	87	12	1.9	2.7	2.1	1.4
19	.79	.29	141	122	79	58	147	7.7	2.9	2.3	2.9	.96
20	.35	.22	158	2.4	76	76	187	56	3.6	3.7	1.4	1.7
21	.36	.25	132	1.3	58	189	391	88	2.8	2.5	2.3	1.7
22	.31	.32	68	1.1	48	622	133	88	2.8	.82	1.9	1.7
23	.46	.25	23	1.2	99	76	130	107	3.0	.89	1.9	1.7
24	.69	.27	1.6	36	100	68	130	102	1.9	1.9	1.7	1.0
25	1.0	1.1	45	112	99	69	211	97	1.3	4.6	2.3	1.7
26	.93	41	644	113	108	85	164	92	2.0	4.9	1.4	1.6
27	.51	66	200	105	110	93	136	92	1.9	2.3	.84	2.3
28	.62	76	1320	99	1570	109	178	92	1.5	2.7	1.7	3.0
29	.97	97	13	94	---	112	130	76	3.2	1.8	1.1	2.4
30	.88	118	3.4	92	---	228	157	76	5.6	.67	1.7	2.2
31	.48	---	2.3	101	---	389	---	76	---	1.5	2.5	---
TOTAL	18.35	439.16	5525.3	4915.9	10527	17584	5302	2682.7	740.4	81.55	58.96	218.52
MEAN	.59	14.6	178	159	376	567	177	86.5	24.7	2.63	1.90	7.28
MAX	1.3	118	1320	1120	2590	3780	995	150	76	5.0	3.4	112
MIN	.25	.22	1.6	1.1	36	54	46	7.7	1.3	.67	.62	.62
AC-FT	36	871	10960	9750	20880	34880	10520	5320	1470	.162	117	433

CAL YR 1977 TOTAL 10174.33 MEAN 27.9 MAX 1320 MIN .21 AC-FT 20180
WTR YR 1978 TOTAL 48093.84 MEAN 132 MAX 3780 MIN .22 AC-FT 95390

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.64	.40	.40	.64	695	2.8	2.4	.88	.64	.88	.40
2	.88	.64	.40	.40	.40	144	1.9	.64	.88	.64	.64	.40
3	.88	.64	.40	22	.40	43	.40	.40	.64	.64	.88	.40
4	1.1	.40	.64	157	.33	471	31	.40	.64	.64	.88	.40
5	.88	11	.40	4.6	72	164	.40	.40	.64	.64	.64	47
6	.88	1.4	.40	43	31	2.1	54	.33	.64	.64	.64	30
7	1.1	.64	.40	1.1	93	.88	24	.33	.64	.64	1.1	.64
8	.88	.40	.40	.64	146	.88	.64	.40	1.4	.64	.88	.40
9	.88	.33	.40	102	510	.64	.40	.40	1.4	.88	1.1	.40
10	.88	.40	.40	156	281	.64	.40	.40	1.1	.64	.88	.40
11	.88	.33	.40	1.4	2.3	9.2	.40	.40	.88	.64	.88	.40
12	.88	.33	.64	.64	190	.64	.40	.40	.88	.64	.88	.64
13	.64	.40	.40	.64	63	.64	.40	.64	.88	.64	.64	.64
14	.64	.40	.40	257	.88	.40	.33	.88	.64	.64	.64	.88
15	.64	.64	.40	103	.40	.40	151	.64	.64	.64	.64	.88
16	.64	.40	.40	369	.40	.64	4.6	.64	.64	.64	.64	.64
17	.64	.40	36	15	.33	.40	.40	.64	.64	.64	.64	.64
18	.64	.40	51	1.1	.40	.40	.64	.88	.40	.64	.64	.64
19	.88	.40	.88	51	.33	.40	.40	.88	.40	.64	.64	.64
20	.88	.33	.64	.88	.33	.40	.40	.88	.40	.64	.40	.40
21	.88	.33	.40	.40	.40	18	.33	.64	.64	.88	.64	.64
22	.88	.40	.64	.40	.33	79	.40	.64	.64	.88	.64	.64
23	.64	.40	9.9	.40	.40	.64	.40	.64	.64	.64	.64	.64
24	.88	.40	.64	.40	.33	.40	.64	.64	.64	.88	.40	.64
25	.88	.40	24	.64	.33	.40	15	.64	.64	.88	.64	.64
26	.88	.40	262	.40	1.2	.40	.64	.64	.64	1.1	.64	.88
27	.88	.40	69	.64	1.1	.40	.40	.64	.64	1.1	.64	.88
28	.88	.40	369	.40	404	.64	.33	.64	.64	1.1	.88	.88
29	.64	.40	9.1	.33	---	.64	.40	.64	.64	1.4	.64	.88
30	.64	.40	.64	.40	---	30	3.2	.64	.64	.88	.88	.88
31	.64	---	.40	1.1	---	80	---	.88	---	.88	.40	---
TOTAL	25.32	24.45	841.12	1292.31	1801.23	1746.18	296.65	20.26	21.66	23.66	22.20	94.44
MEAN	.82	.82	27.1	41.7	64.3	56.3	9.89	.65	.72	.76	.72	3.15
MAX	1.1	11	369	369	510	695	151	2.4	1.4	1.4	1.1	47
MIN	.64	.33	.40	.33	.33	.40	.33	.33	.40	.64	.40	.40
AC-FT	50	48	1670	2560	3570	3460	588	40	43	47	44	187
CAL YR 1977	TOTAL	2594.19		MEAN	7.11	MAX	369	MIN	.30	AC-FT	5150	
WTR YR 1978	TOTAL	6209.48		MEAN	17.0	MAX	695	MIN	.33	AC-FT	12320	

LOS ANGELES RIVER BASIN

11101500 RIO HONDO NEAR MONTEBELLO, CA

LOCATION.--Lat 34°02'00", long 118°04'22", in Potrero Grande Grant, Los Angeles County, on right bank 900 ft (274 m) upstream from Mission bridge, and 2 mi (3 km) northeast of Montebello.

DRAINAGE AREA.--116 mi² (300 km²), excludes area above Santa Fe Dam.

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 190.77 ft (58.147 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to September 1962.

REMARKS.--Records poor. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs, combined capacity, 1,700 acre-ft (2.10 hm³) and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. At times flow is diverted from San Gabriel River below Santa Fe Dam to Rio Hondo above station. Since 1957, with the exception of 1972, imported Colorado River water has been released to Rio Hondo 1.6 mi (2.6 km) above station for ground-water recharge. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--29 years (water years 1929-57), 51.5 ft³/s (1.458 m³/s), 37,280 acre-ft/yr (46.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Mar. 2, 1938, gage height, 16.69 ft (5.087 m), present datum; from rating curve extended above 9,000 ft³/s (255 m³/s) on basis of slope-area measurement and runoff from contributing stream; no flow part of some years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,250 ft³/s (120 m³/s) Mar. 4; no flow Oct. 1 to Nov. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	129	2.1	108	4040	104	189	120	4.0	5.0	4.0
2		0	131	2.4	105	2070	49	144	114	4.1	5.0	4.0
3		0	135	120	112	1070	46	144	105	4.1	4.9	3.5
4		0	137	638	88	4250	270	144	105	4.1	4.9	3.5
5		0	137	19	293	2390	95	138	105	4.1	4.9	159
6		0	92	155	135	1070	420	138	100	4.2	4.8	86
7		0	164	40	455	641	339	132	105	4.2	4.8	5.0
8		0	164	44	587	487	146	144	105	4.2	4.8	4.5
9		0	166	428	2420	397	115	163	70	4.3	4.7	4.0
10		0	174	697	2870	308	100	163	20	4.3	4.7	3.5
11		0	176	5.7	505	219	95	163	12	4.3	4.7	4.0
12		0	179	2.2	1240	307	95	163	4.2	4.4	4.7	4.0
13		0	181	1.7	483	405	101	151	4.0	4.4	4.6	5.0
14		0	183	1040	126	203	101	53	3.7	4.5	4.6	4.0
15		0	185	558	105	105	1150	98	4.3	4.5	4.6	3.5
16		0	185	1490	100	71	136	109	3.6	4.6	4.5	3.5
17		0	316	40	86	55	64	109	4.0	4.6	4.5	3.3
18		0	118	3.9	105	67	88	109	4.0	4.6	4.5	3.0
19		0	159	173	163	81	147	75	4.0	4.7	4.4	2.5
20		0	170	3.3	163	109	204	4.6	4.0	4.7	4.4	3.5
21		0	159	1.7	126	207	400	89	4.0	4.8	4.3	3.5
22		0	100	1.5	129	700	169	89	4.0	4.8	4.3	3.5
23		0	51	1.6	237	77	157	107	4.0	4.9	4.2	3.5
24		0	22	36	251	68	151	115	4.0	4.9	4.2	3.0
25		0	69	122	251	69	212	126	4.0	4.9	4.1	3.5
26		14	975	131	244	85	169	132	4.0	5.0	4.1	3.0
27		62	269	114	244	93	146	126	4.0	5.0	4.0	3.5
28		72	1690	110	1970	120	209	120	4.0	5.0	4.0	5.0
29		91	22	95	---	132	163	109	4.0	5.0	4.0	4.5
30		127	11	95	---	258	182	114	4.0	5.0	4.0	4.0
31		---	5.0	108	---	469	---	109	---	5.0	4.0	---
TOTAL	0	366	6654.0	6279.1	13701	20623	5823	3769.6	1036.8	141.2	139.2	350.3
MEAN	0	12.2	215	203	489	665	194	122	34.6	4.55	4.49	11.7
MAX	0	127	1690	1490	2870	4250	1150	189	120	5.0	5.0	159
MIN	0	0	5.0	1.5	86	55	46	4.6	3.6	4.0	4.0	2.5
AC-FT	0	726	13200	12450	27180	40910	11550	7480	2060	280	276	695
CAL YR 1977	TOTAL	19538.40	MEAN	53.5	MAX	1690	MIN	0	AC-FT	38750		
WTR YR 1978	TOTAL	58883.20	MEAN	161	MAX	4250	MIN	0	AC-FT	116800		

11102000 MISSION CREEK NEAR MONTEBELLO, CA

LOCATION.--Lat 34°01'45", long 118°04'07", in La Merced Grant, Los Angeles County, on upstream side of right abutment of San Gabriel Boulevard bridge, 2 mi (3 km) northeast of Montebello.

DRAINAGE AREA.--4.16 mi² (10.77 km²).

PERIOD OF RECORD.--October 1929 to current year. Yearly estimate for 1938, published in WSP 1315-B. Prior to October 1944, published as Rio Hondo Slough near Montebello.

GAGE.--Water-stage recorder. Datum of gage is 188.2 ft (57.36 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 3, 1938, at datum 6.30 ft (1.920 m) higher.

REMARKS.--Flow is almost entirely from ground-water seepage. Flow partially regulated above station by Legg Lake. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins. No flow since Sept. 11, 1976. Discharge figures for the calendar year 1975 are as follows: Total, 1.6 ft³/s (0.05 m³/s); mean, 0.004 ft³/s (<0.001 m³/s); maximum daily, 1.6 ft³/s (0.05 m³/s); minimum daily, no flow most of year.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--48 years, 10.0 ft³/s (0.283 m³/s), 7,250 acre-ft/yr (8.94 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, occurred Mar. 2, 1938; no flow at times in some years.

NOTE.--Record for current year will not be published due to lack of data.

LOS ANGELES RIVER BASIN

11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°01'00", long 118°05'15", in Paso de Bartolo Grant, Los Angeles County, on right levee 0.2 mi (0.3 km) upstream from Beverly Boulevard, 0.4 mi (0.6 km) downstream from axis of Whittier Narrows Dam, and 1.0 mi (1.6 km) northeast of Montebello.

DRAINAGE AREA.--124 mi² (321 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 175 ft (53 m), from topographic map.

REMARKS.--Records good above 100 ft³/s (2.83 m³/s) and poor below. Flow regulated by Whittier Narrows flood-control reservoir, capacity, 36,160 acre-ft (44.6 hm³). There are several small flood-control reservoirs, combined capacities, 1,700 acre-ft (2.10 hm³) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,800 ft³/s (1,100 m³/s) Jan. 25, 1969, gage height, 13.82 ft (4.212 m), from rating curve extended above 15,000 ft³/s (425 m³/s) on basis of gate openings at dam at gage heights 12.32 ft (3.755 m) and 13.82 ft (4.212 m); no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,400 ft³/s (691 m³/s) Mar. 1, gage height, 10.66 ft (3.249 m); no flow many days in October and November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.04	90	8.1	102	11500	200	140	116	109	147	116
2	0	0	100	8.1	102	7800	71	140	116	109	156	125
3	0	0	110	71	116	4860	55	140	102	38	140	132
4	.04	0	115	1350	89	13800	272	131	95	18	95	125
5	0	.07	118	594	395	13800	83	124	95	18	95	260
6	0	0	71	403	164	6400	257	124	102	27	102	111
7	0	0	153	65	408	3430	492	124	102	51	95	98
8	0	0	154	71	708	718	156	124	102	65	95	104
9	0	0	156	451	7460	358	116	164	83	71	95	111
10	0	0	161	1940	5640	272	109	173	38	83	89	111
11	0	0	160	568	475	214	116	164	27	109	77	125
12	0	0	160	46	2770	147	102	164	14	124	77	139
13	0	0	161	27	883	207	124	156	11	131	77	139
14	0	0	167	799	302	55	124	131	11	131	83	57
15	0	0	167	2910	200	89	1130	30	11	140	124	147
16	0	0	169	3100	83	51	235	95	11	131	124	163
17	0	0	250	668	55	42	77	124	11	140	124	81
18	0	.27	453	250	65	42	83	116	11	140	116	1.9
19	0	0	140	365	102	42	164	109	30	131	116	7.9
20	0	0	156	34	102	55	131	30	60	131	116	1.5
21	0	.04	140	2.3	108	181	265	8.1	71	131	109	1.2
22	0	0	77	1.9	83	688	323	21	77	131	102	11
23	0	0	27	1.9	116	89	191	116	77	131	102	7.9
24	0	0	4.1	30	116	65	164	124	65	131	102	5.9
25	0	0	34	131	116	51	140	164	71	131	102	20
26	0	0	1280	140	124	65	116	156	71	102	109	11
27	0	12	577	116	147	83	124	235	83	102	109	35
28	0	33	3340	109	2970	131	131	164	102	147	102	71
29	0	74	451	102	---	131	131	131	102	147	95	125
30	0	93	21	102	---	250	140	124	95	147	95	147
31	0	---	11	116	---	492	---	116	---	156	109	---
TOTAL	.04	212.42	9173.1	14580.3	24001	66108	5822	3862.1	1962	3353	3279	2590.3
MEAN	.001	7.08	296	470	857	2133	194	125	65.4	108	106	86.3
MAX	.04	93	3340	3100	7460	13800	1130	235	116	156	156	260
MIN	0	0	4.1	1.9	55	42	55	8.1	11	18	77	1.2
AC-FT	.08	421	18190	28920	47610	131100	11550	7660	3890	6650	6500	5140

CAL YR 1977 TOTAL 25311.12 MEAN 69.3 MAX 3340 MIN 0 AC-FT 50200
WTR YR 1978 TOTAL 134943.26 MEAN 370 MAX 13800 MIN 0 AC-FT 267700

LOCATION.--Lat 33°56'48", long 118°09'43", in San Antonio Grant, Los Angeles County, on left bank 700 ft (210 m) upstream from Stewart and Gray Road bridge, 1.0 mi (1.6 km) upstream from mouth, and 1.5 mi (2.4 km) west of Downey.

GAGE.--Water-stage recorder. Datum of gage is 91.4 ft (27.86 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). Prior to Oct. 31, 1951, at site 700 ft (210 m) downstream at datum 1.5 ft (0.46 m) lower.

EXTREMES FOR CURRENT YEAR,--Maximum discharge, 32,000 ft³/s (906 m³/s) Mar. 1, gage height, 12.24 ft (3.731 m); minimum daily, 0.01 ft³/s (<0.001 m³/s) May 19, June 11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.07	1.0	.07	1.4	12200	102	2.0	.45	3.2	1.2	.64
2	.26	.05	1.2	.07	1.2	7470	1.6	1.4	.26	3.2	1.2	.64
3	.07	.07	1.0	9.5	1.0	4340	1.4	1.0	.07	2.6	1.2	.64
4	.06	1.2	.84	1070	1.2	13800	179	1.0	.05	2.6	1.4	.45
5	.26	.26	1.4	37	148	13500	1.8	1.0	.05	2.0	1.4	48
6	.26	.06	1.2	90	36	6040	44	.84	.04	2.6	1.4	11
7	.26	.07	1.6	3.2	156	3190	466	.64	.04	2.0	1.4	1.8
8	.26	.45	1.2	1.4	177	717	76	.45	.03	2.0	1.4	1.6
9	.07	.64	.84	125	7350	303	23	.07	.02	2.0	1.6	1.4
10	.26	.06	.84	1350	5740	189	1.8	.06	.02	2.0	1.4	1.2
11	.64	.45	1.0	11	40	122	1.0	.04	.01	2.0	1.4	1.0
12	.26	.64	.84	2.0	2410	25	1.0	.04	.64	1.8	1.6	.84
13	.45	.64	.84	1.4	907	88	.84	.03	3.2	1.6	1.6	.84
14	.45	.26	.84	647	7.6	21	.64	.03	2.6	1.8	1.6	.64
15	.26	.26	1.0	2350	4.5	2.0	979	.03	2.6	1.8	1.6	.64
16	.64	.45	.84	3010	3.2	2.0	119	.03	3.2	1.6	1.6	.64
17	.45	.45	65	228	1.6	1.6	1.8	.03	2.6	1.4	1.6	.45
18	.5	.84	43	5.1	1.6	1.6	1.6	.03	3.2	1.6	1.8	.45
19	.45	.64	.64	58	1.4	1.6	1.6	.01	2.6	1.6	1.8	.26
20	.64	.07	.05	3.2	1.2	1.6	1.8	.02	3.9	1.6	2.0	1.2
21	.07	.26	1.9	1.6	1.2	64	67	.02	3.2	1.4	1.8	2.0
22	.45	.64	1.0	1.6	1.4	747	198	.04	3.2	1.4	2.0	1.8
23	.26	.45	.84	3.9	1.4	4.5	9.5	.26	2.6	1.4	2.0	1.6
24	.45	.45	.64	.45	1.6	2.6	2.0	.84	2.0	1.4	1.8	1.6
25	.45	.64	26	.26	1.4	1.8	4.5	.84	1.8	1.4	1.8	1.4
26	.07	.64	632	.84	1.6	1.8	1.4	.84	1.6	1.2	1.6	1.4
27	.26	.84	43	1.0	9.5	1.8	1.2	1.0	2.0	1.2	1.4	1.4
28	.06	1.2	2950	1.0	2840	1.8	1.0	.84	2.6	1.2	1.2	1.6
29	.07	1.0	1.8	1.2	---	2.0	.64	.84	3.2	1.2	1.4	2.0
30	.06	1.0	.26	1.4	---	78	.26	.64	3.2	1.0	1.2	2.0
31	.07	---	.45	1.8	---	417	---	.64	---	1.0	1.0	---
TOTAL	9.17	14.75	3783.06	9016.99	19848.0	63337.7	2290.38	15.55	50.98	54.8	47.4	91.13
MEAN	.30	.49	122	291	709	2043	76.3	.50	1.70	1.77	1.53	3.04
MAX	.64	1.2	2950	3010	7350	13800	979	2.0	3.9	3.2	2.0	48
MIN	.06	.05	.05	.07	1.0	1.6	.26	.01	.01	1.0	1.0	.26
AC-FT	18	29	7500	17890	39370	125600	4540	31	101	109	94	181
CAL YR 1977	TOTAL	5823.54	MEAN	16.0	MAX	2950	MIN	.03	AC-FT	11550		
WTR YR 1978	TOTAL	98559.91	MEAN	270	MAX	13800	MIN	.01	AC-FT	195500		

LOS ANGELES RIVER BASIN

11103000 LOS ANGELES RIVER AT LONG BEACH, CA

LOCATION.--Lat 33°49'02", long 118°12'20", in Los Cerritos Grant, Los Angeles County, on right bank 5,000 ft (1,524 m) upstream from Willow Street, 3.4 mi (5.5 km) north of Long Beach, and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--827 mi² (2,140 km²).

PERIOD OF RECORD.--December 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 11.91 ft (3.630 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to Jan. 19, 1956.

REMARKS.--Records fair below 500 ft³/s (14.2 m³/s) and poor above. Flow regulated since September 1940 by Hansen flood-control reservoir, since December 1941 by Sepulveda flood-control reservoir, combined capacity, 49,400 acre-ft (60.9 hm³), and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth reservoirs and at times discharges imported water into Los Angeles River above station. Many diversions above station for domestic use and irrigation. AVERAGE DISCHARGE represents flow to the ocean, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--49 years (water years 1930-78), 181 ft³/s (5.126 m³/s), 131,100 acre-ft/yr (162 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,000 ft³/s (2,890 m³/s) Jan. 25, 1969, gage height, 16.00 ft (4.877 m); no flow at times in 1929-30, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,800 ft³/s (2,680 m³/s) Feb. 10, gage height, 15.20 ft (4.633 m); minimum daily, 11 ft³/s (0.31 m³/s) Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	18	23	33	27600	1160	255	41	49	22	42
2	12	13	15	18	27	15000	552	222	39	35	22	48
3	13	13	15	341	25	7640	436	222	37	35	27	46
4	15	12	15	4300	24	42300	829	233	42	37	34	42
5	15	48	15	703	2800	30000	288	195	46	38	27	601
6	15	106	16	2170	956	10000	222	233	49	41	23	765
7	15	19	19	218	2310	6110	1720	200	44	40	20	104
8	15	13	17	57	1530	2910	518	211	41	36	27	60
9	15	12	15	1980	17800	2030	380	168	38	33	30	57
10	13	13	15	6130	27100	1440	310	450	35	28	29	51
11	15	14	15	464	3000	990	352	110	35	64	29	51
12	13	13	15	83	6870	746	324	178	37	45	29	53
13	13	12	17	55	4510	692	266	110	40	45	28	46
14	13	13	14	3180	1050	728	288	53	39	65	29	39
15	13	13	14	7350	746	674	2160	53	36	42	32	57
16	13	21	13	9830	620	586	3030	50	32	42	37	436
17	13	16	442	2020	338	484	620	41	36	57	38	299
18	17	22	1140	656	200	288	394	45	29	62	38	131
19	15	19	50	1370	137	255	366	51	25	53	38	78
20	15	13	16	244	131	233	338	41	36	53	40	54
21	15	13	22	73	131	585	310	46	38	55	41	65
22	14	15	14	61	124	4650	484	54	34	49	46	70
23	13	15	74	62	114	710	352	50	34	44	39	71
24	15	14	93	96	76	436	277	44	33	37	39	75
25	14	13	130	82	71	233	299	112	30	36	38	96
26	14	13	5640	56	73	266	626	151	31	34	42	78
27	13	14	1100	39	318	244	255	60	31	32	41	68
28	13	15	11100	32	11000	173	266	55	31	42	51	70
29	12	17	1130	28	---	178	233	104	39	32	46	70
30	11	17	312	30	---	387	200	82	37	22	50	71
31	12	---	95	45	---	2880	---	46	---	18	42	---
TOTAL	429	564	21606	41796	82114	161448	17855	3925	1095	1301	1074	3794
MEAN	13.8	18.8	697	1348	2933	5208	595	127	36.5	42.0	34.6	126
MAX	17	106	11100	9830	27100	42300	3030	450	49	65	51	765
MIN	11	12	13	18	24	173	200	41	25	18	20	39
AC-FT	851	1120	42860	82900	162900	320200	35420	7790	2170	2580	2130	7530
CAL YR 1977	TOTAL	65653.1	MEAN	180	MAX	11100	MIN	5.3	AC-FT	130200		
WTR YR 1978	TOTAL	337001.0	MEAN	923	MAX	42300	MIN	11	AC-FT	668400		

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°48'16", long 118°12'15", in Los Cerritos Grant, Los Angeles County, on the Willow Street bridge, 2.8 mi (4.5 km) upstream from mouth in Long Beach.

DRAINAGE AREA.--831 mi² (2,152 km²).

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

CHEMICAL ANALYSES: Water years 1973 to current year.

SPECIFIC CONDUCTANCE: Water years 1974 to current year.

WATER TEMPERATURES: Water years 1974 to current year.

SEDIMENT RECORDS: Water years 1975 to current year (partial-record station).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to September 1975.

WATER TEMPERATURES: October 1973 to September 1975.

INSTRUMENTATION.--Specific-conductance recorder October 1973 to September 1975. Temperature recorder October 1973 to September 1975.

REMARKS.--Discharge values are from Los Angeles River at Long Beach (station 11103000).

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,010 micromhos June 30, 1975; minimum recorded, 117 micromhos Mar. 6, 1975.

WATER TEMPERATURES: Maximum recorded, 34.5°C, Aug. 7, 1975; minimum recorded, 2.0°C Jan. 31, 1975.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
19...	0915	15	1430	8.3	18.0	6	--	15.2	1400	K2400
NOV										
16...	0930	13	1650	8.8	15.5	7	--	>20.0	1300	2000
DEC										
22...	0945	64	940	8.1	14.0	25	--	8.5	K5900	K13000
JAN										
12...	1045	70	1060	8.9	14.0	45	--	10.4	K5500	>4000
FEB										
22...	1115	124	1060	8.0	20.0	15	--	11.0	570	1300
MAR										
21...	0915	233	847	7.8	19.0	15	--	20.0	600	830
APR										
19...	0830	366	592	8.7	17.0	60	--	--	1800	3100
MAY										
19...	1230	46	1290	9.5	28.0	--	4.9	>20.0	K15000	K230
JUN										
27...	1645	34	1160	9.1	27.0	--	8.0	>20.0	K13000	200
JUL										
25...	1550	36	974	9.8	33.0	--	6.0	>20.0	--	100
AUG										
17...	1220	38	1130	9.2	26.5	--	7.0	>20.0	K12000	230
SEP										
06...	1340	501	321	6.8	25.5	--	220	5.5	--	K18000

E Estimated

K Results based on non-ideal colony count.

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT 19...	440	220	110	41	160	43	3.3	10	270	0
NOV 16...	480	220	110	49	180	44	3.6	11	310	2
DEC 22...	270	140	71	22	87	40	2.3	9.3	150	0
JAN 12...	360	210	94	31	93	35	2.1	6.9	190	1
FEB 22...	410	230	100	38	77	29	1.7	5.5	220	0
MAR 21...	320	150	93	22	52	26	1.3	5.1	210	0
APR 19...	240	84	63	20	35	24	1.0	4.0	190	--
MAY 19...	480	270	120	43	120	35	2.4	8.0	--	--
JUN 27...	350	180	82	36	120	42	2.8	8.5	--	--
JUL 25...	260	170	68	23	110	47	2.9	7.3	--	--
AUG 17...	320	120	77	30	120	44	2.9	10	--	--
SEP 06...	97	38	28	6.6	21	31	.9	5.3	--	--

DATE	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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, NO2+NO3 TOTAL (MG/L AS N)
OCT									
19...	220	2.2	330	150	.6	20	996	955	4.2
NOV									
16...	260	.8	360	160	1.0	14	1090	1040	4.0
DEC									
22...	120	1.9	200	86	.7	15	593	565	7.7
JAN									
12...	160	.4	250	81	.5	19	708	670	4.4
FEB									
22...	180	3.5	260	79	.6	16	714	685	5.0
MAR									
21...	170	5.3	200	45	.6	20	570	541	3.2
APR									
19...	160	.6	110	25	.5	23	366	374	1.9
MAY									
19...	210	--	330	120	.7	18	875	886	1.4
JUN									
27...	170	--	260	120	.4	8.6	742	738	.08
JUL									
25...	97	--	230	120	.7	13	591	630	.09
AUG									
17...	200	--	210	120	.8	30	757	718	2.5
SEP									
06...	59	--	58	16	.3	8.3	220	179	3.3

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT									
19...	.20	--	--	--	.99	--	--	3.5	1.7
NOV									
16...	.13	--	--	--	1.3	--	--	1.8	1.3
DEC									
22...	.36	--	--	--	3.1	--	--	2.8	3.0
JAN									
12...	.45	1.6	2.0	.10	1.9	6.4	28	.77	.67
FEB									
22...	.28	.92	1.2	.25	.95	6.2	27	.56	.51
MAR									
21...	.21	.79	1.0	.52	.48	4.2	19	.21	.14
APR									
19...	.25	.71	.96	.52	.44	2.9	13	.37	.20
MAY									
19...	.41	--	--	--	1.1	--	--	1.0	.38
JUN									
27...	.87	5.4	6.3	5.4	.94	6.4	28	1.4	.16
JUL									
25...	.00	3.1	3.1	2.3	.83	3.2	14	.44	.07
AUG									
17...	.18	2.3	2.5	1.3	1.2	5.0	22	1.5	1.2
SEP									
06...	.46	3.9	4.4	2.5	1.9	7.7	34	1.6	.35

LOS ANGELES RIVER BASIN

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
OCT				DEC			
03...	0830	1860	19.0	13...	0800	1470	12.0
04...	0800	1850	18.0	14...	0830	1460	12.0
05...	0830	1470	18.0	15...	0800	1530	12.0
06...	0800	1460	18.0	18...	0830	175	14.0
10...	0830	1410	18.0	18...	1230	169	14.0
11...	0830	1420	18.0	18...	1630	168	14.0
12...	0830	1500	18.0	19...	0830	559	12.0
13...	0800	1500	18.0	20...	0800	557	10.0
17...	0800	1550	18.0	22...	0945	940	14.0
18...	0830	1550	18.0	26...	0830	96	14.0
19...	0830	1500	17.0	26...	1230	98	14.0
19...	0915	1430	18.0	26...	1630	110	14.0
20...	0800	1490	17.0	27...	0830	218	16.0
24...	0830	1420	20.0	28...	0830	133	16.0
25...	0830	1450	17.0	28...	1230	133	16.0
26...	0830	1450	16.0	28...	1630	130	16.0
28...	0800	1450	16.0	29...	0830	102	16.0
31...	0830	1520	16.0	JAN			
NOV				02...	0830	1350	14.0
01...	0800	1510	16.0	03...	0800	1350	14.0
02...	0830	1570	16.0	04...	0800	251	16.0
03...	0800	1580	17.0	04...	1200	249	16.0
07...	0830	1090	15.0	04...	1600	251	16.0
08...	0800	1100	15.0	06...	0800	295	14.0
08...	0830	1480	10.0	06...	1200	323	14.0
09...	0800	1480	10.0	09...	0800	1230	14.0
14...	0830	1570	10.0	10...	0800	173	13.0
15...	0800	1580	11.0	12...	1045	1060	14.0
16...	0830	1670	11.0	13...	1200	165	14.0
16...	0930	1650	15.5	16...	0800	610	13.0
21...	0830	1550	10.0	17...	0800	611	13.0
22...	0830	1550	10.0	18...	0800	210	13.0
23...	0830	1810	11.0	19...	0800	207	13.0
24...	0800	1810	11.0	20...	0800	228	14.0
28...	0830	1540	11.0	20...	1200	230	14.0
29...	0800	1540	11.0	20...	1600	228	14.0
DEC				23...	0800	1330	11.0
07...	0830	1930	14.0	25...	0830	1550	13.0
08...	0800	1920	14.0	26...	0800	1540	13.0
12...	0830	1530	14.0	30...	0830	1570	15.0

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
JAN				MAR			
31...	0800	1570	14.0	23...	0830	183	15.0
FEB				23...	1230	196	15.0
01...	0830	1030	14.0	23...	1630	196	15.0
02...	0830	1030	14.0	27...	0800	860	15.0
05...	0830	151	13.0	28...	0800	949	15.0
05...	1230	164	13.0	28...	0830	856	15.0
05...	1630	150	13.0	29...	0830	942	15.0
06...	0830	227	17.0	31...	0830	171	10.0
06...	1230	217	17.0	31...	1230	254	10.0
06...	1630	205	17.0	31...	1630	152	10.0
07...	0830	575	14.0	APR			
08...	0830	585	14.0	03...	0830	183	10.0
10...	0830	266	13.0	04...	0800	483	10.0
10...	1230	272	12.0	04...	0830	648	10.0
10...	1630	271	13.0	10...	0830	668	10.0
12...	0830	399	12.0	11...	0830	673	10.0
13...	0830	397	13.0	12...	0830	740	11.0
15...	0830	594	12.0	19...	0830	592	17.0
16...	0800	593	12.0	24...	0830	671	11.5
20...	0830	750	10.0	25...	0800	673	11.5
22...	0830	743	10.0	26...	0830	420	14.0
22...	1115	1060	20.0	28...	0800	692	14.0
23...	0830	734	10.0	MAY			
27...	0830	333	15.0	01...	0830	652	16.0
27...	1200	319	15.0	02...	0800	647	16.0
27...	1630	316	15.0	08...	0800	685	15.0
28...	0830	742	15.0	09...	0800	670	15.0
MAR				09...	0830	643	16.0
03...	0830	229	11.0	10...	0830	640	16.0
03...	1200	231	11.0	15...	0800	1360	19.0
03...	1630	232	11.0	16...	0830	1300	19.0
04...	0830	192	11.0	17...	0800	1350	14.0
04...	1630	208	11.0	19...	1230	1290	28.0
06...	0830	262	10.0	22...	0800	1170	14.0
08...	0830	337	10.0	23...	0800	1170	14.0
09...	0830	334	10.0	24...	0800	1180	15.0
13...	0830	535	10.0	25...	0830	1190	14.0
14...	0830	525	10.0	30...	0800	859	15.0
15...	0830	643	10.0	31...	0800	1070	14.0
21...	0915	847	19.0	JUN			
				01...	0830	1020	15.0

LOS ANGELES RIVER BASIN

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
JUN				AUG			
05...	0800	1260	19.0	09...	0800	1195	22.0
06...	0830	1250	19.0	10...	0800	1193	21.5
07...	0800	1200	20.0	14...	0800	1183	21.0
08...	0830	1210	20.0	15...	0830	1186	21.0
12...	0730	1160	19.5	16...	0800	1232	19.0
12...	0800	1640	19.0	17...	0800	1230	19.5
13...	0730	1160	19.0	17...	1220	1130	26.5
19...	0800	1210	18.5	21...	0730	1058	20.0
20...	0800	1210	18.5	22...	0800	1014	20.0
21...	0800	1250	18.5	23...	0800	1063	--
22...	0830	1250	19.0	23...	0830	1062	--
27...	0800	1210	19.0	28...	0730	1100	--
27...	1645	1160	27.0	29...	0800	1106	--
28...	0800	1203	19.0	30...	0800	1115	--
29...	0800	1203	19.5	31...	0700	1103	--
JUL				SEP			
03...	0745	1190	18.5	04...	0730	1085	--
04...	0800	1160	19.0	05...	0800	1104	--
05...	0730	1125	18.5	05...	2000	830	22.0
06...	0800	1100	19.0	06...	0830	376	27.0
10...	0800	1170	20.0	06...	1340	321	25.5
11...	0800	1135	19.5	07...	0730	265	26.0
12...	0800	1170	19.5	11...	0800	1154	20.0
13...	0730	1152	19.0	12...	0730	1186	21.0
17...	0800	1140	21.5	13...	0730	1137	21.0
18...	0800	1140	21.0	14...	0800	1140	20.0
19...	0830	1105	21.5	18...	0830	702	17.0
20...	0830	1102	22.0	19...	0730	731	17.5
24...	0800	1076	20.0	20...	0730	1040	15.0
25...	0800	1080	22.5	21...	0800	1027	15.5
25...	1550	974	33.0	25...	0730	1007	20.0
26...	0800	1222	20.0	26...	0700	1000	21.0
27...	0800	1215	20.5	27...	0645	990	20.5
31...	0800	1188	20.0	28...	0730	985	20.0
AUG							
01...	0800	1185	20.5				
02...	0800	1180	21.0				
03...	0800	1175	21.0				
07...	0800	1150	22.0				
08...	0800	1122	22.0				

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)
OCT 19...	0915	15	1430	8.3	18.0	6	1	5	500	400	100
JAN 12...	1045	70	1060	8.9	14.0	6	2	4	--	0	200
APR 19...	0830	366	592	8.7	17.0	1	0	2	100	0	100
JUL 25...	1550	36	974	9.8	33.0	3	0	3	200	200	50

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
OCT 19...	10	8	2	40	0	40	<50	<50	0	30	26
JAN 12...	2	1	1	10	10	0	0	0	1	17	10
APR 19...	5	0	6	10	10	0	1	1	0	20	13
JUL 25...	5	4	<1	10	0	10	0	0	0	30	20

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 19...	4	240	--	40	<100	<94	6	40	20	20	.0
JAN 12...	7	2500	--	70	37	29	8	120	60	60	.0
APR 19...	7	4500	4400	80	--	--	--	150	110	40	.0
JUL 25...	10	610	590	20	32	30	2	40	40	<1	.1

DATE	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 19...	.0	.0	2	0	4	<10	<10	0	50	30	20
JAN 12...	.0	.0	8	0	9	0	0	0	70	40	30
APR 19...	.0	.0	2	0	2	0	0	0	50	20	30
JUL 25...	.1	.0	13	1	12	0	0	0	110	110	3

LOS ANGELES RIVER BASIN

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 19...	0915	15	1430	8.3	18.0	--	13	--
NOV 16...	0930	13	1650	8.8	15.5	13	--	--
DEC 22...	0945	64	940	8.1	14.0	25	--	--
JAN 12...	1045	70	1060	8.9	14.0	--	--	.2
FEB 22...	1115	124	1060	8.0	20.0	7.5	--	--
MAR 21...	0915	233	847	7.8	19.0	6.9	--	--
APR 19...	0830	366	592	8.7	17.0	--	5.6	1.8
MAY 19...	1230	46	1290	9.5	28.0	24	--	--
JUN 27...	1645	34	1160	9.1	27.0	26	--	--
JUL 25...	1550	36	974	9.8	33.0	--	12	>5.0
AUG 17...	1220	38	1130	9.2	26.5	14	--	--
SEP 06...	1340	501	321	6.8	25.5	49	--	--

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	OCT 19,77 0915	NOV 16,77 0930	DEC 22,77 0945	JAN 12,78 1045	FEB 22,78 1115	MAR 21,78 0915				
TOTAL CELLS/ML	49000	7700	3700	4400	460	7100				
DIVERSITY: DIVISION	1.2	1.3	0.8	0.2	1.3	1.4				
..CLASS	1.2	1.3	0.8	0.2	1.3	1.4				
..ORDER	1.7	1.5	1.0	0.2	1.3	1.4				
...FAMILY	2.4	2.3	1.2	1.2	1.9	1.4				
....GENUS	2.4	2.3	1.2	1.3	1.9	1.7				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....HYDRODICTYACEAE										
....PEDIASTRUM	10000#	21	--	-	130	4	--	-	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	*	0	36	1	--	-
....CHODATELLA	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	*	0	--	-	--	-	--	-
....OOCYSTIS	--	-	210	3	53	1	--	-	--	-
....SELENASTRUM	--	-	--	-	*	0	*	0	--	-
....SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	*	0	--	-	--	-
....SCENEDESMUS	21000#	43	4400#	57	130	4	--	-	230	3
...CLADOPHORALES										
....CLADOPHORACEAE										
....CLADOPHORA	--	-	--	-	--	-	--	-	--	-
...OEDOGONIALES										
....OEDOGONIAEAE										
....OEDOGONIUM	--	-	--	-	--	-	--	-	--	-
...ULOTRICHIALES										
....CHAEETOPHORACEAE										
....STIGEOCLONIUM	2100	4	--	-	--	-	--	-	--	-
...VOLVOCALES										
....CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	1100	2	--	-	110	3	*	0	180#	40
...ZYGNEATALES										
....DESMIDIACEAE	--	-	--	-	--	-	--	-	--	-
....COSMARIVUM	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
....CYCLOTELLA	1500	3	670	9	36	1	*	0	--	-
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	280	4	*	0	--	-	--	-
....CYMBELLACEAE										
....AMPHORA	--	-	--	-	*	0	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-	--	-

See footnotes at end of table.

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	OCT 19,77 0915		NOV 16,77 0930		DEC 22,77 0945		JAN 12,78 1045		FEB 22,78 1115		MAR 21 78 0915	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...PENNALES												
....DIATOMACEAE												
....DIATOMA	--	-	--	-	--	-	* 0		--	-	--	-
....FRAGILARIACEAE												
....FRAGILARIA	--	-	--	-	* 0		--	-	--	-	--	-
....SYNEDRA	--	-	460	6	* 0		* 0		140#	31	--	-
....GOMPHONEMACEAE												
....GOMPHONEMA	* 0		140	2	* 0		* 0		9	2	--	-
....NAVICULACEAE												
....NAVICULA	970	2	560	7	* 0		--	-	--	-	--	-
....NITZSCHIACEAE												
....NITZSCHIA	3400	7	460	6	53	1	* 0		96#	21	4100#	58
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
....CRYPTOMONODACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	* 0		9	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROCOCCACEAE												
....CHROCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	--	-	1800#	26
....ANACYSTIS	1300	3	--	-	45	1	--	-	--	-	460	6
...HORMOGONALES												
....NOSTOCACEAE												
....CYLINDROSPERMUM	--	-	490	6	--	-	--	-	--	-	--	-
....OSCILLATORIA												
....LYNGBYA	--	-	--	-	--	-	45	1	--	-	--	-
....OSCILLATORIA	7300	15	--	-	3100#	83	2100#	47	--	-	--	-
....SCYTONEMACEAE												
....PLECTONEMA	--	-	--	-	--	-	2200#	49	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
....EUGLENA	--	-	* 0		--	-	--	-	--	-	--	-
....PHACUS	--	-	--	-	* 0		--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	18	4	110	2

See footnotes at end of table.

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	APR 19,78 0830	MAY 19,78 1230	JUN 27,78 1645	JUL 25,78 1550	AUG 17,78 1220	SEP 6,78 1340				
TOTAL CELLS/ML	570	74000	8000	230000	44000	16000				
DIVERSITY: DIVISION	0.7	0.5	0.5	0.0	0.9	1.3				
..CLASS	0.7	0.5	0.5	0.0	0.9	1.3				
...ORDER	1.0	0.8	0.5	1.1	1.0	1.5				
....FAMILY	1.6	1.1	1.3	1.4	1.3	2.0				
.....GENUS	1.6	1.1	1.3	1.4	1.3	2.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....HYDRODICTYACEAE										
.....PEDIASTRUM	--	-	--	-	2300#	29	12000	5	3900	9
.....OOCYSTACEAE										
....ANKISTRODESMUS	--	-			*	0	--	-	--	-
....CHODATELLA	--	-	450	1	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	900	1	--	-	3100	1	--	-
....OOCYSTIS	--	-			--	-	--	-	--	-
....SELENASTRUM	--	-			--	-	--	-	--	-
....SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	4500	6	4700#	59	91000#	39	26000#	57
..CLADOPHORALES										
...CLADOPHORACEAE										
....CLADOPHORA	--	-	--	-	--	-	120000#	53	--	-
....OEDOGONIALES										
....OEDOGONIAEAE										
.....OEDOGONIUM	--	-	--	-	--	-	4100	2	--	-
....ULOTRICHALES										
....CHAEOTOPHORACEAE										
....STIGEOCLONIUM	--	-	--	-	--	-	--	-	--	-
....VOLVOCALES										
....CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	110#	19	1800	2	--	-	--	-	270	2
..ZYGNEATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	--	-	--	-	*	0	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
.....CYCLOTELLA	27	5	2700	4	--	-	--	-	270	2
...PENNALES										
....ACHNANTHACEAE										
.....ACHNANTHES	--	-	--	-	--	-	--	-	180	1
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
....CYMBELLACEAE										
.....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	450	1	--	-	--	-	270	2

See footnotes at end of table.

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	APR 19,78 0830		MAY 19,78 1230		JUN 27,78 1645		JUL 25,78 1550		AUG 17,78 1220		SEP 6,78 1340	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..PENNALES												
...DIATOMACEAE												
....DIATOMA	--	-	--	-	--	-	--	-	--	-	440	3
...FRAGILARIACEAE												
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	110#	19	--	-	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE												
....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-	180	1
...NAVICULACEAE												
....NAVICULA	330#	57	61000#	82	--	-	--	-	--	-	530	3
...NITZSCHACEAE												
....NITZSCHIA	--	-	2700	4	--	-	--	-	--	-	2000	13
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONIDALES												
...CRYPTOMONODACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROCOCCALES												
...CHROCOCCACEAE												
....AGMENELLUM	--	-	--	-	940	12	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	--	-	350	1	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....CYLINDROSPERMUM	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	--	-	15000#	33	9400#	60
...SCYTONEACEAE												
....PLECTONEMA	--	-	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-	--	-

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

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

11103010 LOS ANGELES RIVER AT WILLOW STREET BRIDGE, AT LONG BEACH, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
NOV 16...	0930	8.10	2.95	9.61	7.87	28
AUG 17...	1220	7.09	1.26	3.62	2.28	23

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 19...	0915	15	18.0	138	20
NOV 16...	0930	13	15.5	28	69
DEC 22...	0945	64	14.0	45	68
JAN 12...	1045	70	14.0	57	84
FEB 22...	1115	124	20.0	46	48
MAR 21...	0915	233	19.0	41	68
APR 19...	0830	366	17.0	144	85
MAY 19...	1230	46	28.0	40	59
JUN 27...	1645	34	27.0	114	50
JUL 25...	1550	36	33.0	56	47
AUG 17...	1220	38	26.5	23	61
SEP 06...	1340	501	25.5	767	83

11103500 BALLONA CREEK NEAR CULVER CITY, CA

LOCATION.--Lat 33°59'54", long 118°24'05", in La Ballona Grant, Los Angeles County, 500 ft (150 m) upstream from Sawtelle Boulevard bridge, 1.7 mi (2.7 km) south of Culver City, and 4.1 mi (6.6 km) upstream from mouth.

DRAINAGE AREA.--89.5 mi² (231.8 km²), excludes that of Sepulveda Creek. Prior to January 1951, 111 mi² (287 km²), change due to tributary channel realignment.

PERIOD OF RECORD.--February 1928 to current year (after December 1950, flow of Sepulveda Creek excluded).

GAGE.--Water-stage recorder. Datum of gage is 11.98 ft (3.652 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). Prior to May 14, 1936, at site 1 mi (2 km) downstream at different datum. May 14, 1936, to Oct. 3, 1961, at datum 0.72 ft (0.219 m) lower and Oct. 24, 1961, to Aug. 10, 1967, at datum 0.92 ft (0.280 m) lower at site 500 ft (150 m) downstream.

REMARKS.--No regulation above station. At times city of Los Angeles discharges imported Owens River water from several distribution reservoirs into the creek above station. Some small pumping diversions above station for lawn and park use.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--22 years (water years 1929-50), 35.2 ft³/s (0.997 m³/s), 25,480 acre-ft/yr (31.4 hm³/yr); 28 years (water years 1951-78), 46.5 ft³/s (1.317 m³/s), 33,690 acre-ft/yr (41.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) Nov. 21, 1967, gage height, 14.89 ft (4.538 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,088 ft³/s (795 m³/s) Feb. 10, gage height, 14.84 ft (4.523 m); minimum daily, 4.2 ft³/s (0.12 m³/s) Nov. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.2	7.0	9.4	9.4	2770	54	22	13	17	27	11
2	6.2	5.4	7.6	8.2	8.8	993	15	14	13	14	17	12
3	6.2	5.4	6.6	208	8.8	280	12	15	12	17	19	12
4	6.2	7.6	6.2	1080	8.8	4440	219	16	12	16	18	12
5	6.2	45	7.0	16	1080	708	22	16	13	15	21	202
6	6.6	7.6	6.6	661	262	108	230	21	12	16	20	26
7	6.2	7.0	6.2	11	708	84	63	12	13	16	12	11
8	7.0	5.8	5.8	8.2	858	68	17	14	14	15	12	12
9	6.6	5.0	5.8	858	1920	116	14	13	14	14	8.8	12
10	6.6	5.0	5.8	1270	2230	45	13	13	13	13	11	12
11	7.0	4.6	5.8	16	45	76	13	13	12	14	11	12
12	7.0	5.0	7.0	11	1030	41	12	13	12	12	11	12
13	7.6	4.2	6.2	9.4	435	30	14	15	12	12	11	14
14	7.6	5.0	6.6	1800	34	25	15	14	12	12	11	10
15	8.2	5.4	6.2	460	23	23	909	14	12	12	11	11
16	7.0	6.2	6.2	2150	20	22	25	14	12	14	13	11
17	7.0	6.6	431	45	20	22	18	14	12	14	12	11
18	6.6	7.6	121	14	20	22	21	13	12	14	12	11
19	6.6	6.6	9.4	244	18	22	21	15	12	14	12	12
20	7.0	5.8	11	11	16	22	22	14	12	15	11	12
21	7.0	5.4	17	9.4	17	85	21	14	13	16	12	12
22	7.6	5.0	17	8.8	16	758	20	15	16	15	12	11
23	6.6	5.8	31	9.4	15	20	18	15	15	16	12	12
24	6.6	5.4	11	9.4	13	17	19	13	15	17	13	12
25	6.6	5.0	187	9.4	13	18	140	14	15	17	12	12
26	6.2	7.6	1250	8.8	72	18	16	14	15	18	12	11
27	6.6	6.6	356	8.8	52	19	15	14	15	19	12	12
28	7.0	6.6	1960	9.4	2400	19	13	14	14	20	12	13
29	7.0	7.6	25	9.4	---	19	11	14	15	20	11	14
30	6.2	7.0	17	8.8	---	157	11	13	17	19	11	12
31	6.2	---	11	12	---	464	---	13	---	36	11	---
TOTAL	209.2	219.0	4557.0	8993.8	11352.8	11511	2013	448	399	499	410.8	559
MEAN	6.75	7.30	147	290	405	371	67.1	14.5	13.3	16.1	13.3	18.6
MAX	8.2	45	1960	2150	2400	4440	909	22	17	36	27	202
MIN	6.2	4.2	5.8	8.2	8.8	17	11	12	12	12	8.8	10
AC-FT	415	434	9040	17840	22520	22830	3990	889	791	990	815	1110
CAL YR 1977 TOTAL	16090.4			MEAN 44.1	MAX 1960	MIN 4.2	AC-FT 31920					
WTR YR 1978 TOTAL	41171.6			MEAN 113	MAX 4440	MIN 4.2	AC-FT 81660					

11104000 TOPANGA CREEK NEAR TOPANGA BEACH, CA

LOCATION.--Lat 34°03'52", long 118°35'10", in Boca de Santa Monica Grant, Los Angeles County, on right downstream side of bridge abutment on State Highway 27, 1.7 mi (2.7 km) north of Topanga Beach.

DRAINAGE AREA.--18.0 mi² (46.6 km²).

PERIOD OF RECORD.--January 1930 to September 1938, October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 265.60 ft (80.955 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). Prior to June 5, 1940, at different datum. June 5, 1940, to Dec. 9, 1941, at site 400 ft (122 m) upstream at different datum.

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

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--47 years (water years 1931-38, 1940-78), 5.98 ft³/s (0.169 m³/s), 4,330 acre-ft/yr (5.34 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Jan. 25, 1969, gage height, 13.36 ft (4.072 m), from rating curve extended above 610 ft³/s (17.3 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft³/s (287 m³/s), Mar. 4, gage height, 10.99 ft (3.350 m); minimum daily, 0.08 ft³/s (0.002 m³/s) Oct. 6-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.11	.11	.68	3.4	1030	17	7.0	2.6	1.0	.44	.68
2	.12	.10	.11	.60	3.4	496	15	6.5	2.6	1.0	.52	.60
3	.12	.10	.11	1.0	3.0	192	14	6.5	2.6	1.0	.36	.60
4	.11	.10	.13	19	2.6	2680	17	6.0	2.6	1.0	.28	.52
5	.09	.11	.14	6.0	61	396	14	6.0	2.6	1.0	.20	.92
6	.08	.12	.14	43	51	162	14	6.0	2.6	1.0	.19	2.2
7	.08	.11	.14	9.5	49	112	16	5.5	2.6	1.0	.19	.84
8	.08	.11	.14	2.2	61	90	13	6.0	2.6	1.0	.19	.60
9	.08	.10	.14	137	600	81	12	6.5	2.2	1.0	.36	.60
10	.09	.10	.14	162	383	66	11	6.0	2.2	1.0	.36	.60
11	.09	.09	.14	26	109	58	10	6.0	1.8	1.0	.36	.68
12	.09	.10	.14	11	272	51	10	5.5	1.8	1.0	.44	.68
13	.09	.11	.13	7.5	211	45	10	5.0	1.4	1.0	.44	.68
14	.09	.15	.13	182	73	40	9.5	4.6	1.4	.92	.52	.60
15	.09	.14	.13	825	51	37	56	4.6	1.8	1.0	.62	.60
16	.09	.14	.18	712	38	34	30	4.2	1.8	1.0	.60	.60
17	.11	.13	.52	132	32	32	18	4.2	1.4	1.0	.60	.60
18	.11	.12	.16	43	27	30	13	3.8	1.4	1.0	.60	.52
19	.11	.12	.14	48	24	29	12	3.8	1.4	1.4	.60	.52
20	.11	.12	.13	29	21	28	12	3.8	1.0	1.4	.60	.44
21	.11	.11	.14	27	18	31	12	3.4	1.4	1.0	.68	.44
22	.11	.10	.14	24	14	70	10	3.4	1.8	1.0	.68	.28
23	.11	.11	.13	23	12	33	10	3.4	1.4	1.0	.68	.28
24	.11	.10	.14	20	10	27	9.5	3.0	1.0	.92	.68	.28
25	.11	.10	.10	8.0	8.0	24	10	3.0	1.4	.84	.68	.36
26	.11	.10	8.3	7.0	8.0	21	9.0	3.0	1.0	.76	.68	.28
27	.11	.10	4.3	5.5	10	20	8.5	3.0	1.0	.76	.68	.28
28	.19	.10	69	4.6	407	18	8.0	3.0	1.0	.68	.68	.36
29	.13	.11	4.2	4.2	---	17	8.0	2.6	1.0	.68	.76	.44
30	.11	.11	1.0	4.2	---	18	7.5	2.2	1.0	.60	.76	.60
31	.11	---	.84	3.4	---	22	---	2.6	---	.52	.76	---
TOTAL	3.24	3.32	91.39	2527.38	2562.4	5990	416.0	140.1	52.4	29.48	16.19	17.68
MEAN	.10	.11	2.95	81.5	91.5	193	13.9	4.52	1.75	.95	.52	.59
MAX	.19	.15	69	825	600	2680	56	7.0	2.6	1.4	.76	2.2
MIN	.08	.09	.10	.60	2.6	17	7.5	2.2	1.0	.52	.19	.28
AC-FT	6.4	6.6	181	5010	5080	11880	825	278	104	58	32	35
CAL YR 1977 TOTAL	286.63	MEAN	.79	MAX	69	MIN	.04	AC-FT	569			
WTR YR 1978 TOTAL	11849.58	MEAN	32.5	MAX	2680	MIN	.08	AC-FT	23500			

MALIBU CREEK BASIN

11105500 MALIBU CREEK AT CRATER CAMP, NEAR CALABASAS, CA

LOCATION.--Lat 34°04'40", long 118°42'03", in SW¼ sec.18, T.1 S., R.17 W., Los Angeles County, on right bank 700 ft (210 m) downstream from Cold Creek, 0.2 mi (0.3 km) downstream from Crater Camp, and 6 mi (10 km) southwest of Calabasas.

DRAINAGE AREA.--105 mi² (272 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 432.82 ft (131.924 m) National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Flood Control District). Prior to Nov. 16, 1954, at datum 2.31 ft (0.704 m) lower.

REMARKS.--Records fair. Flow partly regulated by many small recreational reservoirs. Small diversions above station for domestic use.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--47 years, 23.0 ft³/s (0.651 m³/s), 16,660 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,800 ft³/s (957 m³/s) Jan. 25, 1969, gage height, 21.43 ft (6.532 m), from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurements at gage heights 17.27 ft (5.264 m) and 21.43 ft (6.532 m); no flow at times in some years prior to 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,400 ft³/s (549 m³/s) Mar. 4, gage height, 16.64 ft (5.072 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Oct. 24, Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.2	6.1	8.6	31	3080	85	35	14	12	7.7	4.5
2	2.3	2.3	6.1	7.1	32	1110	67	32	13	11	9.3	4.2
3	2.2	2.2	3.5	9.9	32	646	64	31	17	9.6	7.7	6.6
4	2.2	2.2	6.3	84	28	7620	70	28	18	6.6	8.0	5.8
5	2.3	2.3	5.8	75	242	1640	66	28	22	8.3	5.6	9.2
6	2.2	2.2	6.8	117	191	748	61	31	19	11	4.4	11
7	2.3	2.2	4.4	53	206	565	83	29	14	8.3	7.4	8.6
8	2.2	2.2	5.1	24	280	411	66	29	8.4	7.4	6.6	5.3
9	2.0	2.5	4.9	224	2530	307	58	32	12	9.9	4.4	3.8
10	2.2	2.5	3.2	682	2310	260	56	30	15	6.8	4.2	5.6
11	2.0	2.5	2.2	148	503	215	51	28	16	5.6	5.6	6.8
12	2.0	2.5	2.0	74	930	197	50	24	15	5.3	9.0	7.4
13	2.2	2.5	1.9	50	1040	168	51	26	13	5.1	9.0	7.4
14	2.2	3.5	1.7	210	479	153	49	33	11	5.6	6.8	8.0
15	2.0	2.5	4.6	1100	321	137	241	30	12	5.8	6.3	8.3
16	1.9	4.8	6.1	1120	231	131	181	27	15	6.3	4.6	8.3
17	1.9	7.1	7.2	678	176	123	96	24	15	6.3	5.1	8.3
18	2.0	7.4	8.0	257	147	113	80	24	15	6.8	5.8	4.8
19	2.3	7.4	8.3	199	127	104	70	24	11	7.1	5.6	3.5
20	2.3	7.1	8.6	137	113	100	63	25	9.6	6.8	9.3	5.3
21	2.5	6.3	8.6	105	104	105	54	24	15	6.8	8.0	6.1
22	2.2	5.9	9.0	88	91	305	44	17	10	6.8	5.6	8.3
23	2.0	5.9	8.0	78	83	142	40	18	8.6	7.1	5.3	8.3
24	1.7	7.1	9.3	67	75	107	42	21	10	6.8	5.3	8.6
25	1.9	5.8	9.0	57	74	91	47	20	12	7.1	4.8	8.3
26	2.2	5.3	22	49	70	86	50	21	14	7.7	4.4	8.6
27	2.2	5.2	12	47	72	80	40	21	8.6	6.8	5.8	7.7
28	2.2	3.8	163	44	849	77	35	21	7.1	6.6	9.0	7.1
29	2.2	2.2	57	39	---	74	33	21	8.6	9.4	7.4	4.8
30	2.2	1.9	18	34	---	77	35	17	12	10	5.8	4.4
31	2.2	---	9.3	33	---	142	---	14	---	8.0	6.8	---
TOTAL	66.5	119.5	428.0	5898.6	11367	19114	2028	785	390.9	234.7	200.6	204.9
MEAN	2.15	3.98	13.8	190	406	617	67.6	25.3	13.0	7.57	6.47	6.83
MAX	2.5	7.4	163	1120	2530	7620	241	35	22	12	9.3	11
MIN	1.7	1.9	1.7	7.1	28	74	33	14	7.1	5.1	4.2	3.5
AC-FT	132	237	849	11700	22550	37910	4020	1560	775	466	398	406
CAL YR 1977	TOTAL	2719.8	MEAN	7.45	MAX	315	MIN	1.1	AC-FT	5390		
WTR YR 1978	TOTAL	40837.7	MEAN	112	MAX	7620	MIN	1.7	AC-FT	81000		

11105850 ARROYO SIMI NEAR SIMI, CA

LOCATION.--Lat 34°16'23", long 118°47'13", SE½SE¼NW¼ sec.8, T.2 N., R.18 W., Ventura County, on left bank 9 ft (3 m) upstream from concrete drop structure; 100 ft (30 m) downstream from intersection of Sinaloa Road and Aristotle Street, in town of Simi Valley, 0.4 mi (0.6 km) northwest of Simi, and 1.0 mi (1.6 km) upstream from Brea Canyon.

DRAINAGE AREA.--69.4 mi² (179.7 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to September 1951, October 1952 to current year. Monthly discharge, in acre-ft only, for October 1933 to September 1951, October 1952 to October 1968, published in WSP 2128.

GAGE.--Water-stage recorder with concrete control since Nov. 16, 1976. Datum of gage is 729.35 ft (222.306 m) National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District). Prior to Nov. 16, 1976 at site 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Records fair. No regulation above station. Pumping from wells for irrigation. City of Simi Valley intermittently discharged ground water into channel from extraction wells this year.

COOPERATION.--Records were furnished by Ventura County Flood Control District and reviewed by Geological Survey.

AVERAGE DISCHARGE.--10 years (water years 1969-78) 9.21 ft³/s (0.261 m³/s), 6,670 acre-ft/yr (8.22 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,730 ft³/s (219 m³/s) Mar. 4, 1978, gage height, 7.5 ft (2.29 m), from high-water profile past gage; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0745	2090 59.2	2.71 0.826	Feb. 10	0030	3560 101	3.79 1.155
Jan. 4	1330	1580 44.7	2.21 0.674	Feb. 12	1930	2420 68.5	2.95 0.899
Jan. 10	0815	903 25.6	1.75 0.533	Mar. 1	0430	4700 133	4.70 1.433
Jan. 16	1800	1970 55.8	2.62 0.799	Mar. 4	0645	*7730 219	7.5 2.29
Feb. 5	0900	854 24.2	1.82 0.555	Mar. 22	0930	596 16.9	1.60 0.488
Feb. 7	1500	836 23.7	1.74 0.530	Apr. 15	1700	524 14.8	1.53 0.466

Minimum daily discharge, 0.60 ft³/s (0.017 m³/s) Jan. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.8	2.8	.60	2.2	1300	4.6	2.5	3.8	2.5	2.3	1.5
2	2.8	2.5	2.8	.60	2.2	354	3.2	2.5	3.8	2.8	2.5	2.2
3	3.2	2.5	2.8	23	2.2	106	3.2	2.5	3.8	2.8	2.5	2.8
4	3.2	2.5	2.8	166	2.5	2350	16	2.5	2.8	2.5	2.5	2.8
5	3.2	4.3	2.8	3.1	128	621	3.8	2.5	2.2	2.2	2.5	13
6	2.8	3.5	2.8	29	13	211	28	2.5	2.2	2.2	2.5	16
7	2.8	3.2	2.8	2.5	113	172	16	2.5	2.8	2.8	2.5	2.8
8	2.8	2.8	2.8	2.2	70	53	3.8	2.5	2.8	2.5	2.2	2.5
9	2.8	2.8	2.8	76	1160	71	2.8	2.5	2.9	2.5	2.5	2.5
10	2.5	3.5	2.5	240	834	29	2.5	2.5	2.8	2.5	2.8	2.5
11	2.2	3.5	2.5	6.3	53	33	2.5	2.2	3.2	2.5	3.2	2.5
12	2.5	2.8	2.8	2.2	451	18	2.8	2.0	2.8	3.5	2.8	1.8
13	2.5	2.8	3.8	2.2	255	9.7	2.8	2.0	2.8	3.2	2.8	1.8
14	2.2	3.2	2.8	182	47	8.0	2.8	2.0	3.2	2.8	2.8	2.0
15	2.5	2.8	2.8	150	20	5.0	96	2.0	2.8	2.8	2.8	2.0
16	2.5	3.2	1.4	434	10	4.6	8.5	2.2	2.8	2.8	2.8	1.5
17	2.8	3.5	5.0	95	5.4	3.5	3.2	2.2	3.2	2.8	2.8	1.5
18	2.5	3.2	7.0	3.8	3.8	3.2	3.2	2.2	3.5	2.8	2.8	1.8
19	2.5	2.8	2.8	24	3.5	3.2	3.2	2.5	3.5	2.8	2.8	2.0
20	2.5	2.8	1.2	2.8	3.2	3.2	3.2	2.5	3.2	2.8	2.8	3.2
21	2.5	2.8	6.1	2.5	3.2	14	2.8	2.8	3.2	2.5	2.8	3.2
22	2.5	2.8	1.6	2.2	2.8	125	2.8	2.5	3.2	2.5	2.8	3.2
23	2.8	3.2	1.6	2.2	2.8	4.7	2.8	2.8	3.2	2.5	2.8	3.2
24	2.8	2.8	.80	2.2	2.8	3.8	2.8	2.8	3.8	2.5	2.8	3.2
25	2.8	2.8	3.6	2.2	2.8	3.2	3.3	3.2	3.5	2.5	2.8	3.2
26	2.8	2.8	50	2.2	2.8	2.8	2.8	3.2	3.2	2.5	2.8	3.2
27	2.8	2.8	17	1.3	3.2	2.5	2.8	3.2	2.5	2.2	2.8	3.2
28	2.8	3.5	267	.80	503	2.5	2.8	3.8	2.8	2.2	2.8	3.2
29	2.8	3.5	83	2.2	---	2.5	2.1	3.8	2.8	2.2	3.2	2.8
30	2.8	3.2	15	2.2	---	29	1.5	3.5	2.4	2.2	2.2	2.8
31	2.8	---	.80	2.2	---	65	---	3.5	---	2.2	1.5	---
TOTAL	83.8	91.2	506.30	1467.50	3702.4	5613.4	238.6	81.9	91.5	80.1	82.5	99.6
MEAN	2.70	3.04	16.3	47.3	132	181	7.95	2.64	3.05	2.58	2.66	3.32
MAX	3.2	4.3	267	434	1160	2350	96	3.8	3.8	3.5	3.2	16
MIN	2.2	2.5	.80	.60	2.2	2.5	1.5	2.0	2.2	2.2	1.5	1.5
AC-FT	166	181	1000	2910	7340	11130	473	162	181	159	164	198
CAL YR 1977 TOTAL	2081.10			MEAN 5.70	MAX 267	MIN .80	AC-FT 4130					
WTR YR 1978 TOTAL	12138.80			MEAN 33.3	MAX 2350	MIN .60	AC-FT 24080					

11105850 ARROYO SIMI NEAR SIMI, CA--Continued

WATER-QUALITY RECORDS

WATER TEMPERATURES: October 1970 to September 1971, October 1973 to September 1978 (discontinued).
SEDIMENT RECORDS: October 1968 to September 1971, October 1972 to September 1978 (discontinued).

COOPERATION.--Records of discharge were furnished by Ventura County Flood Control District.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 42,800 mg/L Mar. 4, 1978; minimum daily mean, no flow for many days during some years.

SEDIMENT DISCHARGE: Maximum daily, 343,000 tons (311,000 metric tons) Mar. 4, 1978; minimum daily, 0 tons on many days during some years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 42,800 mg/L Mar. 4; minimum daily mean, 7 mg/L Sept. 14-30.

SEDIMENT DISCHARGE: Maximum daily discharge, 343,000 tons (311,000 metric tons) Mar. 4; minimum daily discharge, 0.02 tons (0.02 metric tons) Dec. 31 to Jan. 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

11105850 ARROYO SIMI NEAR SIMI, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.8	50	.38	2.8	14	.11	2.8	20	.15			
2	2.8	42	.32	2.5	17	.11	2.8	19	.14			
3	3.2	35	.30	2.5	20	.14	2.8	17	.13			
4	3.2	27	.23	2.5	20	.14	2.8	15	.11			
5	3.2	19	.16	4.3	29	.48	2.8	13	.10			
6	2.8	27	.20	3.5	20	.19	2.8	11	.08			
7	2.8	35	.26	3.2	20	.17	2.8	9	.07			
8	2.8	37	.28	2.8	21	.16	2.8	12	.09			
9	2.8	39	.29	2.8	22	.17	2.8	15	.11			
10	2.5	41	.28	3.5	23	.22	2.5	17	.11			
11	2.2	43	.26	3.5	24	.23	2.5	20	.14			
12	2.5	45	.30	2.8	25	.19	2.8	23	.17			
13	2.5	45	.30	2.8	26	.20	3.8	47	.48			
14	2.2	46	.27	3.2	27	.23	2.8	46	.35			
15	2.5	40	.27	2.8	28	.21	2.8	46	.35			
16	2.5	34	.23	3.2	29	.25	1.4	47	.18			
17	2.8	29	.22	3.5	35	.33	5.0	217	7.3			
18	2.5	23	.16	3.2	41	.35	7.0	237	12			
19	2.5	17	.11	2.8	47	.36	2.8	10	.08			
20	2.5	17	.11	2.8	41	.31	1.2	11	.04			
21	2.5	16	.11	2.8	35	.26	6.1	137	8.1			
22	2.5	16	.11	2.8	29	.22	1.6	24	.12			
23	2.8	17	.13	3.2	28	.24	1.6	20	.10			
24	2.8	17	.13	2.8	27	.20	.80	12	.03			
25	2.8	18	.14	2.8	26	.20	3.6	117	6.3			
26	2.8	18	.14	2.8	25	.19	50	1290	376			
27	2.8	17	.13	2.8	24	.18	17	840	89			
28	2.8	16	.12	3.5	24	.23	267	1940	3290			
29	2.8	15	.11	3.5	23	.22	83	290	364			
30	2.8	15	.11	3.2	22	.19	15	38	6.1			
31	2.8	14	.11	---	---	---	.80	10	.02			
TOTAL	83.8	---	6.27	91.2	---	6.68	506.30	---	4161.95			
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)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.60	10	.02	2.2	29	.17	1300	42100	225000			
2	.60	10	.02	2.2	30	.18	354	19700	21500			
3	23	559	80	2.2	31	.18	106	18800	3660			
4	166	4490	8880	2.5	32	.22	2350	42800	343000			
5	3.1	82	.80	128	3740	6110	621	20100	41500			
6	29	382	56	13	298	29	211	9150	5210			
7	2.5	50	.34	113	3020	3610	172	5710	3090			
8	2.2	50	.30	70	2610	1440	53	1600	229			
9	76	3020	1200	1160	12200	45100	71	2340	535			
10	240	4930	5030	834	11600	52000	29	1500	117			
11	6.3	55	3.3	53	1130	162	33	2100	221			
12	2.2	22	.13	451	6200	24200	18	800	39			
13	2.2	24	.14	255	3410	3680	9.7	700	18			
14	182	3100	6450	47	861	111	8.0	520	11			
15	150	2630	2800	20	600	32	5.0	330	4.5			
16	434	20000	65100	10	290	7.8	4.6	150	1.9			
17	95	4100	3270	5.4	30	.44	3.5	120	1.1			
18	3.8	140	1.5	3.8	30	.31	3.2	91	.79			
19	24	876	114	3.5	20	.19	3.2	62	.54			
20	2.8	26	.20	3.2	17	.15	3.2	32	.28			
21	2.5	26	.18	3.2	19	.16	14	1120	75			
22	2.2	26	.15	2.8	20	.15	125	10900	7280			
23	2.2	26	.15	2.8	22	.17	4.7	679	9.9			
24	2.2	26	.15	2.8	23	.17	3.8	300	3.1			
25	2.2	26	.15	2.8	23	.17	3.2	249	2.2			
26	2.2	26	.15	2.8	23	.17	2.8	197	1.5			
27	1.3	22	.08	3.2	23	.20	2.5	146	.99			
28	.80	15	.03	503	10300	14000	2.5	94	.63			
29	2.2	28	.17	---	---	---	2.5	43	.29			
30	2.2	28	.17	---	---	---	29	1310	310			
31	2.2	28	.17	---	---	---	65	2850	958			
TOTAL	1467.50	---	92988.30	3702.4	---	150484.8	5613.4	---	652780.7			

CALLEGUAS CREEK BASIN

11105850 ARROYO SIMI NEAR SIMI, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.6	200	2.5	2.5	73	.49	3.8	64	.66
2	3.2	130	1.1	2.5	73	.49	3.8	68	.70
3	3.2	130	1.1	2.5	72	.49	3.8	72	.74
4	16	487	47	2.5	72	.49	2.8	73	.55
5	3.8	100	1.0	2.5	71	.48	2.2	74	.44
6	28	1040	360	2.5	72	.49	2.2	75	.45
7	16	748	79	2.5	74	.50	2.8	77	.58
8	3.8	130	1.3	2.5	75	.51	2.8	78	.59
9	2.8	14	.11	2.5	77	.52	2.9	79	.62
10	2.5	28	.19	2.5	78	.53	2.8	60	.45
11	2.5	43	.29	2.2	72	.43	3.2	41	.35
12	2.8	57	.43	2.0	65	.35	2.8	23	.17
13	2.8	46	.35	2.0	59	.32	2.8	24	.18
14	2.8	35	.26	2.0	57	.31	3.2	24	.21
15	96	4440	2800	2.0	55	.30	2.8	25	.19
16	8.5	703	23	2.2	48	.29	2.8	23	.17
17	3.2	100	.86	2.2	40	.24	3.2	21	.18
18	3.2	38	.33	2.2	52	.31	3.5	19	.18
19	3.2	49	.42	2.5	52	.35	3.5	17	.16
20	3.2	59	.51	2.5	46	.31	3.2	15	.13
21	2.8	59	.45	2.8	40	.30	3.2	16	.14
22	2.8	59	.45	2.5	35	.24	3.2	17	.15
23	2.8	59	.45	2.8	28	.21	3.2	18	.16
24	2.8	59	.45	2.8	23	.17	3.8	19	.19
25	3.3	60	.54	3.2	29	.25	3.5	19	.18
26	2.8	36	.27	3.2	35	.30	3.2	18	.16
27	2.8	43	.33	3.2	41	.35	2.5	18	.12
28	2.8	50	.38	3.8	47	.48	2.8	18	.14
29	2.1	53	.30	3.8	51	.52	2.8	17	.13
30	1.5	36	.20	3.5	55	.52	2.4	17	.11
31	---	---	---	3.5	59	.56	---	---	---
TOTAL	238.6	---	3323.57	81.9	---	12.10	91.5	---	9.18
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	2.5	23	.16	2.3	58	.36	1.5	18	.07
2	2.8	30	.23	2.5	49	.33	2.2	16	.10
3	2.8	36	.27	2.5	40	.27	2.8	13	.10
4	2.5	33	.22	2.5	32	.22	2.8	10	.08
5	2.2	31	.18	2.5	23	.16	13	96	8.5
6	2.2	28	.17	2.5	14	.09	16	126	9.6
7	2.8	26	.20	2.5	24	.16	2.8	24	.18
8	2.5	23	.16	2.2	33	.20	2.5	24	.16
9	2.5	27	.18	2.5	43	.29	2.5	24	.16
10	2.5	30	.20	2.8	52	.39	2.5	24	.16
11	2.5	34	.23	3.2	38	.33	2.5	24	.16
12	3.5	31	.29	2.8	23	.17	1.8	24	.12
13	3.2	28	.24	2.8	26	.20	1.8	16	.08
14	2.8	25	.19	2.8	29	.22	2.0	7	.04
15	2.8	22	.17	2.8	32	.24	2.0	7	.04
16	2.8	25	.19	2.8	35	.26	1.5	7	.03
17	2.8	28	.21	2.8	38	.29	1.5	7	.03
18	2.8	31	.23	2.8	22	.17	1.8	7	.03
19	2.8	34	.26	2.8	6	.05	2.0	7	.04
20	2.8	37	.28	2.8	6	.05	3.2	7	.06
21	2.5	40	.27	2.8	7	.05	3.2	7	.06
22	2.5	70	.47	2.8	8	.06	3.2	7	.06
23	2.5	99	.67	2.8	9	.07	3.2	7	.06
24	2.5	129	.87	2.8	10	.08	3.2	7	.06
25	2.5	118	.80	2.8	14	.11	3.2	7	.06
26	2.5	107	.72	2.8	18	.14	3.2	7	.06
27	2.2	97	.58	2.8	22	.17	3.2	7	.06
28	2.2	89	.53	2.8	23	.17	3.2	7	.06
29	2.2	81	.48	3.2	23	.20	2.5	7	.05
30	2.2	74	.44	2.2	24	.14	2.8	7	.05
31	2.2	66	.39	1.5	21	.09	---	---	---
TOTAL	80.1	---	10.48	82.5	---	5.73	99.6	---	20.32
YEAR	12138.80		903810.1						

11105850 ARROYO SIMI NEAR SIMI, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEO (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEO (T/DAY)	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 05...	1230	20.0	8.0	91	2.0	--	--	--	--	--
JAN 16...	1705	12.0	956	67600	174000	21	23	32	41	--
FEB 07...	1605	15.0	558	8090	12200	24	34	43	54	67
08...	1905	16.0	175	6340	3000	33	37	43	53	63
09...	1605	13.0	1930	9260	48300	31	39	52	65	77
MAR 02...	1300	14.0	578	18800	29300	27	29	40	51	64
21...	1250	19.5	3.8	138	1.4	--	--	--	--	--

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
NOV 05...	90	--	100	--	--	--	--	--	--	--
JAN 16...	49	--	59	--	69	--	89	--	99	100
FEB 07...	--	77	--	89	--	99	--	100	--	--
08...	--	79	--	91	--	98	--	100	--	--
09...	--	89	--	96	--	99	--	100	--	--
MAR 02...	--	80	--	92	--	100	--	--	--	--
21...	94	--	97	--	100	--	--	--	--	--

11106400 CONEJO CREEK ABOVE HIGHWAY 101, NEAR CAMARILLO, CA

LOCATION.--Lat 34°14'12", long 118°57'50", T.2 N., R.20 W., Ventura County, on left bank 2.6 mi (4.2 km) upstream from U.S. Highway 101, and 4.4 mi (7.1 km) northeast of Camarillo.

DRAINAGE AREA.--64.2 mi² (166.3 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (55 m), from topographic map. Prior to March 4, 1978, at same site at datum 10.00 ft (3.048 m) higher.

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

COOPERATION.--Records were furnished by Ventura County Flood Control District and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--6 years, 20.3 ft³/s (0.575 m³/s), 14,700 acre-ft/yr (18.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft³/s (278 m³/s) Mar. 4, 1978, gage height, 19.10 ft (5.822 m); maximum gage height, 20.44 ft (6.230 m) Feb. 10, 1978, present datum; minimum daily, 0.13 ft³/s (0.004 m³/s) May 31, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	1530	1620 45.9	5.48 1.670	Feb. 12	1900	4200 119	7.76 2.365
Jan. 16	1815	3600 102	7.62 2.323	Mar. 1	0345	4750 135	7.87 2.399
Feb. 5	0930	1530 43.3	5.34 1.628	Mar. 4	0700	*9830 278	19.10 5.822
Feb. 7	1645	1550 43.9	5.37 1.637	Mar. 22	0900	1220 34.6	12.12 3.694
Feb. 10	0130	7840 222	*10.44 3.182				

Minimum daily discharge, 5.5 ft³/s (0.16 m³/s) Oct. 8, Nov. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	7.9	8.9	10	11	1220	57	17	15	13	16	15
2	7.4	7.9	7.4	9.9	12	309	43	16	15	12	15	13
3	8.4	8.4	6.9	32	12	117	30	15	15	11	14	15
4	7.9	7.4	10	179	11	3240	26	14	15	11	14	16
5	7.4	6.4	8.9	21	208	680	24	12	15	11	15	59
6	6.9	6.4	6.4	73	39	180	43	12	14	10	13	34
7	6.4	5.5	7.4	14	215	112	35	14	14	10	14	14
8	5.5	6.0	11	10	147	92	30	15	13	10	12	12
9	6.4	8.4	12	119	1920	111	27	16	12	9.8	12	12
10	7.9	8.9	10	331	1520	82	23	17	12	9.6	12	14
11	8.9	8.9	10	28	97	65	22	18	13	9.4	13	16
12	7.9	8.4	12	19	776	56	22	18	13	9.2	12	15
13	7.9	8.9	10	17	326	48	22	18	14	9.0	12	15
14	7.9	10	10	183	73	43	21	17	14	8.8	12	16
15	8.4	10	9.4	382	65	39	132	16	14	8.6	11	16
16	8.9	9.4	9.4	459	44	37	22	16	13	8.4	11	18
17	9.4	10	13	74	41	34	22	15	12	8.2	12	18
18	9.4	10	22	25	38	32	22	15	14	8.0	13	18
19	9.4	10	11	47	34	29	22	14	15	7.8	13	17
20	9.4	10	10	18	34	27	21	14	14	7.6	12	15
21	8.9	10	15	16	34	24	21	15	13	7.4	12	15
22	9.4	11	17	14	32	280	21	15	13	7.2	14	14
23	9.4	11	10	14	31	34	20	15	13	7.0	14	14
24	10	10	10	13	31	34	19	15	11	6.8	12	14
25	9.4	9.4	8.9	13	29	34	19	15	12	8.0	9.9	14
26	8.9	8.9	148	14	28	34	18	15	14	10	12	13
27	7.9	9.4	38	12	32	34	18	15	13	12	13	13
28	8.9	10	118	12	301	31	18	15	14	12	13	13
29	8.4	10	17	12	---	27	17	15	14	12	13	12
30	8.4	10	14	12	---	24	17	15	14	12	13	12
31	8.9	---	11	12	---	147	---	15	---	14	13	---
TOTAL	257.6	268.5	612.6	2194.9	6141	7256	854	474	407	300.8	396.9	502
MEAN	8.31	8.95	19.8	70.8	219	234	28.5	15.3	13.6	9.70	12.8	16.7
MAX	10	11	148	459	1920	3240	132	18	15	14	16	59
MIN	5.5	5.5	6.4	9.9	11	24	17	12	11	6.8	9.9	12
AC-FT	511	533	1220	4350	12180	14390	1690	940	807	597	787	996
CAL YR 1977 TOTAL	4826.1		MEAN 13.2	MAX 438	MIN 3.1	AC-FT 9570						
WTR YR 1978 TOTAL	19665.3		MEAN 53.9	MAX 3240	MIN 5.5	AC-FT 39010						

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA

LOCATION.--Lat 34°10'46", long 119°02'20", in Guadalupe Grant, Ventura County, on downstream side of county road bridge, 1.0 mi (1.6 km) northeast of Camarillo State Hospital, and 1.4 mi (2.3 km) downstream from Conejo Creek.

DRAINAGE AREA.--248 mi² (642 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 58.42 ft (17.806 m) National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District).

REMARKS.--Records good except those for periods of no gage-height record, Mar. 8 to Sept. 1, which are poor. No regulation above station. Pumping for irrigation in valley 1.0 mi (1.6 km) above station. Sustained flow from city of Thousand Oaks reclamation plant.

COOPERATION.--Records were furnished by Ventura County Flood Control District; two discharge measurements were made and records reviewed by Geological Survey.

AVERAGE DISCHARGE.--10 years, 29.6 ft³/s (0.838 m³/s), 21,450 acre-ft/yr (26.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft³/s (530 m³/s) March 4, 1978, gage height, 8.38 ft (2.554 m); maximum gage height, 8.50 ft (2.591 m) Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1345	913 25.9	3.07 0.936	Feb. 12	2030	5930 168	5.50 1.676
Jan. 4	1915	1640 46.4	3.61 1.100	Mar. 1	0730	7000 198	5.86 1.786
Jan. 10	1330	1290 36.5	3.37 1.027	Mar. 4	1015	*18700 530	8.38 2.554
Jan. 16	1800	5110 145	5.20 1.585	Mar. 22	1100	1410 39.9	2.66 0.811
Feb. 5	1215	1270 36.0	3.33 1.015	Mar. 31	0445	529 15.0	1.45 0.442
Feb. 7	1845	1670 47.3	3.60 1.097	Apr. 15	1615	584 16.5	1.56 0.475
Feb. 10	0345	11500 326	7.12 2.170				

Minimum daily discharge, 2.7 ft³/s (0.076 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	9.3	5.1	11	16	2670	50	30	15	17	16	13
2	13	8.1	6.0	9.2	15	893	34	28	14	17	16	16
3	16	8.1	7.0	22	15	185	32	27	15	17	15	18
4	12	9.3	8.1	290	14	6700	59	26	15	17	15	20
5	8.1	7.0	13	63	249	1600	34	25	15	17	15	26
6	6.0	6.0	10	116	128	400	50	25	15	17	14	64
7	7.0	6.0	8.1	26	359	207	48	25	15	17	15	24
8	5.1	6.0	8.1	18	242	141	34	25	15	16	14	22
9	9.3	8.1	15	145	3220	118	31	24	16	16	14	12
10	9.3	6.0	10	602	3620	93	30	24	15	16	14	12
11	12	7.0	6.0	64	212	76	32	24	15	16	14	12
12	10	8.1	5.1	26	1220	65	33	24	15	16	14	13
13	10	9.3	4.2	20	868	59	34	23	14	15	14	12
14	10	12	5.1	122	135	54	34	22	14	15	14	15
15	12	13	7.0	869	77	50	144	21	14	15	14	12
16	15	8.1	9.3	1080	63	47	44	20	13	15	14	13
17	12	5.1	13	254	50	45	34	19	13	15	14	15
18	8.1	9.3	24	46	44	43	33	18	14	14	14	15
19	7.0	10	13	70	39	41	33	18	15	14	14	13
20	7.0	9.3	9.3	29	35	40	33	18	14	14	14	10
21	7.0	10	7.0	24	33	48	33	18	14	13	14	10
22	10	12	18	20	29	430	32	18	15	13	14	9.3
23	13	10	10	19	29	64	32	18	14	12	14	10
24	12	10	9.3	19	29	52	32	18	13	12	14	8.1
25	13	10	6.0	16	27	52	30	18	14	13	14	9.3
26	13	6.0	83	18	25	51	29	18	15	14	14	9.3
27	13	5.1	59	18	27	51	28	17	15	14	14	10
28	10	5.1	210	18	383	45	27	17	16	14	14	13
29	9.3	6.0	34	18	---	35	28	16	16	15	14	10
30	9.3	6.0	34	18	---	34	29	15	16	15	14	8.1
31	9.3	---	12	18	---	215	---	15	---	16	14	---
TOTAL	310.5	245.3	668.7	4088.2	11203	14604	1156	654	439	467	442	454.1
MEAN	10.0	8.18	21.6	132	400	471	38.5	21.1	14.6	15.1	14.3	15.1
MAX	16	13	210	1080	3620	6700	144	30	16	17	16	64
MIN	2.7	5.1	4.2	9.2	14	34	27	15	13	12	14	8.1
AC-FT	616	487	1330	8110	22220	28970	2290	1300	871	926	877	901
CAL YR 1977	TOTAL	5621.35	MEAN 15.4	MAX 544	MIN .65	AC-FT 11150						
WTR YR 1978	TOTAL	34731.80	MEAN 95.2	MAX 6700	MIN 2.7	AC-FT 68890						

CALLEGUAS CREEK BASIN

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to September 1978 (discontinued).

WATER TEMPERATURES: Water years 1971 to September 1978 (discontinued).

SEDIMENT RECORDS: Water years 1969 to September 1978 (discontinued).

PERIOD OF DAILY RECORD, --

SEDIMENT RECORDS: October 1968 to September 1978.

EXTREMES FOR PERIOD OF DAILY RECORD, --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 62,900 mg/L Jan. 25, 1969; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 1,700,000 tons (1,540,000 metric tons) Jan. 25, 1969; minimum daily, 0 tons on many days during most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 33,300 mg/L Mar. 4; minimum daily mean, 7 mg/L Oct. 25 to Nov. 1.

SEDIMENT DISCHARGE: Maximum daily, 904,000 tons (820,000 metric tons) Mar. 4; minimum daily, 0.14 tons (0.13 metric tons) Oct. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER				NOVEMBER				DECEMBER			
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.7	19	.14	9.3	7	.18	5.1	24	.33			
2	13	19	.67	8.1	12	.26	6.0	23	.37			
3	16	18	.78	8.1	17	.37	7.0	21	.40			
4	12	17	.55	9.3	22	.55	8.1	20	.44			
5	8.1	15	.33	7.0	27	.51	13	19	.67			
6	6.0	14	.23	6.0	24	.39	10	23	.62			
7	7.0	13	.25	6.0	22	.36	8.1	26	.57			
8	5.1	13	.18	6.0	19	.31	8.1	30	.66			
9	9.3	14	.35	8.1	17	.37	15	33	1.3			
10	9.3	14	.35	6.0	14	.23	10	37	1.0			
11	12	15	.49	7.0	22	.42	6.0	33	.53			
12	10	15	.41	8.1	29	.63	5.1	29	.40			
13	10	14	.38	9.3	23	.58	4.2	25	.28			
14	10	12	.32	12	17	.55	5.1	21	.29			
15	12	11	.36	13	11	.39	7.0	17	.32			
16	15	9	.36	8.1	11	.24	9.3	18	.45			
17	12	8	.26	5.1	12	.17	13	18	.63			
18	8.1	8	.17	9.3	12	.30	24	22	1.4			
19	7.0	8	.15	10	13	.35	13	25	.88			
20	7.0	8	.15	9.3	13	.33	9.3	28	.70			
21	7.0	8	.15	10	13	.35	7.0	30	.57			
22	10	8	.22	12	12	.39	18	30	1.5			
23	13	8	.28	10	12	.32	10	30	.81			
24	12	8	.26	10	11	.30	9.3	30	.75			
25	13	7	.25	10	11	.30	6.0	30	.49			
26	13	7	.25	6.0	14	.23	83	3680	2530			
27	13	7	.25	5.1	17	.23	59	1330	331			
28	10	7	.19	5.1	19	.26	210	7180	9690			
29	9.3	7	.18	6.0	22	.36	34	489	64			
30	9.3	7	.18	6.0	25	.41	34	271	55			
31	9.3	7	.18	---	---	---	12	80	2.6			
TOTAL	310.5	---	9.27	245.3	---	10.64	668.7	---	12688.96			

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)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	75	2.2	16	40	1.7	2670	30100	331000			
2	9.2	70	1.7	15	47	1.9	893	17800	58700			
3	22	147	15	15	47	1.9	185	8300	4590			
4	290	11700	32900	14	47	1.8	6700	33300	904000			
5	63	1330	486	249	7880	16600	1600	14100	74400			
6	116	3490	2200	128	2520	2690	400	5460	6430			
7	26	160	11	359	11100	34400	207	4040	2260			
8	18	50	2.4	242	5050	11300	141	2610	994			
9	145	1150	1320	3220	27700	290000	118	1190	379			
10	602	3410	8520	3620	21500	451000	93	745	187			
11	64	259	66	212	666	426	76	690	142			
12	26	130	9.1	1220	7510	86700	65	630	111			
13	20	100	5.4	868	7230	29200	59	576	92			
14	122	1410	3520	135	1000	364	54	500	73			
15	869	7650	38700	77	500	104	50	460	62			
16	1080	7090	68100	63	300	51	47	430	55			
17	254	2130	2650	50	200	27	45	415	50			
18	46	158	22	44	110	13	43	400	46			
19	70	174	38	39	110	12	41	385	43			
20	29	90	7.0	35	110	10	40	971	105			
21	24	52	3.4	33	110	9.8	48	1200	156			
22	20	52	2.8	29	110	8.6	430	4630	8070			
23	19	63	3.2	29	110	8.6	64	1350	233			
24	19	75	3.8	29	110	8.6	52	1020	143			
25	16	69	3.0	27	110	8.0	52	1020	143			
26	18	63	3.1	25	110	7.4	51	990	136			
27	18	57	2.8	27	110	8.0	51	960	132			
28	18	51	2.5	383	5380	24600	45	930	113			
29	18	45	2.2	---	---	---	35	900	85			
30	18	38	1.8	---	---	---	34	1000	92			
31	18	32	1.6	---	---	---	215	4750	3740			
TOTAL	4088.2	---	158606.0	11203	---	947563.3	14604	---	1396762			

CALLEGUAS CREEK BASIN

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	APRIL				MAY				JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	50	2160	292	30	288	23	15	143	5.8	
2	34	1000	92	28	300	23	14	137	5.2	
3	32	1500	130	27	312	23	15	130	5.3	
4	59	7800	319	26	325	23	15	124	5.0	
5	34	1050	96	25	319	22	15	117	4.7	
6	50	1200	162	25	312	21	15	114	4.6	
7	48	1100	143	25	306	21	15	111	4.5	
8	34	550	50	25	299	20	15	108	4.4	
9	31	350	29	24	293	19	16	105	4.5	
10	30	350	28	24	286	19	15	102	4.1	
11	32	350	30	24	280	18	15	99	4.0	
12	33	350	31	24	273	18	15	96	3.9	
13	34	350	32	23	267	17	14	93	3.5	
14	34	350	32	22	260	15	14	90	3.4	
15	144	2460	2420	21	254	14	14	87	3.3	
16	44	350	42	20	247	13	13	84	2.9	
17	34	320	29	19	241	12	13	81	2.8	
18	33	290	26	18	234	11	14	78	2.9	
19	33	260	23	18	228	11	15	75	3.0	
20	33	230	20	18	221	11	14	72	2.7	
21	33	227	20	18	215	10	14	69	2.6	
22	32	224	19	18	208	10	15	66	2.7	
23	32	221	19	18	202	9.8	14	63	2.4	
24	32	218	19	18	195	9.5	13	60	2.1	
25	30	214	17	18	189	9.2	14	57	2.2	
26	29	226	18	18	182	8.8	15	54	2.2	
27	28	239	18	17	176	8.1	15	51	2.1	
28	27	251	18	17	169	7.8	16	48	2.1	
29	28	263	20	16	163	7.0	16	44	1.9	
30	29	276	22	15	156	6.3	16	43	1.9	
31	---	---	---	15	150	6.1	---	---	---	
TOTAL	1156	---	4216	654	---	446.6	439	---	102.7	

	JULY				AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	17	43	2.0	16	20	.86	13	77	2.7	
2	17	42	1.9	16	19	.82	16	77	3.3	
3	17	41	1.9	15	19	.77	18	77	3.7	
4	17	40	1.8	15	18	.73	20	77	4.2	
5	17	40	1.8	15	17	.69	26	77	5.4	
6	17	39	1.8	14	16	.60	64	714	190	
7	17	38	1.7	15	16	.65	24	70	4.5	
8	16	37	1.6	14	15	.57	22	50	3.0	
9	16	37	1.6	14	18	.68	12	40	1.3	
10	16	36	1.6	14	20	.76	12	30	.97	
11	16	35	1.5	14	23	.87	12	20	.65	
12	16	35	1.5	14	26	.98	13	20	.70	
13	15	34	1.4	14	29	1.1	12	20	.65	
14	15	33	1.3	14	31	1.2	15	20	.81	
15	15	32	1.3	14	34	1.3	12	20	.65	
16	15	32	1.3	14	37	1.4	13	20	.70	
17	15	31	1.3	14	39	1.5	15	20	.81	
18	14	30	1.1	14	42	1.6	15	20	.81	
19	14	30	1.1	14	45	1.7	13	20	.70	
20	14	29	1.1	14	47	1.8	10	20	.54	
21	13	28	.98	14	50	1.9	10	20	.54	
22	13	27	.95	14	53	2.0	9.3	20	.50	
23	12	27	.87	14	56	2.1	10	20	.54	
24	12	26	.84	14	58	2.2	8.1	20	.44	
25	13	25	.88	14	61	2.3	9.3	20	.50	
26	14	24	.91	14	64	2.4	9.3	20	.50	
27	14	24	.91	14	66	2.5	10	20	.54	
28	14	23	.87	14	69	2.6	13	20	.70	
29	15	22	.89	14	72	2.7	10	20	.54	
30	15	22	.89	14	74	2.8	8.1	20	.44	
31	16	21	.91	14	77	2.9	---	---	---	
TOTAL	467	---	40.50	442	---	46.98	454.1	---	231.33	
YEAR	34731.8		2520724							

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	310.50	9.27	40	49
NOVEMBER ...	245.30	10.64	19	30
DECEMBER ...	668.70	12688.96	813	13500
JANUARY 1978	4088.20	158606.00	16100	175000
FEBRUARY ...	11203.00	947563.30	68300	1020000
MARCH	14604.00	1396762.00	93400	1490000
APRIL	1156.00	4216.00	977	5190
MAY	654.00	446.60	255	702
JUNE	439.00	102.70	99	202
JULY	467.00	40.50	111	151
AUGUST	442.00	46.98	95	142
SEPTEMBER ..	454.10	231.33	158	389
TOTAL	34731.80	2520724.28	180367	2705355

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC 26...	1610	14.0	65	1640	288	17	20	24	27	30
JAN 16...	0855	13.5	51	163	22	57	66	72	79	85
FEB 09...	1652	14.5	3010	18600	151000	--	30	32	42	54
MAR 02...	1030	14.8	1340	23800	86100	--	22	24	30	38
04...	0602	14.5	12600	55000	1870000	--	19	20	29	39
06...	1735	17.0	314	11200	9500	--	54	61	79	92
22...	1612	17.0	381	11500	11800	--	39	49	62	73

DATE	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. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 26...	--	31	--	33	--	35	--	57	90	99
JAN 16...	--	89	--	94	--	97	--	99	100	--
FEB 09...	70	--	92	--	99	--	100	--	--	--
MAR 02...	--	52	--	73	--	89	--	98	99	100
04...	--	56	--	75	--	92	--	99	100	--
06...	98	--	100	--	--	--	--	--	--	--
22...	84	--	96	--	99	--	100	--	--	--

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NUMBER OF SAM- PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
SEP											
20...	1200	1	26	72	92	97	99	100	--	--	--
20...	1205	1	--	2	13	57	83	89	93	95	100
20...	1210	1	--	2	18	76	98	100	--	--	--
20...	1215	1	--	1	17	65	93	99	100	--	--
20...	1220	1	--	1	15	73	97	100	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 .062 MM
NOV							
02...	0930	15.0	44	10	11	.20	--
DEC							
29...	0946	16.0	19	32	20	.60	--
MAR							
13...	1450	22.0	20	59	50	32	1
MAY							
04...	1400	21.5	23	26	48	35	0
JUN							
05...	1340	25.5	44	15	44	15	0
29...	1330	29.0	40	16	44	15	0

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	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
NOV							
02...	0	7	43	75	90	99	100
DEC							
29...	0	1	36	87	99	100	--
MAR							
13...	7	50	88	98	100	--	--
MAY							
04...	2	18	65	95	99	100	--
JUN							
05...	1	14	72	96	99	100	--
29...	1	14	68	93	99	100	--

11107745 SANTA CLARA RIVER ABOVE RAILROAD STATION, NEAR LANG, CA

LOCATION.--Lat 34°25'52", long 118°21'22", in SE¼SW¼NW¼ sec.16, T.4 N., R.14 W., Los Angeles County, on downstream side of railroad bridge, 1.1 mi (1.8 km) east of Lang Railroad Station, 1.9 mi (3.1 km) downstream from Agua Dulce Canyon, and 5.2 mi (8.4 km) northeast of Solemint.

DRAINAGE AREA.--157 mi² (407 km²).

PERIOD OF RECORD.--October 1949 to September 1968, October 1969 to current year. Monthly discharge only for 1950-70 published in WDR CA-71-1. Daily discharge available in historical computer files.

GAGE.--Water-stage recorder. Altitude of gage is 1,750 ft (533 m), from topographic map. Prior to Apr. 3, 1970, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records poor. No regulation above station. Small diversions for irrigation and recreation.

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

AVERAGE DISCHARGE.--27 years (water years 1950-69, 1970-77), 4.50 ft³/s (0.127 m³/s), 3,260 acre-ft/yr (4.02 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft³/s (167 m³/s), estimated, Feb. 25, 1969; no flow at times in some years.

NOTE.--Records for current year will not be published due to lack of data.

SANTA CLARA RIVER BASIN

11107922 SOUTH FORK SANTA CLARA RIVER AT SAUGUS, CA

LOCATION.--Lat 34°24'55", long 118°32'34", in San Francisco Grant, Los Angeles County, on upstream side of Magic Mountain Parkway, 800 ft (244 m) west of San Fernando Road in Saugus.

DRAINAGE AREA.--43.4 mi² (112.4 km²).

PERIOD OF RECORD.--October 1975 to current year. September 1947 to September 1975 in files of Los Angeles County Flood Control District.

GAGE.--Water-stage recorder. Altitude of gage is 1150 ft (351 m) from topographic map.

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

COOPERATION.--Records were furnished by Los Angeles County Flood Control District.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 6,800 ft³/s (193 m³/s) Jan. 15, 1952, gage height unknown, from information by Los Angeles County Flood Control District.

NOTE.--Records for current year will not be published because of lack of data.

11108075 CASTAIC CREEK ONE MILE ABOVE FISH CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°36'54", long 118°39'28", in SW¼NW¼NW¼ sec.14, T.6 N., R.17 W., Los Angeles County, on right bank 1.0 mi (1.6 km) upstream from wooden bridge crossing Castaic Creek, and 9 mi (14 km) northwest of Castaic.

DRAINAGE AREA.--36.0 mi² (93.2 km²).

PERIOD OF RECORD.--October 1976 to current year. October 1968 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 1,780 ft (543 m), from topographic map.

REMARKS.--Records poor. No gage-height record, Jan. 9 to Sept. 30. Station is used to monitor natural inflow to Castaic Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Jan. 19, 1969, gage height unknown, from information furnished by California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,300 ft³/s (178 m³/s), estimated, Mar. 4, gage height, 7.00 ft (2.134 m), from information furnished by California Department of Natural Resources; no flow Oct. 1 to Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.94	5.0	317	47	18	7.1	3.0	1.1	.88
2			0	.82	3.6	308	41	17	7.1	2.9	1.1	.67
3			0	.73	3.0	128	39	16	6.5	2.8	1.1	.57
4			0	11	2.8	1610	38	14	5.9	2.7	1.1	.72
5			0	1.7	3.0	608	37	14	5.9	2.6	1.2	1.8
6			0	1.7	14	226	36	13	5.9	2.6	1.2	3.0
7			0	1.0	12	108	41	13	5.4	2.5	1.2	2.0
8			0	.88	11	99	33	12	5.4	2.4	1.2	1.7
9			0	15	1560	88	29	12	5.4	2.3	1.2	1.6
10			0	54	1110	81	26	12	4.9	2.3	1.2	1.7
11			0	14	150	75	22	12	4.9	2.3	1.4	1.4
12			0	6.6	128	72	19	11	4.9	2.2	1.2	1.3
13			0	5.6	108	70	16	11	4.4	2.1	1.2	1.3
14			0	37	86	67	12	11	4.4	2.0	1.2	1.4
15			0	59	65	52	10	10	4.4	1.9	1.2	1.4
16			.01	92	59	50	75	10	4.0	1.8	1.2	1.2
17			.07	55	51	47	34	10	4.0	1.8	1.2	1.3
18			.06	32	45	46	28	10	4.0	1.7	1.2	1.2
19			.04	27	37	45	24	9.4	3.6	1.7	1.2	1.1
20			.04	24	30	43	21	9.4	3.6	1.7	1.2	1.1
21			.07	21	25	39	20	9.4	3.6	1.6	1.1	.99
22			.05	19	22	60	20	8.6	3.3	1.5	1.1	.95
23			.05	17	21	53	19	8.6	3.3	1.5	1.1	.77
24			.04	16	20	50	18	7.8	3.3	1.4	1.1	.70
25			.05	12	20	45	19	7.8	3.0	1.4	1.1	.67
26			.17	11	19	38	17	7.8	3.0	1.3	1.1	.64
27			13	8.8	18	32	16	7.1	3.0	1.2	1.1	.65
28			110	7.8	100	27	19	7.1	3.0	1.1	1.1	.68
29			12	6.5	---	25	20	7.1	3.0	1.1	1.1	.69
30			1.0	6.0	---	20	20	7.1	3.0	1.1	1.1	.71
31		---	.97	5.1	---	75	---	7.1	---	1.1	1.1	---
TOTAL	0	0	137.62	570.17	3728.4	4604	816	330.3	133.2	59.6	35.9	34.79
MEAN	0	0	4.44	18.4	133	149	27.2	10.7	4.44	1.92	1.16	1.16
MAX	0	0	110	92	1560	1610	75	18	7.1	3.0	1.4	3.0
MIN	0	0	0	.73	2.8	20	10	7.1	3.0	1.1	1.1	.57
AC-FT	0	0	273	1130	7400	9130	1620	655	264	118	71	69
CAL YR 1977 TOTAL	267.83		MEAN .73	MAX 110	MIN 0	AC-FT 531						
WTR YR 1978 TOTAL	10449.98		MEAN 28.6	MAX 1610	MIN 0	AC-FT 20730						

11108080 FISH CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°36'09", long 118°39'43", in NW¼NE¼NE¼ sec.22, T.6 N., R.17 W., Los Angeles County, on right bank 700 ft (213 m) upstream from confluence of Fish Creek with Castaic Creek, and 8.1 mi (13 km) northwest of Castaic.

DRAINAGE AREA.--27.2 mi² (70.4 km²).

PERIOD OF RECORD.--October 1976 to current year. June 1965 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 1,620 ft (494 m), from topographic map.

REMARKS.--Records good, except for period of no gage-height record, Feb. 9 to Sept. 1, which is fair. Station is used to monitor natural inflow to Castaic Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,986 ft³/s (170 m³/s) Feb. 24, 1969, gage height, 4.98 ft (1.518 m); no flow for periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,260 ft³/s (121 m³/s), estimated, Mar. 4, gage height, 4.80 ft (1.463 m) from information furnished by California Department of Water Resources; no flow part of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	6.1	342	58	28	11	5.1	.42	
2			0	0	5.7	452	49	27	11	4.8	.38	
3			0	0	5.3	230	41	25	10	4.5	.34	
4			0	1.1	4.9	999	39	24	10	4.3	.34	
5			0	.67	8.0	999	38	23	10	4.3	.30	
6			0	.49	10	999	37	22	9.3	4.0	.27	
7			0	.35	9.4	201	56	21	9.3	4.0	.24	
8			0	.26	12	151	50	20	8.9	4.0	.18	
9			0	10	999	100	47	20	8.5	3.7	.18	
10			0	78	999	90	41	19	8.5	3.5	.18	
11			0	28	747	80	35	19	8.1	3.2	.18	
12			0	15	209	78	32	18	8.1	3.1	.12	
13			0	10	178	76	28	18	8.1	2.8	.06	
14			0	26	144	72	26	18	7.7	2.7	.04	
15			0	109	110	70	23	18	7.3	2.6	2.0	
16			0	181	76	61	88	17	7.3	2.6	.01	
17			0	106	66	50	72	17	7.0	2.3	0	
18			0	65	59	36	63	17	6.6	2.1	0	
19			0	42	50	30	49	16	6.3	2.0	0	
20			0	28	43	26	42	16	6.0	1.9	0	
21			0	23	38	22	41	15	6.0	1.8	0	
22			0	21	35	72	39	15	6.0	1.7	0	
23			0	17	30	59	39	14	6.0	1.6	0	
24			0	14	27	52	37	14	6.0	1.3	0	
25			0	11	26	44	37	13	6.0	1.1	0	
26			0	9.5	23	41	36	13	5.7	.97	0	
27			9.2	8.5	21	37	35	12	5.7	.78	0	
28			23	8.4	257	32	34	12	5.4	.66	0	
29			2.2	7.9	---	27	32	11	5.1	.56	0	
30			.14	7.5	---	26	31	11	5.1	.51	0	
31		---	0	6.8	---	80	---	11	---	.42	0	---
TOTAL	0	0	34.54	835.47	4198.4	5634	1275	544	226.0	78.90	5.24	0
MEAN	0	0	1.11	27.0	150	182	42.5	17.5	7.53	2.55	.17	0
MAX	0	0	23	181	999	999	88	28	11	5.1	2.0	0
MIN	0	0	0	0	4.9	22	23	11	5.1	.42	0	0
AC-FT	0	0	69	1660	8330	11180	2530	1080	448	156	10	0
CAL YR 1977	TOTAL	91.79	MEAN	.25	MAX	23	MIN	0	AC-FT	182		
WTR YR 1978	TOTAL	12831.55	MEAN	35.2	MAX	999	MIN	0	AC-FT	25450		

11108090 ELDERBERRY CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°34'20", long 118°37'28", in NW¼NW¼NW¼ sec.31, T.6 N., R.31 W., Los Angeles County, on right bank 2.8 mi (4.5 km) south of city of Los Angeles Department of Water and Power Castaic powerplant and 5.5 mi (8.8 km) northwest of Castaic.

DRAINAGE AREA.--2.50 mi² (6.48 km²).

PERIOD OF RECORD.--October 1977 to September 1978. October 1966 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (475 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Mar. 1-7, which are fair. Station is used to monitor natural inflow into Pyramid Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) Mar. 4, 1978, estimated, gage height, 6.00 ft (1.829 m), from information furnished by California Department of Water Resources; no flow several months in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) Mar. 4, estimated, gage height, 6.00 ft (1.829 m), from information furnished by California Department of Water Resources; no flow several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				.02	.30	35	4.7	1.1	.16			
2				.01	.26	28	4.0	.97	.17			
3				.01	.23	20	3.2	.95	.16			
4				.36	.20	200	3.4	.90	.14			
5				.52	.53	171	2.7	.86	.12			
6				.76	1.8	15	3.1	.90	.09			
7				.54	1.5	11	3.8	.81	.07			
8				.27	5.8	13	3.0	.82	.05			
9				6.4	192	12	2.6	.81	.05			
10				24	159	7.8	2.3	.76	.04			
11				4.1	36	9.7	2.1	.68	.04			
12				1.8	17	6.7	2.0	.64	.04			
13				.97	17	3.9	1.8	.59	.04			
14				10	11	3.4	1.7	.57	.03			
15				22	9.0	3.1	5.6	.57	.03			
16				35	7.9	2.8	5.7	.51	.03			
17				17	7.2	2.4	4.6	.47	.03			
18				5.9	6.1	2.3	4.1	.44	.02			
19				4.2	3.5	2.1	2.6	.40	.02			
20				2.7	2.2	2.1	2.1	.40	.02			
21				1.9	1.8	2.6	1.9	.36	.02			
22				1.5	1.5	6.3	1.8	.37	.02			
23				1.0	1.4	4.5	1.7	.36	.02			
24				.92	1.2	3.7	1.6	.33	.01			
25				.76	1.0	3.3	1.7	.31	.01			
26				.63	.93	3.0	1.5	.29	.01			
27				.51	.95	2.8	1.3	.26	.02			
28				.43	7.1	2.4	1.3	.22	.02			
29				.38	---	1.9	1.3	.19	.02			
30				.33	---	2.2	1.3	.17	.02			
31		---		.30	---	7.1	---	.15	---			---
TOTAL	0	0	0	145.22	494.40	591.1	80.5	17.16	1.52	0	0	0
MEAN	0	0	0	4.68	17.7	19.1	2.68	.55	.051	0	0	0
MAX	0	0	0	35	192	200	5.7	1.1	.17	0	0	0
MIN	0	0	0	.01	.20	1.9	1.3	.15	.01	0	0	0
AC-FT	0	0	0	288	981	1170	160	34	3.0	0	0	0
WTR YR 1978	TOTAL	1329.90	MEAN	3.64	MAX	200	MIN	0	AC-FT	2640		

11108095 NECKTIE CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°33'38", long 118°36'51", in SW¼SW¼SE¼ sec.31, T.6 N., R.16 W., Los Angeles County, on right bank 4.7 mi (7.6 km) south on dirt road from Castaic Powerplant, and 5 mi (8 km) north of Castaic.

DRAINAGE AREA.--2.12 mi² (5.49 km²).

PERIOD OF RECORD.--October 1976 to current year. February 1967 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (475 m), from topographic map.

REMARKS.--Records fair. Station is used to monitor natural inflow to Castaic Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Mar. 4, 1978, estimated, gage height, 5.10 ft (1.554 m), from information furnished by California Department of Water Resources; no flow for periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Mar. 4, estimated, gage height, 5.10 ft (1.554 m), from information furnished by California Department of Water Resources; no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.05	.51	10	4.8	1.4	.20			
2			0	.07	.51	9.0	4.0	1.3	.18			
3			0	.07	.47	8.0	3.7	1.3	.17			
4			0	.67	.46	333	4.1	1.3	.17			
5			0	.98	.95	301	3.4	1.3	.17			
6			0	1.6	2.9	35	4.3	1.2	.22			
7			0	1.2	2.3	25	4.9	1.2	.21			
8			0	.69	14	24	4.1	1.2	.25			
9			0	10	325	22	3.9	1.2	.22			
10			0	35	304	19	3.5	1.2	.21			
11			0	13	18	13	3.4	1.1	.22			
12			0	4.1	12	6.6	3.4	1.0	.25			
13			0	1.7	13	5.3	3.2	.94	.19			
14			0	8.7	8.9	4.6	3.0	.94	.25			
15			0	33	7.5	4.5	16	.56	.16			
16			0	102	6.3	4.3	14	.29	.17			
17			0	42	4.9	4.0	8.7	.24	.23			
18			0	18	4.9	3.9	7.9	.24	.22			
19			0	11	4.5	3.6	5.5	.23	.21			
20			0	4.3	4.0	3.5	3.7	.20	.24			
21			0	3.0	2.8	3.8	3.1	.21	.24			
22			0	2.4	2.2	8.2	2.6	.21	.21			
23			0	1.8	2.2	6.1	2.0	.21	.14			
24			0	1.4	2.0	5.4	2.1	.19	.08			
25			0	.94	1.8	5.0	2.1	.17	.31			
26			0	.98	1.6	4.7	1.9	.17	.14			
27			.60	.81	1.5	4.0	1.8	.13	.09			
28			10	.73	7.8	2.9	1.6	.13	.16			
29			1.0	.67	---	2.4	1.6	.11	.08			
30			.26	.60	---	2.5	1.5	.10	.02			
31		---	.13	.56	---	8.1	---	.12	---			---
TOTAL	0	0	11.99	302.02	757.00	892.4	129.8	20.09	5.61	0	0	0
MEAN	0	0	.39	9.74	27.0	28.8	4.33	.65	.19	0	0	0
MAX	0	0	10	102	325	333	16	1.4	.31	0	0	0
MIN	0	0	0	.05	.46	2.4	1.5	.10	.02	0	0	0
AC-FT	0	0	24	599	1500	1770	257	40	11	0	0	0
CAL YR 1977	TOTAL	24.18	MEAN	.066	MAX	10	MIN	0	AC-FT	48		
WTR YR 1978	TOTAL	2118.91	MEAN	5.81	MAX	333	MIN	0	AC-FT	4200		

11108130 ELIZABETH LAKE CANYON CREEK ABOVE CASTAIC LAKE, NEAR CASTAIC, CA

LOCATION.--Lat 34°34'34", long 118°33'22", in NW¼SE¼SE¼ sec.27, T.6 N., R.16 W., Los Angeles County, on left bank 0.4 mi (0.6 km) northeast of Elizabeth Lake Guard Station, on Elizabeth Lake Canyon Road, and 0.5 mi (0.8 km) northeast of Castaic on Lake Hughes Road.

DRAINAGE AREA.--43.7 mi² (113.2 km²), excluding 18.1 mi² (46.9 km²) of noncontributing area in Elizabeth and Hughes Lake basins.

PERIOD OF RECORD.--October 1976 to current year. January 1962 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft (512 m), from topographic map.

REMARKS.--Records good. Station is used to monitor inflow into Castaic Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s), estimated, Jan. 25, 1969, by California Department of Water Resources; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,800 ft³/s (108 m³/s) Feb. 9, gage height, 5.79 ft (1.765 m), from information furnished by California Department of Water Resources; minimum daily, 0.02 ft³/s (0.001 m³/s) Oct. 17, 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.05	.20	2.3	8.9	205	103	47	22	10	4.0	2.2
2	.07	.05	.19	1.8	8.6	640	100	44	23	11	3.8	2.2
3	.08	.05	.20	1.5	8.6	496	93	42	22	10	3.8	2.1
4	.08	.05	.20	4.5	8.3	1670	96	40	21	10	3.4	2.2
5	.06	.08	.20	6.0	13	1120	91	37	20	10	3.3	4.7
6	.05	.08	.20	6.9	30	635	96	35	18	10	3.5	11
7	.11	.08	.21	5.4	23	453	102	33	17	9.8	3.3	6.7
8	.15	.08	.22	4.6	41	333	93	33	15	9.4	3.2	4.5
9	.19	.10	.22	22	1000	269	88	33	15	9.2	3.1	4.2
10	.17	.11	.22	107	1510	209	85	33	14	9.1	3.2	4.5
11	.16	.13	.24	22	344	175	84	32	14	9.0	2.9	4.1
12	.15	.14	.24	18	249	151	81	31	15	8.9	2.8	3.9
13	.14	.13	.25	14	241	137	76	29	15	8.2	2.5	4.0
14	.14	.12	.24	58	187	134	72	29	15	7.8	3.3	5.0
15	.13	.12	.24	164	151	121	102	30	14	7.3	3.0	4.5
16	.08	.12	.24	113	120	110	93	28	14	7.3	3.0	5.1
17	.02	.13	.35	109	104	100	83	27	14	7.0	2.9	4.3
18	.03	.14	.53	45	94	93	80	25	14	6.8	3.2	4.3
19	.03	.14	.60	43	79	85	78	24	13	6.6	2.9	4.2
20	.03	.16	.67	32	63	78	76	25	12	6.3	2.8	4.1
21	.03	.17	.67	24	58	77	75	27	11	6.0	3.0	4.2
22	.03	.18	.55	20	54	90	70	27	8.9	5.5	2.7	3.7
23	.03	.19	.45	18	50	73	66	27	8.7	5.4	3.2	2.9
24	.02	.20	.34	16	46	61	65	26	8.7	5.3	3.4	2.8
25	.02	.21	.25	14	40	49	66	26	8.7	4.9	3.6	2.7
26	.02	.21	.23	13	38	41	62	25	8.5	4.6	3.1	2.6
27	.03	.21	5.9	11	39	38	58	24	8.5	4.8	2.8	2.7
28	.03	.20	45	10	75	46	52	22	8.5	4.8	2.8	2.5
29	.04	.20	7.2	10	---	62	50	20	8.5	4.7	2.6	2.3
30	.04	.20	3.8	9.9	---	79	49	21	8.5	4.3	2.4	2.0
31	.05	---	2.8	9.0	---	117	---	21	---	4.1	2.4	---
TOTAL	2.28	4.03	72.85	934.9	4683.4	7947	2385	923	415.5	228.1	95.9	116.2
MEAN	.074	.13	2.35	30.2	167	256	79.5	29.8	13.9	7.36	3.09	3.87
MAX	.19	.21	45	164	1510	1670	103	47	23	11	4.0	11
MIN	.02	.05	.19	1.5	8.3	38	49	20	8.5	4.1	2.4	2.0
AC-FT	4.5	8.0	144	1850	9290	15760	4730	1830	824	452	190	230

CAL YR 1977 TOTAL 388.75 MEAN 1.07 MAX 45 MIN 0 AC-FT 771
WTR YR 1978 TOTAL 17808.16 MEAN 48.8 MAX 1670 MIN .02 AC-FT 35320

SANTA CLARA RIVER BASIN

11108135 CASTAIC LAGOON PARSHALL FLUME NEAR CASTAIC, CA

LOCATION.--Lat 34°30'37", long 118°36'28", in NE¼NE¼NE¼ sec.24, T.5 N., R.17 W., Los Angeles County, at southeast end of lagoon under Lake Hughes Road bridge, 0.5 mi (0.8 km) east of Castaic on Lake Hughes Road.

DRAINAGE AREA.--138 mi² (357 km²) excluding 18.1 mi² (46.9 km²) non-contributing area in Elizabeth Canyon Creek basin.

PERIOD OF RECORD.--October 1976 to current year. June 1972 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 1,140 ft (347 m), from topographic map.

REMARKS.--Records poor. No gage-height record Apr. 20 to Aug. 8, Sept. 1-30.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,575 ft³/s (73 m³/s) Feb. 11, 1973, gage height, 3.47 ft (1.058 m); no flow for long periods in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 195 ft³/s (5.52 m³/s) June 30, estimated; no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	62	143	185	11	3.1
2							0	62	151	185	11	3.1
3							0	62	151	185	11	3.1
4							0	62	151	185	11	3.1
5							0	62	159	185	11	3.1
6							0	62	159	185	11	3.1
7							0	62	167	185	11	3.1
8							0	62	167	185	11	3.1
9							0	62	176	185	14	3.1
10							0	74	167	185	14	3.1
11							0	74	176	185	13	3.1
12							0	74	176	185	12	3.1
13							0	74	176	185	11	3.1
14							0	74	176	143	9.8	3.1
15							0	93	176	93	9.1	3.1
16							0	93	176	93	8.2	3.1
17							0	93	185	35	7.6	3.1
18							0	93	185	11	7.1	14
19							0	93	185	11	6.6	20
20							0	93	185	11	6.2	26
21							20	93	185	11	5.8	30
22							35	93	185	11	5.5	30
23							62	0	185	11	5.2	30
24							62	0	185	11	4.7	30
25							62	54	185	11	4.2	35
26							62	74	185	11	3.9	41
27							62	74	185	11	3.5	41
28							62	74	185	11	3.2	41
29					---		62	74	185	11	3.0	41
30					---		62	104	195	10	2.9	47
31		---			---		---	129	---	10	2.7	---
TOTAL	0	0	0	0	0	0	551	2255	5247	2921	251.2	478.7
MEAN	0	0	0	0	0	0	18.4	72.7	175	94.2	8.10	16.0
MAX	0	0	0	0	0	0	62	129	195	185	14	47
MIN	0	0	0	0	0	0	0	0	143	10	2.7	3.1
AC-FT	0	0	0	0	0	0	1090	4470	10410	5790	498	950
CAL YR 1977	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	0	AC-FT	0		
WTR YR 1978	TOTAL	11703.90	MEAN	32.1	MAX	195	MIN	0	AC-FT	23210		

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA

LOCATION.--Lat 34°23'59", long 118°42'14", in San Francisco Grant, Ventura County, on downstream end of old diversion weir on right bank, on private road 0.2 mi (0.3 km) south of Highway 126, 0.8 mi (1.3 km) west of Los Angeles-Ventura County line, and 6.4 mi (10.3 km) west of intersection of Highway 126 and Interstate 5.

DRAINAGE AREA.--625 mi² (1,620 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 794.93 ft (242.295 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Base flow affected by pumping from wells along stream for irrigation. Flow partly regulated since January 1972 by Castaic Reservoir, capacity, 324,000 acre-ft (399 hm³). Imported water from California Water Project stored and released at Castaic Dam.

AVERAGE DISCHARGE.--26 years, 39.7 ft³/s (1.12 m³/s), 28,760 acre-ft/yr (35.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,800 ft³/s (1,950 m³/s) Jan. 25, 1969, gage height, 19.01 ft (5.794 m), from rating curve extended above 9,200 ft³/s (261 m³/s) on basis of field estimate of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1500	2120 60.0	7.20 2.195	Feb. 9	2400	*22800 646	10.85 3.307
Jan. 4	1930	1070 30.3	5.74 1.750	Feb. 12	Unknown	Unknown	Unknown
Jan. 10	1230	1360 38.5	6.15 1.875	Mar. 1	0600	7910 224	7.65 2.332
Jan. 16	2000	6480 184	9.68 2.950	Mar. 4	Unknown	16600 470	9.74 2.969

Minimum daily discharge, 5.9 ft³/s (0.17 m³/s) Oct. 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	8.7	8.0	30	37	2950	154	67	164	187	28	17
2	7.8	8.4	7.8	24	28	2230	161	67	183	187	27	17
3	8.7	8.4	7.5	23	24	1470	164	67	189	187	26	17
4	7.8	8.4	7.5	172	20	6470	157	67	204	187	24	18
5	7.5	9.6	7.2	70	106	2660	143	67	200	187	23	23
6	6.9	11	7.2	65	157	640	150	67	195	185	22	23
7	6.6	10	7.2	50	133	390	140	67	190	183	21	21
8	6.6	9.6	7.2	44	127	270	138	67	187	183	20	21
9	6.6	9.0	7.2	126	6500	206	128	67	187	187	19	22
10	6.6	8.4	7.2	691	5210	190	124	70	187	185	18	23
11	6.6	8.0	8.0	109	200	164	121	72	187	176	18	24
12	6.1	8.0	9.0	57	322	140	119	72	187	176	17	23
13	6.1	7.8	9.0	56	355	120	119	72	187	180	17	24
14	5.9	8.0	9.0	149	221	110	119	72	187	176	16	25
15	5.9	7.5	8.7	692	176	100	140	80	187	91	16	25
16	5.9	7.2	8.4	1100	145	97	150	86	187	89	16	27
17	6.1	6.9	9.3	339	98	94	118	86	187	89	16	30
18	6.1	7.2	11	47	92	91	100	79	187	50	16	29
19	6.4	7.2	11	89	94	90	91	74	187	42	16	30
20	6.9	8.4	12	61	98	88	85	76	187	41	16	30
21	7.5	9.9	13	57	98	88	80	85	187	32	16	31
22	7.8	9.9	15	55	98	150	76	89	187	30	17	32
23	8.4	9.0	15	53	102	88	73	88	187	32	16	34
24	8.7	9.0	15	50	97	72	71	76	187	32	16	35
25	8.7	9.3	16	48	97	75	70	79	187	32	16	37
26	9.0	8.7	150	46	104	82	69	89	187	30	16	39
27	9.0	8.7	117	47	108	112	68	125	187	30	16	42
28	9.0	9.0	746	48	734	87	67	127	187	29	16	46
29	9.0	8.7	72	49	---	78	67	124	187	29	16	49
30	9.6	8.4	56	49	---	75	67	124	187	29	16	50
31	9.6	---	37	45	---	192	---	155	---	28	16	---
TOTAL	231.2	258.3	1421.4	4541	15581	19669	3329	2603	5626	3301	569	864
MEAN	7.46	8.61	45.9	146	556	634	111	84.0	188	106	18.4	28.8
MAX	9.6	11	746	1100	6500	6470	164	155	204	187	28	50
MIN	5.9	6.9	7.2	23	20	72	67	67	164	28	16	17
AC-FT	459	512	2820	9010	30900	39010	6600	5160	11160	6550	1130	1710
CAL YR 1977	TOTAL	6783.2	MEAN	18.6	MAX	746	MIN	2.5	AC-FT	13450		
WTR YR 1978	TOTAL	57993.9	MEAN	159	MAX	6500	MIN	5.9	AC-FT	115000		

SANTA CLARA RIVER BASIN

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

CHEMICAL ANALYSIS: Water years 1969, 1972 to current year.

WATER TEMPERATURES: Water years 1969 to September 1978 (discontinued).

SEDIMENT RECORDS: Water years 1969 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to current year.

pH: June to September 1969.

CHLORIDE: June to September 1969.

WATER TEMPERATURES: October 1968 to September 1978 (discontinued).

SEDIMENT RECORDS: October 1968 to September 1978 (discontinued).

INSTRUMENTATION.--Water-quality monitor from June to September 1969. Specific-conductance recorder since June 1969.

REMARKS.--The letter "A" following a date indicates chemical-quality data furnished by California Department of Water Resources. Missing specific-conductance data due to probe or recorder malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 3,600 micromhos Mar. 31, 1971; minimum recorded, 185 micromhos

Dec. 28, 1977.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 48,500 mg/L Feb. 10, 1978; minimum daily mean, 4 mg/L Sept. 9, 1976.

SEDIMENT DISCHARGE: Maximum daily, 3,300,000 tons (2,990,000 metric tons), estimated, Feb. 25, 1969; minimum daily, 0.03 tons (0.03 metric tons) Sept. 9, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,240 micromhos May 26; minimum recorded, 185 micromhos Dec. 28.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 48,500 mg/L Feb. 10; minimum daily mean, 7 mg/L Dec. 23.

SEDIMENT DISCHARGE: Maximum daily, 1,080,000 tons (980,000 metric tons) Feb. 10; minimum daily, 0.22 tons (0.20 metric tons) Oct. 19.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 06...A	1615	7.4	1830	8.2	17.0	0	8.7	680	560	90	1380
FEB 23...A	1510	98	1800	8.1	22.0	90	7.9	720	610	92	1400
MAY 02...A	1710	67	1320	8.5	23.0	70	7.9	500	410	69	1010
JUL 24...A	1450	30	1330	8.6	29.0	5	7.8	530	400	78	995

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY 15...A	1535	86	0	20	10	30	0	3.0	10

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	7.8	22	.46	8.7	20	.47	8.0	30	.65
2	7.8	25	.53	8.4	25	.57	7.8	30	.63
3	8.7	30	.70	8.4	30	.68	7.5	45	.91
4	7.8	35	.74	8.4	33	.75	7.5	60	1.2
5	7.5	35	.71	9.6	36	.93	7.2	70	1.4
6	6.9	30	.56	11	50	1.5	7.2	80	1.6
7	6.6	30	.53	10	73	2.0	7.2	80	1.6
8	6.6	16	.29	9.6	50	1.3	7.2	65	1.3
9	6.6	16	.29	9.0	40	.97	7.2	50	.97
10	6.6	16	.29	8.4	40	.91	7.2	43	.84
11	6.6	16	.29	8.0	40	.86	8.0	40	.86
12	6.1	16	.26	8.0	39	.84	9.0	30	.73
13	6.1	60	.99	7.8	45	.95	9.0	25	.61
14	5.9	35	.56	8.0	50	1.1	9.0	30	.73
15	5.9	30	.48	7.5	55	1.1	8.7	30	.70
16	5.9	25	.40	7.2	60	1.2	8.4	35	.79
17	6.1	20	.33	6.9	65	1.2	9.3	35	.88
18	6.1	15	.25	7.2	60	1.2	11	30	.89
19	6.4	13	.22	7.2	60	1.2	11	25	.74
20	6.9	15	.28	8.4	60	1.4	12	22	.71
21	7.5	20	.41	9.9	60	1.6	13	15	.53
22	7.8	25	.53	9.9	60	1.6	15	10	.41
23	8.4	20	.45	9.0	55	1.3	15	7	.28
24	8.7	18	.42	9.0	55	1.3	15	10	.41
25	8.7	16	.38	9.3	50	1.3	16	10	.43
26	9.0	16	.39	8.7	50	1.2	150	1140	1220
27	9.0	15	.36	8.7	50	1.2	117	1300	464
28	9.0	15	.36	9.0	55	1.3	746	7250	23800
29	9.0	15	.36	8.7	58	1.4	72	300	58
30	9.6	15	.39	8.4	32	.73	56	370	56
31	9.6	20	.52	---	---	---	37	88	8.8
TOTAL	231.2	---	13.73	258.3	---	34.06	1421.4	---	25627.60
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	30	82	6.6	37	85	8.5	2950	24400	271000
2	24	65	4.2	28	175	13	2230	20100	138000
3	23	58	3.6	24	50	3.2	1470	7000	27800
4	172	2050	2870	20	20	1.1	6470	27600	568000
5	70	601	194	106	2860	1930	2660	22500	162000
6	65	1400	314	157	4170	2750	640	13500	23300
7	50	350	47	133	3620	2330	390	10000	10500
8	44	150	18	127	1390	772	270	7300	5320
9	126	1660	1270	6500	29900	908000	206	5200	2890
10	691	6950	14700	5210	48500	1080000	190	5800	2980
11	109	935	347	200	8500	4590	164	6500	2880
12	57	190	29	322	6440	9230	140	4100	1550
13	56	180	27	355	5600	5370	120	3000	972
14	149	924	1140	221	2180	1300	110	2640	784
15	692	5550	15100	176	2600	1240	100	2600	702
16	1100	13000	124000	145	2250	881	97	2500	655
17	339	8820	17200	98	1200	318	94	2400	609
18	47	790	100	92	800	199	91	2300	565
19	89	2020	649	94	850	216	90	2300	559
20	61	290	48	98	1050	278	88	2300	546
21	57	175	27	98	1160	307	88	2320	551
22	55	130	19	98	1050	278	150	10000	4050
23	53	100	14	102	800	220	88	3200	760
24	50	90	12	97	590	155	72	2150	418
25	48	100	13	97	500	131	75	1650	334
26	46	130	16	104	490	138	82	1250	277
27	47	150	19	108	430	125	112	1020	308
28	48	130	17	734	10100	51600	87	1250	294
29	49	100	13	---	---	---	78	2200	463
30	49	60	7.9	---	---	---	75	3240	656
31	45	37	4.5	---	---	---	192	12100	7260
TOTAL	4541	---	178229.8	15581	---	2072384	19669	---	1236983

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	154	3000	1250	67	1100	199	164	500	221
2	161	1800	782	67	1050	190	183	858	424
3	164	1600	708	67	920	166	189	850	434
4	157	9000	3820	67	710	128	204	840	463
5	143	11000	4250	67	580	105	200	830	448
6	150	9500	3850	67	470	85	195	827	435
7	140	7500	2840	67	400	72	190	1000	513
8	138	6100	2270	67	370	67	187	2000	1010
9	128	5000	1730	67	300	54	187	4770	2410
10	124	3500	1170	70	250	47	187	4800	2420
11	121	2200	719	72	265	52	187	5000	2520
12	119	1700	546	72	310	60	187	5300	2680
13	119	2000	643	72	355	69	187	5640	2850
14	119	3000	964	72	380	74	187	5500	2780
15	140	4000	1510	80	400	86	187	5400	2730
16	150	4800	1940	86	415	96	187	5390	2720
17	118	2000	637	86	440	102	187	2000	1010
18	100	1500	405	79	475	101	187	1000	505
19	91	1020	251	74	495	99	187	750	379
20	85	1000	230	76	395	81	187	574	290
21	80	1200	259	85	445	102	187	600	303
22	76	1490	306	89	355	85	187	700	353
23	73	1400	276	88	260	62	187	800	404
24	71	1300	249	76	202	41	187	939	474
25	70	1280	242	79	220	47	187	700	353
26	69	1240	231	89	390	94	187	600	303
27	68	1200	220	125	560	189	187	461	233
28	67	1190	215	127	495	170	187	400	202
29	67	1150	208	124	390	131	187	300	151
30	67	1100	199	124	300	100	187	263	133
31	---	---	---	155	280	117	---	---	---
TOTAL	3329	---	32920	2603	---	3071	5626	---	30151
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	187	300	151	28	170	13	17	150	6.9
2	187	320	162	27	170	12	17	150	6.9
3	187	350	177	26	170	12	17	150	6.9
4	187	366	185	24	170	11	18	150	7.3
5	187	350	177	23	170	11	23	160	9.9
6	185	350	175	22	170	10	23	160	9.9
7	183	350	173	21	170	9.6	21	160	9.1
8	183	347	171	20	170	9.2	21	160	9.1
9	187	350	177	19	170	8.7	22	160	9.5
10	185	350	175	18	170	8.3	23	160	9.9
11	176	350	166	18	160	7.8	24	160	10
12	176	374	178	17	160	7.3	23	160	9.9
13	180	300	146	17	160	7.3	24	160	10
14	176	200	95	16	160	6.9	25	160	11
15	91	161	40	16	160	6.9	25	160	11
16	89	140	34	16	160	6.9	27	160	12
17	89	120	29	16	160	6.9	30	160	13
18	50	105	14	16	160	6.9	29	160	13
19	42	120	14	16	160	6.9	30	160	13
20	41	150	17	16	160	6.9	30	160	13
21	32	176	15	16	150	6.5	31	170	14
22	30	150	12	17	150	6.9	32	170	15
23	32	100	8.6	16	150	6.5	34	170	16
24	32	80	6.9	16	150	6.5	35	170	16
25	32	68	5.9	16	150	6.5	37	170	17
26	30	60	4.9	16	150	6.5	39	170	18
27	30	50	4.1	16	150	6.5	42	180	20
28	29	46	3.6	16	150	6.5	46	190	24
29	29	100	7.8	16	150	6.5	49	200	26
30	29	150	12	16	150	6.5	50	200	27
31	28	173	13	16	150	6.5	---	---	---
TOTAL	3301	---	2549.8	569	---	247.4	864	---	394.3
YEAR	57993.9		3582606						

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	231.20	13.73	154	168
NOVEMBER ...	258.30	34.06	203	237
DECEMBER ...	1421.40	25627.60	3590	29200
JANUARY 1978	4541.00	178229.80	14100	192000
FEBRUARY ...	15581.00	2072383.80	168000	2240000
MARCH	19669.00	1236983.00	200000	1440000
APRIL	3329.00	32920.00	3920	36800
MAY	2603.00	3071.00	3080	6150
JUNE	5626.00	30151.00	6730	36900
JULY	3301.00	2549.80	3960	6510
AUGUST	569.00	247.40	651	898
SEPTEMBER ..	864.00	394.30	1060	1460
TOTAL	57993.90	3582605.49	405448	3990323

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM
DEC 28...	1320	--	1500	9140	37000	--	54	63	80	89
JAN 06...	1230	15.5	98	3590	950	40	55	73	86	93
15...	1330	14.0	407	6500	7140	28	35	46	54	61
19...	1210	15.0	93	2160	542	31	43	54	64	73
FEB 02...	1220	--	28	210	16	49	60	74	88	93
MAR 01...	1230	14.0	2660	27000	194000	--	19	21	30	42
04...	1010	12.0	7450	51200	1030000	--	20	27	38	51
05...	1700	--	2000	23300	126000	--	20	26	36	49
09...	1255	13.0	390	5980	6300	--	20	29	36	48
MAY 17...	1220	25.5	86	442	103	--	--	--	--	--

SANTA CLARA RIVER BASIN

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 28...	--	90	--	91	--	91	--	93	95	98
JAN 06...	--	95	--	96	--	97	--	100	--	--
15...	--	64	--	65	--	67	--	77	87	96
19...	--	79	--	83	--	88	--	97	100	--
FEB 02...	--	95	--	96	--	99	--	100	--	--
MAR 01...	--	54	--	69	--	84	--	96	99	100
04...	--	71	--	90	--	98	--	100	--	--
05...	--	65	--	85	--	97	--	100	--	--
09...	57	--	75	--	97	--	100	--	--	--
MAY 17...	--	34	--	50	--	85	--	99	100	--

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
OCT								
07...	1350	21.5	20	6.9	10	19	--	--
13...	1210	18.5	13	6.6	7.3	6.7	--	--
NOV								
07...	1525	18.5	20	10	10	16	--	--
30...	1025	14.0	20	8.9	10	24	--	--
DEC								
30...	1345	--	22	52	23	60	--	--
JAN								
06...	1245	15.5	11	98	24	171	--	--
19...	1205	15.0	12	95	26	92	--	--
FEB								
02...	1215	--	15	28	15	21	--	--
13...	1205	13.0	14	324	75	130	1	4
17...	1250	--	16	98	49	148	--	1
MAR								
30...	1045	17.0	15	72	29	52	1	7
MAY								
02...	1145	20.0	13	67	28	73	--	3
JUN								
08...	1140	--	13	187	52	221	--	2
JUL								
06...	1135	22.0	15	188	63	419	--	1
AUG								
17...	1120	--	22	16	23	54	--	--

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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
OCT								
07...	1	18	56	82	95	100	--	--
13...	--	8	38	72	94	100	--	--
NOV								
07...	--	16	52	80	94	100	--	--
30...	1	17	53	82	96	100	--	--
DEC								
30...	2	24	58	79	90	95	99	100
JAN								
06...	4	24	47	62	73	80	95	100
19...	4	24	73	88	95	99	100	--
FEB								
02...	2	18	49	77	91	98	100	--
13...	28	60	84	94	97	99	100	--
17...	14	42	71	89	97	100	--	--
MAR								
30...	33	59	79	90	96	98	100	--
MAY								
02...	26	65	84	94	98	100	--	--
JUN								
08...	24	61	81	89	93	95	100	--
JUL								
06...	10	40	63	80	90	96	98	100
AUG								
17...	2	20	63	89	98	100	--	--

11109100 PIRU CREEK BELOW THORN MEADOWS, NEAR STAUFFER, CA

LOCATION.--Lat 34°38'21", long 119°05'43", in SW¼NE¼SW¼ sec.3, T.6 N., R.21 W., Ventura County, on right bank 1.3 mi (2.1 km) northeast of Thorn Meadows, and 8 mi (13 km) southwest of Stauffer.

DRAINAGE AREA.--22.5 mi² (58.3 km²).

PERIOD OF RECORD.--October 1971 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,280 ft (1,305 m), from topographic map.

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

COOPERATION.--Eight discharge measurements were furnished by Ventura County Flood Control District.

AVERAGE DISCHARGE.--7 years, 9.50 ft³/s (0.269 m³/s), 6,880 acre-ft/yr (8.48 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,870 ft³/s (110 m³/s) Feb. 10, 1978, gage height, 6.34 ft (1.932 m), from floodmarks, from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurements at gage heights 5.37 ft (1.637 m) and 6.34 ft (1.932 m); no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) revised, and maximum (*), based on rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1000	794 22.5	4.05 1.234	Mar. 4	Unknown	Unknown	Unknown
Jan. 9	1930	371 10.5	3.28 1.000	Mar. 22	0600	249 7.05	3.09 0.942
Jan. 16	1800	1110 31.4	4.47 1.362	Mar. 31	0100	806 22.8	4.09 1.247
Feb. 7	1730	196 5.55	2.80 0.853	Apr. 15	1900	307 8.69	3.23 0.985
Feb. 10	Unknown	*3870 110	6.34 1.932				

Minimum daily discharge, no flow Oct. 1 to Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	9.1	7.2	100	131	15	7.2	1.8	.54	.12
2			0	6.7	6.7	80	81	12	6.0	1.6	.49	.12
3			0	10	6.3	75	79	13	5.0	1.8	.44	.12
4			0	21	6.3	1500	70	13	5.0	1.8	.41	.12
5			0	14	36	562	85	12	5.5	1.6	.89	2.6
6			0	15	68	237	81	12	5.0	1.6	.34	3.3
7			0	10	81	174	66	12	4.5	1.2	.31	1.0
8			0	7.2	153	115	79	13	4.5	1.2	.28	.64
9			0	130	1500	92	87	13	4.1	1.2	.26	.45
10			0	169	1300	77	85	13	4.1	1.2	.24	.24
11			0	56	163	68	74	13	4.1	1.4	.22	.19
12			0	19	168	64	72	13	4.1	1.4	.20	.19
13			0	11	137	62	53	13	3.7	1.2	.18	.19
14			0	212	101	60	51	12	3.7	1.0	.17	.19
15			0	372	77	58	111	12	3.3	.89	.15	.15
16			0	323	55	57	60	12	3.0	.89	.12	.24
17			0	174	49	55	39	11	3.0	.89	.09	.24
18			0	72	45	53	36	11	2.6	.89	.09	.30
19			0	45	42	51	49	11	2.3	.89	.09	.30
20			0	32	39	48	43	11	2.3	.89	.12	.19
21			0	26	39	80	36	10	2.3	.75	.12	.15
22			0	23	39	204	24	10	2.1	.89	.12	.19
23			0	19	40	102	20	10	2.1	1.0	.12	.15
24			0	15	38	94	20	9.2	2.1	1.6	.12	.15
25			0	13	35	83	27	9.2	1.8	1.0	.12	.15
26			2.3	12	34	74	19	8.5	1.8	1.0	.12	.15
27			183	11	34	58	17	9.2	2.3	1.0	.19	.15
28			376	9.7	54	53	15	9.2	1.8	.75	.24	.15
29			50	9.1	---	51	12	8.5	2.1	.75	.15	.15
30			22	8.1	---	140	13	7.8	2.1	.64	.12	.15
31		---	13	7.6	---	403	---	7.2	---	.58	.12	---
TOTAL	0	0	646.3	1861.5	4353.5	4930	1635	345.8	103.5	35.30	7.17	12.43
MEAN	0	0	20.8	60.0	155	159	54.5	11.2	3.45	1.14	.23	.41
MAX	0	0	376	372	1500	1500	131	15	7.2	1.8	.89	3.3
MIN	0	0	0	6.7	6.3	48	12	7.2	1.8	.58	.09	.12
AC-FT	0	0	1280	3690	8640	9780	3240	686	205	70	14	25
CAL YR 1977	TOTAL	1178.76	MEAN	3.23	MAX	376	MIN	0	AC-FT	2340		
WTR YR 1978	TOTAL	13930.50	MEAN	38.2	MAX	1500	MIN	0	AC-FT	27630		

11109200 MIDDLE FORK LOCKWOOD CREEK NEAR STAUFFER, CA

LOCATION.--Lat 34°45'56", long 119°07'12", in SW¼NE¼SE¼ sec.20, T.8 N., R.21 W., Ventura County, on right bank 3.3 mi (5.3 km) upstream from Lockwood Creek, and 3.3 mi (5.3 km) northwest of Stauffer.

DRAINAGE AREA.--5.50 mi² (14.25 km²).

PERIOD OF RECORD.--October 1971 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,630 ft (1,716 m), from topographic map.

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

COOPERATION.--Twelve discharge measurements were furnished by Ventura County Flood Control District.

AVERAGE DISCHARGE.--7 years, 0.86 ft³/s (0.024 m³/s), 623 acre-ft/yr (768,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 697 ft³/s (19.7 m³/s) Sept. 6, 1976, gage height, 4.80 ft (1.463 m), from rating curve extended above 2.9 ft³/s (0.082 m³/s) on basis of slope-area measurement of maximum flow; no flow for some days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft³/s (4.81 m³/s) Mar. 4, gage height, 3.17 ft (0.966 m), from rating curve extended above 11 ft³/s (0.31 m³/s) on basis of slope-area measurement at gage height 4.80 ft (1.463 m); no other peak above base of 100 ft³/s (2.83 m³/s); no flow Oct. 1 to Nov. 5, Nov. 7 to Dec. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	.30	.43	6.2	15	10	3.1	1.7	.81	.55
2		0	0	.30	.37	4.8	12	8.9	3.1	1.5	.81	.54
3		0	0	.30	.32	4.1	11	9.5	2.8	1.4	.72	.53
4		0	0	.42	.27	52	9.5	11	2.8	1.3	.72	.53
5		0	0	.47	.72	38	8.4	10	2.6	1.3	.72	1.8
6		.01	0	.52	.81	24	8.4	8.4	2.6	1.3	.72	.82
7		0	0	.42	1.7	16	7.9	7.9	2.6	1.1	.72	.52
8		0	0	.34	1.8	10	7.0	7.9	2.4	1.1	.72	.51
9		0	0	.47	21	8.9	7.0	7.5	2.4	1.1	.72	.51
10		0	0	.52	16	7.0	7.0	7.5	2.4	1.1	2.7	.50
11		0	0	.47	10	5.8	7.9	7.5	2.6	1.1	1.0	.50
12		0	0	.42	7.1	5.1	8.9	7.5	2.6	1.1	.70	.50
13		0	0	.38	5.0	4.4	10	7.5	2.4	1.0	.69	.49
14		0	0	.63	4.5	4.1	10	7.5	2.4	1.0	.68	.49
15		0	0	.77	4.2	4.4	12	7.5	2.4	1.0	.67	.49
16		0	0	3.9	4.1	4.8	9.5	6.2	2.4	1.0	.66	.49
17		0	.01	2.2	3.8	5.8	8.4	5.8	2.4	1.0	.66	.48
18		0	.09	1.3	4.1	6.2	8.4	5.1	2.2	1.0	.65	.48
19		0	.04	1.1	4.4	7.0	8.9	5.1	2.2	1.0	.64	.48
20		0	.05	1.0	4.4	7.5	9.5	4.8	2.0	.91	.63	.47
21		0	.09	.91	4.1	9.5	9.5	4.4	2.0	.91	.62	.47
22		0	.08	.72	3.8	11	9.5	4.4	2.0	.91	.62	.47
23		0	.08	.72	3.8	7.5	11	4.1	2.0	.81	.61	.47
24		0	.08	.72	3.6	7.5	10	4.1	2.0	.81	.60	.46
25		0	.08	.72	3.3	8.9	10	4.1	2.0	.91	.59	.46
26		0	.26	.63	3.3	8.9	8.4	3.8	1.8	.91	.59	.46
27		0	1.2	.63	3.1	8.9	8.4	3.6	1.8	.91	.58	.45
28		0	3.5	.56	4.5	9.5	8.4	3.3	1.8	.81	.57	.45
29		0	.50	.56	---	11	8.4	3.3	1.8	.81	.56	.45
30		0	.34	.56	---	16	8.9	3.3	1.7	.81	.56	.45
31		---	.26	.56	---	21	---	3.3	---	.81	.55	---
TOTAL	0	.01	6.66	23.52	124.52	345.8	279.2	194.8	69.3	32.42	22.79	16.27
MEAN	0	.0003	.21	.76	4.45	11.2	9.31	6.28	2.31	1.05	.74	.54
MAX	0	.01	3.5	3.9	21	52	15	11	3.1	1.7	2.7	1.8
MIN	0	0	0	.30	.27	4.1	7.0	3.3	1.7	.81	.55	.45
AC-FT	0	.02	13	47	247	686	554	386	137	64	45	32
CAL YR 1977	TOTAL	63.23	MEAN	.17	MAX	3.5	MIN	0	AC-FT	125		
WTR YR 1978	TOTAL	1115.29	MEAN	3.06	MAX	52	MIN	0	AC-FT	2210		

SANTA CLARA RIVER BASIN

11109250 LOCKWOOD CREEK AT GORGE, NEAR STAUFFER, CA

LOCATION.--Lat 34°43'57", long 119°02'14", in SE¼SW¼SE¼ sec.31, T.8 N., R.20 W., Ventura County, on right bank 2.1 mi (3.4 km) southeast of Stauffer, and 3.8 mi (6.1 km) upstream from Piru Creek.

DRAINAGE AREA.--58.7 mi² (152.0 km²).

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

REVISED RECORDS.--WDR CA-74-1: 1973 (M)

GAGE.--Water-stage recorder. Altitude of gage is 4,790 ft (1,460 m), from topographic map.

REMARKS.--Records fair, except those above 100 ft³/s (2.83 m³/s), which are poor.

COOPERATION.--Fifteen discharge measurements were furnished by Ventura County Flood Control District.

AVERAGE DISCHARGE.--7 years, 5.95 ft³/s (0.169 m³/s), 4,310 acre-ft/yr (5.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) Mar. 4, 1978, gage height, 7.32 ft (2.231 m), from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurement at gage height 4.92 ft (1.500 m); minimum daily, 0.90 ft³/s (0.025 m³/s) Aug. 5, 9-16, Aug. 19 to Oct. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1000	179 5.07	3.81 1.161	Mar. 1	0515	352 9.97	4.70 1.433
Jan. 16	Unknown	274 7.76	4.34 1.323	Mar. 4	0600	*1070 30.3	7.32 2.231
Feb. 10	0100	915 25.9	6.85 2.088	Mar. 31	Unknown	244 6.91	4.02 1.225

Minimum daily discharge, 0.90 ft³/s (0.025 m³/s) Oct. 1-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	1.3	1.1	1.2	2.2	199	63	25	8.3	4.0	3.2	3.1
2	.90	1.3	1.1	1.2	2.2	94	44	23	8.2	4.2	3.2	3.1
3	.90	1.3	1.1	1.5	2.2	83	42	24	7.8	4.0	3.1	3.5
4	.90	1.1	1.1	1.7	2.2	430	40	24	7.7	3.9	3.1	5.0
5	.90	1.3	1.3	1.7	4.0	121	38	25	7.6	3.7	3.1	7.5
6	.90	1.3	1.3	2.1	4.2	50	37	25	7.4	3.9	3.2	3.7
7	1.1	1.3	1.3	2.1	4.4	42	35	25	7.3	3.9	3.1	3.5
8	1.1	1.3	1.3	2.1	4.6	40	34	24	7.2	3.7	3.1	3.4
9	1.1	1.3	1.3	3.5	3.62	40	32	25	7.1	3.4	3.1	3.4
10	1.1	1.3	1.3	5.0	3.11	35	30	25	7.1	3.5	5.7	3.5
11	1.1	1.3	1.3	4.0	1.50	31	29	25	6.9	3.7	5.4	3.4
12	1.1	1.3	1.5	3.1	7.0	30	28	24	6.7	3.9	3.9	3.4
13	1.1	1.3	1.5	2.7	5.0	26	27	23	6.5	3.9	3.7	3.4
14	1.1	1.3	1.5	3.1	4.0	22	26	22	6.3	3.9	3.4	3.4
15	1.1	1.3	1.5	6.2	3.3	18	38	22	6.1	3.5	3.4	3.4
16	1.1	1.3	1.5	10.0	2.8	15	42	20	6.1	3.4	3.2	3.4
17	1.1	1.1	1.5	3.0	2.3	13	30	21	5.8	3.4	3.2	3.4
18	1.1	1.1	1.5	1.1	2.2	11	28	19	5.8	3.2	3.2	3.4
19	1.1	1.1	1.5	1.2	1.8	11	26	18	5.8	3.4	3.1	3.5
20	1.1	1.1	1.5	7.9	1.7	15	23	16	5.4	3.4	3.4	3.4
21	1.1	1.1	1.5	4.4	1.4	18	23	15	5.2	3.4	3.4	3.4
22	1.1	1.1	1.5	2.7	1.3	4.6	23	14	5.2	3.2	3.1	3.4
23	1.1	1.3	1.5	2.7	1.2	3.0	23	14	5.2	3.2	3.1	3.4
24	1.3	1.1	1.5	2.7	9.3	2.1	23	14	4.6	3.0	3.1	3.4
25	1.3	1.1	1.5	2.7	7.3	2.2	23	13	4.6	3.0	3.1	3.4
26	1.3	1.1	1.9	2.7	5.8	2.4	21	13	4.4	3.0	3.1	3.4
27	1.3	1.1	1.2	2.6	4.4	2.2	22	11	4.6	3.0	3.4	3.4
28	1.3	1.1	6.1	2.6	4.1	2.2	23	9.8	4.6	3.0	3.2	3.4
29	1.3	1.1	2.4	2.4	---	2.1	24	9.3	4.2	3.0	3.1	3.4
30	1.3	1.1	1.7	2.3	---	2.6	25	8.5	4.2	3.0	3.1	3.4
31	1.3	---	1.2	2.2	---	1.10	---	8.4	---	3.2	3.1	---
TOTAL	34.50	36.2	114.7	347.3	1411.6	1688	922	585.0	183.9	108.1	104.6	107.8
MEAN	1.11	1.21	3.70	11.2	50.4	54.5	30.7	18.9	6.13	3.49	3.37	3.59
MAX	1.3	1.3	6.1	10.0	3.62	4.30	6.3	2.5	8.3	4.2	5.7	7.5
MIN	.90	1.1	1.1	1.2	2.2	1.1	2.1	8.4	4.2	3.0	3.1	3.1
AC-FT	68	72	228	689	2800	3350	1830	1160	365	214	207	214
CAL YR 1977	TOTAL	731.60	MEAN	2.00	MAX	61	MIN	.90	AC-FT	1450		
WTR YR 1978	TOTAL	5643.70	MEAN	15.5	MAX	430	MIN	.90	AC-FT	11190		

11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA

LOCATION.--Lat 34°39'58", long 118°49'24", in NW¼SE¼SE¼ sec.30, T.7 N., R.18 W., Ventura County, on left bank 300 ft (90 m) downstream from the confluence of Piru Creek and Buck Creek, and 2.3 mi (3.7 km) southeast of U.S. Forest Service Hardluck Campground.

DRAINAGE AREA.--198 mi² (513 km²).

PERIOD OF RECORD.--October 1976 to current year. February 1975 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 2,700 ft (823 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, Feb. 1-22 and Mar. 1-24, which are fair. Station is used to monitor inflow into Pyramid Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s (538 m³/s) Mar. 4, 1978, estimated, gage height, 10.08 ft (3.072 m), from information furnished by California Department of Water Resources; no flow Sept. 6-26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,000 ft³/s (538 m³/s) Mar. 4, estimated, gage height, 10.08 ft (3.072 m), from information furnished by California Department of Water Resources; minimum daily, 0.02 ft³/s (0.001 m³/s) Oct. 1-8, 15-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.66	1.6	19	28	1580	232	148	57	24	12	9.0
2	.02	.62	1.6	15	28	1580	159	135	56	18	11	9.0
3	.02	.65	1.6	15	26	698	234	130	54	20	11	8.7
4	.02	.69	1.6	29	25	6090	371	125	52	21	11	8.3
5	.02	.83	1.6	47	22	2910	318	121	48	23	10	14
6	.02	1.1	1.7	29	153	569	311	115	46	24	10	30
7	.02	1.4	1.7	26	134	449	327	111	44	24	11	20
8	.02	1.2	1.7	20	185	397	293	108	42	24	10	15
9	.03	1.1	1.7	39	7010	350	261	107	41	23	10	14
10	.03	1.1	1.7	283	3330	335	241	105	40	22	10	13
11	.03	1.1	1.7	114	602	320	224	102	39	22	15	13
12	.03	1.2	1.8	60	552	300	216	99	38	21	12	12
13	.03	1.2	1.8	46	423	290	208	97	37	21	11	12
14	.03	1.2	1.8	88	342	250	196	96	36	20	11	12
15	.02	1.2	1.8	794	307	230	403	92	35	19	10	12
16	.02	1.1	1.8	512	271	209	374	88	34	19	10	12
17	.02	1.0	1.9	357	241	200	271	85	33	18	10	12
18	.02	1.0	2.3	163	212	165	243	83	32	17	9.5	12
19	.02	1.1	2.2	138	203	129	227	82	31	17	10	11
20	.02	1.3	2.0	99	191	109	222	81	31	16	10	11
21	.02	1.3	2.2	74	179	300	204	81	31	16	10	11
22	.02	1.4	2.6	62	163	271	188	79	30	15	11	11
23	.02	1.4	2.3	52	143	250	176	78	30	14	11	10
24	.02	1.4	2.1	44	120	230	176	79	30	14	11	10
25	.02	1.4	2.1	40	108	211	203	76	29	12	10	10
26	.02	1.4	8.5	38	98	196	170	74	29	13	10	11
27	.03	1.4	74	35	93	180	156	69	29	13	10	10
28	.34	1.4	714	31	366	166	150	67	29	13	9.4	10
29	.56	1.5	115	30	---	158	147	64	30	12	9.0	10
30	.72	1.5	43	30	---	340	158	61	31	12	8.9	10
31	.83	---	26	29	---	1440	---	59	---	12	9.0	---
TOTAL	3.06	34.85	1027.4	3358	15555	20902	7059	2897	1124	559	323.8	363.0
MEAN	.099	1.16	33.1	108	556	674	235	93.5	37.5	18.0	10.4	12.1
MAX	.83	1.5	714	794	7010	6090	403	148	57	24	15	30
MIN	.02	.62	1.6	15	22	109	147	59	29	12	8.9	8.3
AC-FT	6.1	69	2040	6660	30850	41460	14000	5750	2230	1110	642	720
CAL YR 1977	TOTAL	3258.24	MEAN	8.93	MAX	714	MIN	0	AC-FT	6460		
WTR YR 1978	TOTAL	53206.11	MEAN	146	MAX	7010	MIN	.02	AC-FT	105500		

SANTA CLARA RIVER BASIN

11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA

LOCATION.--Lat 34°41'26", long 118°47'21", in NE¼NW¼NE¼ sec.21, T.7 N., R.18 W., Los Angeles County, on left bank, next to old Highway 99, 1.2 mi (1.9 km) south of Hungry Valley Road off ramp from Interstate Highway 5, 0.3 mi (0.5 km) above Pyramid Landing on Pyramid Lake.

DRAINAGE AREA.--61.9 mi² (160 km²).

PERIOD OF RECORD.--October 1976 to current year. March 1965 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (850 m), from topographic map.

REMARKS.--Records fair, except those for period of no gage-height record, Feb. 11 to Sept. 30, which are poor. Station is used to monitor natural inflow into Pyramid Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft³/s (84.7 m³/s) Feb. 10, 1978, gage height, 5.10 ft (1.554 m) furnished by California Department of Water Resources; minimum daily, 0.30 ft³/s (0.008 m³/s) May 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,990 ft³/s (84.7 m³/s) Feb. 10, gage height, 5.10 ft (1.554 m) furnished by California Department of Water Resources; minimum daily, estimated, 1.1 ft³/s (0.031 m³/s) June 19 to July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.4	1.7	1.3	1.7	149	4.8	1.6	1.3	1.1	1.3	1.5
2	1.3	1.5	1.7	1.4	1.7	50	2.8	1.6	1.3	1.1	1.3	1.5
3	1.3	1.5	1.7	1.6	1.8	20	2.0	1.6	1.3	1.1	1.3	1.5
4	1.4	1.5	1.7	2.9	1.8	900	2.1	1.5	1.3	1.1	1.3	1.5
5	1.4	1.6	1.7	1.7	5.1	39	2.1	1.5	1.3	1.1	1.3	1.5
6	1.4	1.7	1.7	1.7	2.2	5.0	2.8	1.5	1.3	1.1	1.3	1.5
7	1.4	1.6	1.7	1.7	2.0	3.0	2.2	1.5	1.2	1.1	1.3	1.5
8	1.4	1.5	1.7	1.8	2.6	2.0	2.1	1.5	1.2	1.1	1.3	1.5
9	1.4	1.5	1.7	3.0	337	2.0	1.9	1.5	1.2	1.1	1.3	1.5
10	1.3	1.5	1.7	4.7	1220	2.0	1.8	1.5	1.2	1.1	1.3	1.5
11	1.4	1.5	1.7	2.0	1.9	2.0	1.7	1.5	1.2	1.1	1.4	1.5
12	1.4	1.5	1.7	1.9	2.4	2.0	1.6	1.4	1.2	1.1	1.4	1.5
13	1.4	1.5	1.7	1.9	2.1	2.0	1.6	1.4	1.2	1.2	1.4	1.5
14	1.4	1.5	1.7	5.3	1.9	2.0	1.6	1.4	1.2	1.2	1.4	1.5
15	1.3	1.5	1.7	3.5	1.9	2.0	1.6	1.4	1.2	1.2	1.4	1.5
16	1.3	1.5	1.7	6.0	1.9	2.0	1.6	1.4	1.2	1.2	1.4	1.5
17	1.3	1.5	1.8	2.6	1.9	2.0	1.6	1.4	1.2	1.2	1.4	1.5
18	1.3	1.6	1.8	2.2	1.9	2.0	1.6	1.4	1.2	1.2	1.4	1.5
19	1.4	1.6	1.8	2.3	1.9	2.0	1.6	1.4	1.1	1.2	1.4	1.5
20	1.5	1.5	1.8	2.1	1.9	2.0	1.6	1.4	1.1	1.2	1.4	1.5
21	1.4	1.6	2.1	2.0	1.9	15	1.6	1.4	1.1	1.2	1.4	1.6
22	1.4	1.6	1.9	2.1	1.9	5.0	1.6	1.4	1.1	1.2	1.4	1.6
23	1.4	1.6	1.8	2.0	1.9	3.0	1.6	1.4	1.1	1.2	1.4	1.6
24	1.4	1.6	1.8	2.0	1.9	2.0	1.6	1.4	1.1	1.2	1.4	1.6
25	1.4	1.6	1.9	2.0	1.9	2.0	1.6	1.4	1.1	1.2	1.4	1.6
26	1.6	1.6	3.6	2.0	2.0	2.0	1.6	1.4	1.1	1.2	1.4	1.6
27	1.6	1.6	7.8	2.0	2.1	2.0	1.6	1.3	1.1	1.2	1.4	1.6
28	1.7	1.7	5.8	2.0	191	2.0	1.6	1.3	1.1	1.2	1.5	1.6
29	1.5	1.7	1.6	2.0	---	2.0	1.6	1.3	1.1	1.2	1.5	1.6
30	1.5	1.7	1.5	2.0	---	10	1.6	1.3	1.1	1.3	1.5	1.6
31	1.5	---	1.3	2.0	---	20	---	1.3	---	1.3	1.5	---
TOTAL	43.8	46.8	65.5	73.7	1800.2	1257.0	56.7	44.3	35.4	36.2	42.8	46.0
MEAN	1.41	1.56	2.11	2.38	64.3	40.5	1.89	1.43	1.18	1.17	1.38	1.53
MAX	1.7	1.7	7.8	6.0	1220	900	4.8	1.6	1.3	1.3	1.5	1.6
MIN	1.3	1.4	1.3	1.3	1.7	2.0	1.6	1.3	1.1	1.1	1.3	1.5
AC-FT	87	93	130	146	3570	2490	112	88	70	72	85	91

CAL YR 1977 TOTAL 560.28 MEAN 1.54 MAX 7.8 MIN .30 AC-FT 1110
WTR YR 1978 TOTAL 3548.40 MEAN 9.72 MAX 1220 MIN 1.1 AC-FT 7040

11109550 PIRU CREEK ABOVE FRENCHMANS FLAT, CA

LOCATION.--Lat 34°37'43", long 118°44'42", in NW¼SW¼NW¼ sec.12, T.6 N., R.18 W., Los Angeles County, on right bank of concrete-lined channel beside old Highway 99, 12.5 mi (20.1 km) north of Castaic, and 1 mi (2 km) north of Frenchmans Flat.

DRAINAGE AREA.--308 m² (798 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year. December 1963 to September 1976 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Altitude of gage is 2,100 ft (640 m), from topographic map.

REMARKS.--Records poor. No gage-height record Feb. 1 to Apr. 30. Station is used to monitor releases from Pyramid Lake 1.5 (2.4 km) upstream, into the Piru Creek basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s), estimated, Feb. 25, 1969, by California Department of Water Resources; no flow Jan. 1-18, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,020 ft³/s (57.2 m³/s) Mar. 4, estimated; no flow Jan. 17, Mar. 8-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	7.5	4.5	55	319	10	10	11	59	28	14	21
2	13	4.7	4.5	55	319	10	10	11	60	28	17	21
3	11	4.7	4.5	55	162	10	10	11	60	27	26	21
4	11	4.7	4.5	56	26	2020	10	11	60	26	26	23
5	11	4.7	4.5	55	26	10	10	11	68	26	26	28
6	11	4.7	4.6	55	26	10	10	11	99	26	27	28
7	10	4.7	4.5	54	18	10	10	11	124	26	27	26
8	11	4.7	4.6	53	10	0	10	12	149	25	27	25
9	10	4.7	4.6	58	156	0	10	12	162	27	28	25
10	10	4.7	4.6	60	1080	0	10	19	164	27	28	25
11	10	4.7	4.6	55	1420	10	10	25	165	27	28	21
12	10	4.7	4.6	122	1420	10	10	25	126	26	28	21
13	10	4.7	4.6	152	1420	10	10	25	61	26	28	20
14	10	4.6	4.6	160	884	10	10	25	61	26	27	21
15	10	4.5	4.5	160	502	10	189	37	62	25	28	21
16	10	4.5	4.5	82	319	10	242	78	62	25	28	21
17	10	4.6	4.9	0	101	10	10	124	61	24	28	20
18	11	4.6	4.8	166	101	10	10	166	60	25	28	18
19	11	4.6	4.6	316	101	10	10	199	58	20	28	19
20	11	4.6	4.5	313	101	10	10	199	59	16	27	19
21	11	4.6	4.8	312	101	10	10	200	59	17	27	18
22	11	4.6	4.7	313	186	10	10	198	50	17	27	18
23	10	4.5	4.6	308	319	10	10	105	38	16	27	18
24	10	4.5	4.6	303	319	10	10	53	36	15	27	18
25	10	4.5	4.6	320	319	10	10	53	36	15	24	18
26	10	4.5	4.5	318	319	10	10	53	36	15	21	18
27	11	4.5	4.9	316	319	10	10	53	37	15	20	18
28	11	4.5	70	316	319	10	10	53	33	15	20	18
29	11	4.5	160	316	---	10	10	54	30	14	19	18
30	10	4.5	106	316	---	10	10	54	30	14	21	18
31	10	---	56	316	---	10	---	53	---	14	21	---
TOTAL	331	141.1	516.3	5536	10712	2290	711	1952	2165	673	778	624
MEAN	10.7	4.70	16.7	179	383	73.9	23.7	63.0	72.2	21.7	25.1	20.8
MAX	15	7.5	160	320	1420	2020	242	200	165	28	28	28
MIN	10	4.5	4.5	0	10	0	10	11	30	14	14	18
AC-FT	657	280	1020	10980	21250	4540	1410	3870	4290	1330	1540	1240
CAL YR 1977	TOTAL	5383.5	MEAN 14.7	MAX 160	MIN 3.6	AC-FT 10680						
WTR YR 1978	TOTAL	26429.4	MEAN 72.4	MAX 2020	MIN 0	AC-FT 52420						

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1972 to current year.

INSTRUMENTATION.--Specific-conductance recorder since March 1972.

REMARKS.--Gaging station 700 ft (210 m) upstream operated by California Department of Water Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,540 micromhos Dec. 29, 1973; minimum recorded, 338 micromhos Nov. 30, 1972, Feb. 13, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,670 micromhos Mar. 10; minimum recorded, 448 micromhos Feb. 12.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	582	556	572	652	578	607	678	666	669	642	622	633
2	606	560	584	660	644	654	674	662	669	620	594	610
3	610	580	599	660	642	654	674	664	669	624	590	609
4	612	580	598	670	648	659	684	662	673	662	596	632
5	---	---	---	688	654	666	684	666	675	654	620	641
6	---	---	---	680	660	668	670	662	667	664	624	648
7	594	572	582	676	656	663	680	652	672	652	630	639
8	584	570	579	674	658	666	684	666	675	642	630	636
9	590	572	582	678	660	669	684	666	672	724	634	655
10	586	572	580	672	660	678	686	666	677	782	584	741
11	588	568	580	711	697	706	688	666	674	770	676	731
12	590	570	580	716	696	710	686	666	676	700	586	634
13	590	566	582	718	700	710	680	664	671	608	582	598
14	592	566	581	715	705	711	674	658	668	636	578	600
15	598	566	581	717	705	713	678	664	673	662	610	644
16	590	566	580	716	704	712	686	666	677	1580	596	841
17	592	568	582	720	706	713	722	668	689	---	---	---
18	586	568	580	719	705	714	800	592	714	---	---	---
19	586	576	581	723	703	714	702	688	696	592	562	583
20	586	574	582	725	709	719	698	684	691	608	562	593
21	588	578	583	716	704	711	722	684	704	638	592	607
22	588	572	581	728	706	713	764	730	749	640	596	621
23	586	572	582	723	709	716	748	726	737	658	608	645
24	590	574	584	725	703	717	738	728	734	688	638	654
25	586	572	582	722	708	716	738	722	732	734	698	721
26	588	574	584	722	710	718	1260	594	856	724	698	713
27	590	576	585	725	709	716	1400	808	1050	720	680	701
28	592	576	585	723	711	718	1470	664	1020	708	688	697
29	590	576	584	698	670	719	664	582	624	708	682	699
30	590	580	586	670	664	667	654	590	627	698	672	693
31	596	584	589	---	---	---	646	628	637	694	668	677
MONTH	612	556	583	728	578	694	1470	582	710	1580	562	658

WATER-QUALITY RECORDS

FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	680	640	659	1560	680	1070	1450	1240	1410	---	---	---
2	716	646	662	1620	1350	1500	1410	1370	1390	---	---	---
3	876	692	776	1650	1410	1600	1380	1320	1350	---	---	---
4	878	854	864	---	---	---	1340	1260	1310	---	---	---
5	904	594	863	1510	1290	1430	1340	1280	1310	---	---	---
6	938	896	925	1540	1490	1520	1290	1050	1220	---	---	---
7	1120	904	1010	1550	1470	1510	1300	1240	1270	---	---	---
8	1100	870	1050	1600	1530	1560	1310	1270	1290	---	---	---
9	1340	634	920	1640	1600	1620	1290	1230	1260	---	---	---
10	666	540	592	1670	1600	1440	1260	1200	1240	1000	821	903
11	562	534	552	1590	1370	1380	1260	1200	1230	---	---	---
12	594	448	559	1470	1270	1390	---	---	---	787	747	766
13	618	576	604	1470	1370	1410	---	---	---	763	735	752
14	666	600	636	1380	1320	1350	1100	1050	1080	758	732	747
15	666	632	649	1330	1270	1300	---	---	---	753	685	715
16	818	636	721	1270	1220	1250	---	---	---	686	640	657
17	810	592	764	1220	1190	1190	---	---	---	647	627	639
18	790	592	772	1220	1180	1200	---	---	---	644	626	635
19	780	752	765	1230	1180	1200	---	---	---	634	624	629
20	762	744	751	1190	1160	1180	---	---	---	635	621	629
21	754	734	742	1170	1090	1140	---	---	---	636	622	631
22	738	662	707	1120	960	1050	---	---	---	639	625	634
23	682	650	666	1130	1120	1130	1180	1120	1150	698	638	680
24	676	624	659	1130	1110	1120	1170	1120	1150	701	685	694
25	670	640	659	1110	1080	1090	1150	1110	1140	698	684	693
26	668	636	659	1320	1080	1190	1150	1110	1130	694	680	689
27	670	632	658	1300	1230	1270	1160	1110	1130	695	675	686
28	704	648	669	1250	1190	1220	1150	1090	1120	692	666	681
29	---	---	---	1250	1200	1220	1130	1070	1110	691	665	685
30	---	---	---	---	---	---	1150	1080	1110	694	668	684
31	---	---	---	---	---	---	---	---	---	695	671	685
MONTH	1340	448	733	1670	680	1300	---	---	---	---	---	---
JUNE				JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	697	677	688	---	---	---	684	636	662	657	629	647
2	698	678	689	---	---	---	680	638	660	661	635	651
3	697	675	688	---	---	---	652	614	635	661	635	653
4	694	678	688	---	---	---	645	615	634	726	644	664
5	687	651	675	---	---	---	647	615	635	680	646	669
6	654	640	6									

SANTA CLARA RIVER BASIN

11109600 PIRU CREEK ABOVE LAKE PIRU, CA

LOCATION.--Lat 34°31'23", long 118°45'22", in SW¼NE¼NW¼ sec.15, T.5 N., R.18 W., Ventura County, on left bank near Blue Point, 1.3 mi (2.1 km) downstream from Agua Blanca Creek, 4.3 mi (6.9 km) upstream from Santa Felicia Dam, and 8.0 mi (12.9 km) northeast of Piru.

DRAINAGE AREA.--372 mi² (963 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,058.55 ft (322.646 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Forest Service). Prior to Dec. 15, 1972, at site 0.3 mi (0.5 km) upstream at different datum.

REMARKS.--Records poor. No gage-height record Mar. 4-8, May 28 to July 24. Flow regulated beginning December 1971 by Pyramid Dam, capacity, 173,500 acre-ft (214 hm³) 15 mi (24 km) upstream. Imported water from the California Water Project stored and released from Pyramid Dam. Natural runoff was diverted out of basin this year at Pyramid Reservoir to Castaic Reservoir.

AVERAGE DISCHARGE.--16 years (water years 1956-71), 55.1 ft³/s (1.560 m³/s), 39,920 acre-ft/yr (49.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s (884 m³/s) Feb. 25, 1969, gage height, 18.6 ft (5.669 m), site and datum then in use, from floodmark, from rating curve extended above 4,000 ft³/s (113 m³/s) on basis of slope-area measurement at gage height 12.2 ft (3.719 m) and inflow-outflow records for Lake Piru; no flow in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, 35,000 ft³/s (991 m³/s), is the greatest since that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft³/s (312 m³/s) Mar. 4, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of field estimate of peak flow, gage height, 10.2 ft (3.109 m) from high-water profile past gage; minimum daily, 2.9 ft³/s (0.082 m³/s) Nov. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	3.9	83	327	1650	220	101	84	45	27	29
2	15	7.4	4.2	73	327	1220	213	99	85	44	27	29
3	11	4.5	4.2	63	290	819	199	101	85	43	42	29
4	9.3	4.2	4.2	114	60	4180	199	97	84	42	48	28
5	9.3	4.5	4.2	85	105	1100	186	97	92	42	46	40
6	9.3	4.8	4.2	114	99	900	205	95	123	41	45	57
7	9.3	4.1	4.2	70	73	780	222	95	148	41	44	37
8	9.3	3.4	4.6	65	83	720	199	93	173	40	44	33
9	9.3	3.4	4.6	200	2840	666	192	93	185	41	42	29
10	9.8	3.4	4.6	500	4830	544	186	91	187	41	41	29
11	9.8	3.4	5.2	150	2300	460	180	93	188	41	41	28
12	9.8	3.4	5.2	140	2290	380	176	91	149	40	41	25
13	9.8	3.4	5.2	170	2180	327	173	91	84	40	41	25
14	9.8	3.4	5.2	280	1600	283	170	91	83	40	38	27
15	9.8	3.1	4.9	440	992	242	384	95	84	39	38	28
16	9.8	2.9	4.9	568	750	213	509	119	84	39	38	27
17	9.8	2.9	5.6	446	304	210	266	144	82	38	38	27
18	9.8	3.1	8.6	315	254	196	196	190	81	39	38	29
19	10	3.4	7.2	443	224	176	149	250	79	34	37	28
20	11	3.4	6.8	390	203	158	130	283	79	30	38	27
21	11	3.4	6.8	370	173	189	120	246	79	31	38	27
22	11	4.2	8.1	360	213	296	115	242	70	31	38	27
23	11	4.2	8.1	350	460	224	108	175	57	30	38	27
24	11	3.9	7.6	345	466	210	106	85	55	29	40	27
25	11	3.7	7.6	341	455	186	111	81	55	28	38	26
26	11	3.9	31	336	422	170	111	81	55	27	30	26
27	12	3.7	128	336	395	180	106	79	55	28	29	27
28	12	3.9	504	331	772	192	104	79	51	28	29	27
29	12	3.9	200	331	---	186	101	79	48	28	29	27
30	13	3.9	130	331	---	220	101	80	47	26	28	27
31	12	---	87	331	---	322	---	78	---	27	29	---
TOTAL	333.0	122.8	1219.9	8471	23487	17599	5437	3714	2811	1113	1160	879
MEAN	10.7	4.09	39.4	273	839	568	181	120	93.7	35.9	37.4	29.3
MAX	15	12	504	568	4830	4180	509	283	188	45	48	57
MIN	9.3	2.9	3.9	63	60	158	101	78	47	26	27	25
AC-FT	661	244	2420	16800	46590	34910	10780	7370	5580	2210	2300	1740
CAL YR 1977	TOTAL	7301.7	MEAN	20.0	MAX	504	MIN	2.9	AC-FT	14480		
WTR YR 1978	TOTAL	66346.7	MEAN	182	MAX	4830	MIN	2.9	AC-FT	131600		

11109600 PIRU CREEK ABOVE LAKE PIRU, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1971 to current year.

INSTRUMENTATION.--Specific-conductance recorder since March 1971.

REMARKS.--Periods of missing specific-conductance data due to recorder malfunction, vandalism, and flood damage.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,980 micromhos June 3, 1973; minimum recorded, 292 micromhos Feb. 9, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,320 micromhos Dec. 26; minimum recorded, 292 micromhos Feb. 9.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	704	680	691	754	736	747	898	878	891	760	600	639
2	700	684	691	786	748	770	896	878	890	754	640	695
3	718	692	710	810	782	793	898	880	892	740	640	705
4	744	720	737	836	806	821	900	880	893	778	512	702
5	752	736	744	838	820	833	900	878	894	804	616	767
6	752	738	744	848	832	840	906	880	895	830	760	789
7	752	732	744	848	820	842	904	880	893	798	778	790
8	756	742	750	856	826	846	902	880	893	790	760	780
9	754	740	747	856	840	850	894	880	887	812	490	709
10	756	738	747	854	844	852	894	880	890	846	534	677
11	754	738	746	858	842	852	894	800	882	906	860	892
12	756	740	748	864	844	855	894	878	890	884	724	825
13	758	736	747	860	846	855	898	802	884	724	704	714
14	756	736	747	868	844	858	896	880	891	722	396	643
15	756	736	747	866	844	858	894	800	875	760	416	639
16	754	738	746	874	846	862	894	876	888	762	384	613
17	754	736	746	868	850	863	888	860	877	920	576	802
18	754	736	746	866	848	861	892	860	885	1280	688	919
19	754	740	747	866	846	858	902	820	890	694	678	687
20	752	734	743	868	852	863	912	882	901	688	678	683
21	750	734	743	868	856	864	914	800	871	692	680	686
22	754	738	746	866	852	862	892	800	858	716	684	701
23	754	736	745	870	852	864	892	800	863	720	680	703
24	752	736	744	872	852	866	910	800	873	722	712	717
25	754	736	745	878	858	869	910	800	868	776	716	755
26	750	732	743	878	858	871	1320	640	822	774	760	766
27	750	734	742	874	854	869	990	406	747	768	742	754
28	750	732	742	876	854	870	930	400	598	758	744	751
29	750	734	743	896	862	878	830	602	741	758	748	753
30	752	736	746	898	880	894	670	600	618	752	742	747
31	754	736	747	---	---	---	802	602	753	746	730	739
MONTH	758	680	740	898	736	850	1320	400	851	1280	384	734

11109700 LAKE PIRU NEAR PIRU, CA

LOCATION.--Lat 34°27'52", long 118°44'57", in Temescal Grant, Ventura County, at Santa Felicia Dam on Piru Creek, on left bank 1,000 ft (305 m) upstream from left end of dam, 0.5 mi (0.8 km) downstream from Santa Felicia Canyon, 4.2 mi (6.8 km) northeast of Piru, and 20 mi (32 km) downstream from Pyramid Dam.

DRAINAGE AREA.--425 mi² (1,101 km²).

PERIOD OF RECORD.--May 1955 to current year.

GAGE.--Nonrecording gage. Gage is to National Geodetic Vertical Datum of 1929 (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum.

REMARKS.--Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity table is based on a survey made in 1975. Capacity below spillway level at elevation 1,055.0 ft (321.56 m), 91,010 acre-ft (112 hm³). Flow regulated since December 1971 by Pyramid Dam 20 mi (32 km) upstream, capacity, 173,500 acre-ft (214 hm³). Imported water from the California Water Project stored behind and released from Pyramid Dam. Water is released from outlet to Piru Creek for ground-water recharge, domestic use, and irrigation on the Oxnard plain.

COOPERATION.--Elevations were furnished by United Water Conservation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,400 acre-ft (135 hm³) Feb. 25, 1969, elevation, 1,061.45 ft (323.530); lake dry Oct. 25 to Nov. 20, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 96,130 acre-ft (119 hm³) Mar. 4, elevation, 1,059.10 ft (322.814 m); minimum observed, 13,370 acre-ft (16.5 hm³) Dec. 14-17, elevation, 965.60 ft (294.315 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	966.65	13860	--
Oct. 31.....	966.45	13760	-100
Nov. 30.....	965.85	13480	-280
Dec. 31.....	970.10	15540	+2060
CAL YR 1977.....	--	--	+7980
Jan. 31.....	995.85	32190	+16650
Feb. 28.....	1045.30	79640	+47450
Mar. 31.....	1055.45	91560	+11920
Apr. 30.....	1055.15	91200	-360
May 31.....	1054.35	90230	-970
June 30.....	1049.20	84130	-6100
July 31.....	1043.70	77830	-6300
Aug. 31.....	1038.10	71640	-6190
Sept. 30.....	1036.15	69530	-2110
WTR YR 1978.....	--	--	+55670

SANTA CLARA RIVER BASIN

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA

LOCATION.--Lat 34°27'37", long 118°45'04", in Temescal Grant, Ventura County, on right bank 750 ft (229 m) downstream from Santa Felicia Dam, 1 mi (2 km) upstream from Lime Canyon, 4 mi (6 km) northeast of Piru, and 20 mi (30 km) downstream from Pyramid Dam.

DRAINAGE AREA.--425 mi² (1,100 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to September 1968, October 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 858.8 ft (261.76 m) National Geodetic Vertical Datum of 1929 (levels by United Water Conservation District).

REMARKS.--Records good. Since May 1955 flow regulated by Santa Felicia Dam (Lake Piru, station 11109700) and since December 1971 by Pyramid Dam, capacity 173,500 acre-ft (214 hm³). Imported water from the California Water Project stored by Pyramid Dam. No diversion above station. Spill from Santa Felicia Dam bypasses gage.

COOPERATION.--Records of spill were furnished by United Water Conservation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 544 ft³/s (15.4 m³/s) Aug. 18, 1958, gage height, 3.66 ft (1.116 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 245 ft³/s (6.94 m³/s) May 22; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	7.5	6.9		0	.70	.07	.13	149	152	124	123
2	7.8	8.1	6.9		0	.74	.06	.13	149	152	124	124
3	7.8	9.5	6.9		0	30	.05	.11	149	152	122	124
4	7.8	9.5	6.9		0	55	.08	.11	149	151	122	100
5	7.8	9.5	6.9		0	51	.06	.12	150	137	122	.73
6	7.6	9.5	6.9		0	51	.08	.12	149	126	122	.20
7	7.5	9.5	6.9		0	51	.05	.10	167	126	122	.11
8	7.5	8.3	6.9		0	51	.06	.08	189	126	122	.04
9	7.6	6.7	6.9		.10	51	.06	.08	198	125	122	.01
10	7.8	6.8	6.9		.02	51	.05	.07	202	125	122	0
11	8.1	6.9	6.9		0	51	.06	.06	202	124	122	2.1
12	8.1	6.8	6.9		.03	51	.06	0	203	124	122	3.3
13	7.8	6.8	6.9		0	52	.07	0	202	124	122	3.3
14	7.8	6.8	6.9		8.7	52	.07	0	202	124	122	1.1
15	7.8	6.8	6.9		19	52	.11	0	202	124	122	0
16	7.8	6.8	6.9		19	23	.07	0	202	124	122	0
17	7.8	6.8	6.9		19	2.7	.05	0	202	124	122	0
18	7.8	7.0	4.0		19	.99	.04	0	202	124	122	0
19	7.8	7.2	.04		19	.99	.06	0	202	124	122	1.1
20	7.8	7.2	0		19	.99	.07	241	202	124	122	3.0
21	7.8	7.2	0		19	.97	.09	241	202	124	122	1.1
22	7.8	7.1	0		19	.42	.16	245	202	124	122	113
23	7.8	7.1	0		20	.13	.18	147	202	124	121	113
24	7.8	7.1	0		20	.12	.17	147	203	124	121	113
25	7.8	7.1	0		20	.11	.19	147	203	124	122	150
26	7.8	7.1	0		20	.11	.18	149	203	124	122	147
27	7.8	7.0	0		33	.10	.17	150	203	124	122	168
28	7.8	7.0	0		29	.09	.15	151	171	124	122	199
29	7.8	6.9	0		---	.09	.15	150	153	124	122	210
30	7.5	6.9	0		---	.12	.14	150	152	124	122	208
31	7.5	---	0		---	.11	---	150	---	124	122	---
TOTAL	240.8	224.5	121.34	0	302.85	681.48	2.86	2069.11	5566	3976	3784	1908.09
MEAN	7.77	7.48	3.91	0	10.8	22.0	.095	66.7	186	128	122	63.6
MAX	8.1	9.5	6.9	0	33	55	.19	245	203	152	124	210
MIN	7.5	6.7	0	0	0	.09	.04	0	149	124	121	0
AC-FT	478	445	241	0	601	1350	5.7	4100	11040	7890	7510	3780
a	478	445	241	0	601	41010	13190	13090	11040	7890	7510	3780

CAL YR 1977 TOTAL 2052.84 MEAN 5.62 MAX 9.5 MIN 0 AC-FT 4070 AC-FT a 4070
WTR YR 1978 TOTAL 18877.03 MEAN 51.7 MAX 245 MIN 0 AC-FT 37440 AC-FT a 99280

a Combined discharge, in acre-feet, of Piru Creek below Santa Felicia Dam and spill from Santa Felicia Dam.

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1974 to current year.

INSTRUMENTATION.--Specific-conductance recorder since February 1974.

REMARKS.--Periods of missing specific-conductance record due to periods of no flow and recorder malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,320 micromhos June 13, 1975; minimum recorded, 652 micromhos Feb. 28, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,060 micromhos Dec. 8, 11, 14-17; minimum recorded, 652 micromhos Feb. 28.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1030	1000	1020	1040	1010	1030	1050	1020	1040			
2	1030	1000	1020	1040	1010	1030	1050	1020	1040			
3	1030	1000	1020	1040	1010	1030	1050	1030	1040			
4	1040	1000	1030	1040	1020	1030	1050	1030	1040			
5	1040	1010	1020	1040	1020	1030	1050	1020	1040			
6	1030	1010	1020	1040	1020	1030	1050	1030	1040			
7	1040	1000	1020	1040	1020	1030	1050	1030	1040			
8	1030	1000	1020	1040	1020	1030	1060	1030	1050			
9	1040	1000	1030	1040	1020	1030	1050	1030	1050			
10	1040	1010	1030	1040	1020	1030	1050	1030	1050			
11	1030	1010	1020	1040	1020	1030	1060	1040	1050			
12	1030	1010	1020	1040	1010	1030	1050	1040	1050			
13	1030	1010	1020	1040	1020	1030	1050	1030	1040			
14	1030	1010	1020	1040	1020	1030	1060	1030	1050			
15	1030	1000	1020	1040	1010	1030	1060	1040	1050			
16	1030	1010	1020	1040	1010	1030	1060	1040	1050			
17	1040	1010	1030	1040	1010	1030	1060	1030	1050			
18	1040	1010	1030	1050	1020	1040	---	---	---			
19	1040	1020	1030	1040	1030	1040	---	---	---			
20	1040	1010	1030	1050	1030	1040	---	---	---			
21	1040	1020	1030	1040	1020	1040	---	---	---			
22	1040	1010	1030	1050	1030	1040	---	---	---			
23	1040	1010	1030	1040	1020	1030	---	---	---			
24	1040	1010	1030	1040	1010	1030	---	---	---			
25	1040	1010	1030	1040	1010	1030	---	---	---			
26	1040	1010	1030	1040	1010	1030	---	---	---			
27	1040	1020	1030	1040	1020	1030	---	---	---			
28	1040	1020	1030	1040	1020	1030	---	---	---			
29	1040	1020	1030	1050	1020	1030	---	---	---			
30	1040	1020	1030	1050	1030	1040	---	---	---			
31	1040	1020	1030	---	---	---	---	---	---			
MONTH	1040	1000	1030	1050	1010	1030	---	---	---			

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---				---	---	---
2	---	---	---	---	---	---				---	---	---
3	---	---	---	---	---	---				---	---	---
4	---	---	---	846	666	762				---	---	---
5	---	---	---	812	662	777				---	---	---
6	---	---	---	848	796	822				---	---	---
7	---	---	---	880	790	845				---	---	---
8	---	---	---	884	808	855				---	---	---
9	---	---	---	896	736	862				---	---	---
10	---	---	---	892	846	870				---	---	---
11	---	---	---	890	742	872				---	---	---
12	---	---	---	910	836	884				---	---	---
13	---	---	---	904	860	879				---	---	---
14	---	---	---	906	870	892				---	---	---
15	768	742	750	900	878	890				---	---	---
16	760	744	754	952	896	910				---	---	---
17	762	748	756	1020	894	944				---	---	---
18	768	754	760	1040	928	996				---	---	---
19	784	766	774	1040	942	991				---	---	---
20	788	772	781	1010	958	989				---	---	---
21	804	776	788	1020	958	991				---	---	---
22	808	766	791	---	---	---				---	---	---
23	812	776	793	---	---	---				---	---	---
24	810	716	795	---	---	---				---	---	---
25	802	782	794	---	---	---				---	---	---
26	804	778	789	---	---	---				---	---	---
27	802	780	792	---	---	---				890	866	880
28	796	652	756	---	---	---				888	862	877
29	---	---	---	---	---	---				886	862	877
30	---	---	---	---	---	---				886	862	877
31	---	---	---	---	---	---				886	868	879
MONTH	---	---	---	---	---	---				---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	890	870	880	890	870	881	888	862	877	---	---	---
2	890	872	881	890	870	882	886	868	877	---	---	---
3	890	868	880	892	872	883	884	866	876	---	---	---
4	888	870	879	894	872	883	882	860	874	---	---	---
5	890	864	879	890	872	882	884	864	874	---	---	---
6	888	864	877	888	866	878	882	862	873	---	---	---
7	888	862	877	882	862	875	882	862	872	---	---	---
8	888	860	877	884	862	875	878	862	872	---	---	---
9	888	864	878	884	866	875	880	858	872	---	---	---
10	886	866	879	886	866	876	878	864	872	---	---	---
11	890	868	879	886	864	877	880	864	873	---	---	---
12	886	864	877	884	862	875	884	864	874	888	860	878
13	884	864	877	884	860	873	882	864	874	890	864	879
14	888	866										

11110500 HOPPER CREEK NEAR PIRU, CA

LOCATION.--Lat 34°24'03", long 118°49'32", in NE¼NE¼SW¼ sec.25, T.4 N., R.19 W., Ventura County, on downstream end of center pier of bridge on State Highway 126, 1 mi (2 km) upstream from mouth, and 2.1 mi (3.4 km) south-west of Piru.

DRAINAGE AREA.--23.6 mi² (61.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to September 1932, October 1933 to September 1936, October 1937 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 590 ft (180 m), from topographic map.

REMARKS.--Records good. No regulation above station. Some pumping along stream for irrigation.

COOPERATION.--Records were furnished by Ventura County Flood Control District; one discharge measurement was made and records were reviewed by Geological Survey.

AVERAGE DISCHARGE.--46 years (water years 1931-32, 1934-36, 1938-78) 5.72 ft³/s (0.162 m³/s), 4,140 acre-ft/yr (5.10 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Jan. 25, 1969, gage height, 12.72 ft (3.877 m), from floodmarks, from rating curve extended above 850 ft³/s (24.1 m³/s) on basis of slope-area measurement of maximum flow; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0945	292 8.27	4.77 1.454	Feb. 12	2200	1670 47.3	6.47 1.972
Jan. 4	1730	152 4.30	4.41 1.344	Mar. 1	0745	1230 34.8	6.99 2.131
Jan. 9	2200	224 6.34	4.61 1.405	Mar. 4	0800	4830 137	*9.48 2.890
Jan. 16	1730	1900 53.8	6.92 2.109	Mar. 22	1015	238 6.74	6.34 1.932
Feb. 9	1430	*5460 155	8.87 2.704	Apr. 15	2030	238 6.74	6.34 1.932

Minimum daily discharge, no flow Oct. 1 to Dec. 17, Dec. 20, 24-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	1.3	2.4	395	42	13	4.6	2.4	.87	.37
2			0	1.0	2.4	411	24	12	5.0	2.4	.74	.31
3			0	1.1	2.4	97	23	12	5.0	2.4	.74	.24
4			0	23	2.1	1860	38	12	5.0	2.1	.74	.31
5			0	7.3	20	436	23	11	4.6	1.7	.74	1.1
6			0	15	34	169	33	10	3.8	1.5	.64	4.6
7			0	5.0	16	106	45	8.9	3.5	1.5	.54	1.9
8			0	3.4	41	89	23	8.9	3.5	1.3	.54	1.3
9			0	56	1450	84	21	8.9	3.5	1.3	.64	.87
10			0	78	1280	64	20	8.3	3.5	1.3	.64	.87
11			0	16	98	54	19	8.3	3.8	1.3	.54	.87
12			0	5.8	284	47	19	8.3	3.8	1.3	.64	.74
13			0	3.5	185	42	19	7.8	3.8	1.3	.64	.64
14			0	35	89	38	19	7.8	3.2	1.3	.64	.64
15			0	94	44	33	78	7.2	3.2	1.3	.64	.64
16			0	215	30	29	54	7.2	3.2	1.3	.64	.64
17			0	73	24	28	29	6.7	3.2	1.1	.64	.74
18			2.2	27	19	27	23	6.7	3.2	1.0	.64	.87
19			.16	19	17	26	21	6.7	2.9	1.0	.64	.64
20			0	8.9	16	24	20	6.7	2.6	1.0	.64	.37
21			.06	6.2	16	36	19	6.7	2.1	1.0	.64	.31
22			.17	4.6	16	137	18	6.7	1.9	.87	.64	.31
23			.03	3.8	15	61	16	6.7	1.9	1.0	.64	.31
24			0	3.5	14	28	16	6.2	1.9	1.0	.54	.31
25			0	3.5	13	24	17	6.2	1.7	1.0	.54	.31
26			7.3	3.2	13	23	17	5.4	1.9	1.0	.64	.31
27			80	3.2	13	21	16	5.8	2.1	1.0	.64	.31
28			120	2.9	95	21	14	5.0	2.6	1.0	.54	.31
29			9.7	2.6	---	20	14	4.6	2.6	1.0	.45	.31
30			2.6	2.6	---	24	14	4.6	2.4	1.0	.45	.31
31		---	1.7	2.6	---	86	---	4.6	---	1.0	.45	---
TOTAL	0	0	223.92	727.0	3851.3	4540	754	240.9	96.0	40.67	19.30	21.76
MEAN	0	0	7.22	23.5	138	146	25.1	7.77	3.20	1.31	.62	.73
MAX	0	0	120	215	1450	1860	78	13	5.0	2.4	.87	4.6
MIN	0	0	0	1.0	2.1	20	14	4.6	1.7	.87	.45	.24
AC-FT	0	0	444	1440	7640	9010	1500	478	190	81	38	43
CAL YR 1977 TOTAL	487.31		MEAN 1.34	MAX 120	MIN 0	AC-FT 967						
WTR YR 1978 TOTAL	10514.85		MEAN 28.8	MAX 1860	MIN 0	AC-FT 20860						

SANTA CLARA RIVER BASIN

11110500 HOPPER CREEK NEAR PIRU, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977 to September 1978 (discontinued).

WATER TEMPERATURES: Water year 1977 to September 1978 (discontinued).

SEDIMENT RECORDS: Water year 1977 to September 1978 (discontinued).

PERIOD OF DAILY RECORD. --

SEDIMENT RECORDS: October 1976 to September 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 45,600 mg/L Feb. 9, 1978; minimum daily mean, no flow on many days.

SEDIMENT DISCHARGE: Maximum daily, 316,000 tons (287,000 metric tons) Mar. 4, 1978; minimum daily, 0 tons on many days.

EXTREMES FOR CURRENT YEAR. --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 45,600 mg/L Feb. 9; minimum daily mean, no flow on many days.

SEDIMENT DISCHARGE: Maximum daily, 316,000 tons (287,000 metric tons) Mar. 4; minimum daily, 0 tons on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

11110500 HOPPER CREEK NEAR PIRU, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	0	0
2							0	0	0
3							0	0	0
4							0	0	0
5							0	0	0
6							0	0	0
7							0	0	0
8							0	0	0
9							0	0	0
10							0	0	0
11							0	0	0
12							0	0	0
13							0	0	0
14							0	0	0
15							0	0	0
16							0	0	0
17							0	0	0
18							2.2	92	1.5
19							.16	40	.02
20							0	0	0
21							.06	5	0
22							.17	25	.01
23							.03	5	0
24							0	0	0
25							0	0	0
26							7.3	2650	409
27							80	24200	11900
28							120	8020	4490
29							9.7	149	46
30							2.6	186	1.3
31							1.7	190	.87
TOTAL	0	0	0	0	0	0	223.92	---	16848.70

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	1.3	180	.63	2.4	220	1.4	395	10900	23800
2	1.0	175	.47	2.4	180	1.2	411	8290	13000
3	1.1	175	.52	2.4	132	.86	97	2640	782
4	23	5810	1430	2.1	150	.85	1860	41200	316000
5	7.3	250	9.8	20	3670	363	436	12100	16200
6	15	1710	124	34	2660	432	169	4600	2180
7	5.0	120	1.6	16	3850	383	106	2500	715
8	3.4	100	.92	41	4670	2440	89	900	216
9	56	3510	1700	1450	45600	183000	84	1000	227
10	78	2030	599	1280	19100	129000	64	779	135
11	16	168	11	98	3510	972	54	650	95
12	5.8	150	2.3	284	13000	3570	47	500	63
13	3.5	150	1.4	185	5090	4100	42	400	45
14	35	3210	1350	89	1240	298	38	300	31
15	94	5700	3670	44	900	107	33	217	19
16	215	12700	22500	30	800	65	29	200	16
17	73	3590	1020	24	800	52	28	190	14
18	27	1780	126	19	800	41	27	180	13
19	19	2020	104	17	800	37	26	170	12
20	8.9	1700	41	16	800	35	24	150	9.7
21	6.2	1300	22	16	782	34	36	371	72
22	4.6	900	11	16	650	28	137	3000	1280
23	3.8	500	5.1	15	500	20	61	373	66
24	3.5	408	3.9	14	380	14	28	431	33
25	3.5	400	3.8	13	285	10	24	350	23
26	3.2	550	4.8	13	250	8.8	23	200	12
27	3.2	678	5.9	13	355	12	21	150	8.5
28	2.9	580	4.5	95	6980	5050	21	128	7.3
29	2.6	450	3.2	---	---	---	20	150	8.1
30	2.6	320	2.2	---	---	---	24	455	76
31	2.6	291	2.0	---	---	---	86	3080	784
TOTAL	727.0	---	32761.04	3851.3	---	330076.1	4540	---	375942.6

SANTA CLARA RIVER BASIN

11110500 HOPPER CREEK NEAR PIRU, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	42	677	87	13	50	1.8	4.6	20	.25
2	24	199	13	12	48	1.6	5.0	25	.34
3	23	150	9.3	12	46	1.5	5.0	33	.45
4	38	1210	178	12	40	1.3	5.0	35	.47
5	23	500	31	11	38	1.1	4.6	30	.37
6	33	576	73	10	35	.94	3.8	29	.30
7	45	620	118	8.9	32	.77	3.5	25	.24
8	23	400	25	8.9	29	.70	3.5	15	.14
9	21	200	11	8.9	28	.67	3.5	10	.09
10	20	81	4.4	8.3	28	.63	3.5	5	.05
11	19	65	3.3	8.3	26	.58	3.8	5	.05
12	19	50	2.6	8.3	35	.78	3.8	5	.05
13	19	40	2.1	7.8	40	.84	3.8	10	.10
14	19	25	1.3	7.8	45	.95	3.2	10	.09
15	78	2520	1030	7.2	43	.84	3.2	10	.09
16	54	261	47	7.2	40	.78	3.2	10	.09
17	29	180	14	6.7	30	.54	3.2	10	.09
18	23	121	7.5	6.7	21	.38	3.2	10	.09
19	21	100	5.7	6.7	32	.58	2.9	10	.08
20	20	80	4.3	6.7	30	.54	2.6	10	.07
21	19	60	3.1	6.7	25	.45	2.1	9	.05
22	18	44	2.1	6.7	15	.27	1.9	9	.05
23	16	40	1.7	6.7	9	.16	1.9	5	.03
24	16	50	2.2	6.2	15	.25	1.9	1	.01
25	17	250	11	6.2	20	.33	1.7	1	0
26	17	210	9.6	5.4	21	.31	1.9	3	.02
27	16	200	8.6	5.8	50	.78	2.1	10	.06
28	14	100	3.8	5.0	40	.54	2.6	30	.21
29	14	55	2.1	4.6	30	.37	2.6	30	.21
30	14	50	1.9	4.6	20	.25	2.4	29	.19
31	---	---	---	4.6	14	.17	---	---	---
TOTAL	754	---	1713.6	240.9	---	21.70	96.0	---	4.33

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.4	25	.16	.87	4	.01	.37	4	0
2	2.4	20	.13	.74	4	.01	.31	4	0
3	2.4	18	.12	.74	4	.01	.24	3	0
4	2.1	15	.09	.74	10	.02	.31	3	0
5	1.7	10	.05	.74	18	.04	1.1	100	.30
6	1.5	5	.02	.64	15	.03	4.6	300	3.7
7	1.5	3	.01	.54	10	.01	1.9	50	.26
8	1.3	4	.01	.54	10	.01	1.3	20	.07
9	1.3	5	.02	.64	8	.01	.87	10	.02
10	1.3	5	.02	.64	7	.01	.87	10	.02
11	1.3	5	.02	.54	5	.01	.87	10	.02
12	1.3	5	.02	.64	29	.05	.74	10	.02
13	1.3	5	.02	.64	20	.03	.64	10	.02
14	1.3	6	.02	.64	19	.03	.64	10	.02
15	1.3	5	.02	.64	18	.03	.64	10	.02
16	1.3	5	.02	.64	17	.03	.64	10	.02
17	1.1	15	.04	.64	16	.03	.74	10	.02
18	1.0	27	.07	.64	14	.02	.87	9	.02
19	1.0	25	.07	.64	12	.02	.64	8	.01
20	1.0	20	.05	.64	15	.03	.37	7	.01
21	1.0	16	.04	.64	15	.03	.31	5	0
22	.87	20	.05	.64	18	.03	.31	5	0
23	1.0	15	.04	.64	15	.03	.31	5	0
24	1.0	14	.04	.54	17	.02	.31	5	0
25	1.0	13	.04	.54	20	.03	.31	5	0
26	1.0	12	.03	.64	22	.04	.31	5	0
27	1.0	11	.03	.64	25	.04	.31	5	0
28	1.0	10	.03	.54	20	.03	.31	5	0
29	1.0	5	.01	.45	16	.02	.31	5	0
30	1.0	5	.01	.45	10	.01	.31	5	0
31	1.0	5	.01	.45	5	.01	---	---	---
TOTAL	40.67	---	1.31	19.30	---	.73	21.76	---	4.55
YEAR 10514.85			757374.7						

11110500 HOPPER CREEK NEAR PIRU, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	0.0	0.0	0	0
NOVEMBER ...	0.0	0.0	0	0
DECEMBER ...	223.92	16848.70	2440	19300
JANUARY 1978	727.00	32761.04	7430	40200
FEBRUARY ...	3851.30	330076.11	78900	409000
MARCH	4540.00	375942.60	84700	461000
APRIL	754.00	1713.60	2860	4580
MAY	240.90	21.70	61	83
JUNE	96.00	4.33	0	4
JULY	40.67	1.31	0	1
AUGUST	19.30	0.73	0	1
SEPTEMBER ..	21.76	4.55	0	5
TOTAL	10514.85	757374.67	176391	934174

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC 28...	1318	13.0	196	2660	1410	--	21	26	36	48	64
JAN 04...	1343	--	7.0	2360	45	--	56	76	91	98	--
10...	1440	--	67	1320	239	17	23	30	39	47	--
15...	1250	--	32	782	68	17	22	29	35	42	--
FEB 05...	1302	12.0	62	19000	3180	17	21	29	42	59	--
13...	1155	11.0	107	3070	887	18	25	34	41	48	--
17...	1346	15.5	23	409	25	43	54	60	69	74	--
MAR 01...	0900	12.5	608	11700	19200	--	10	14	18	24	--
01...	1445	12.0	319	4060	3500	--	18	26	33	41	48
02...	1350	11.0	953	14100	36300	13	16	20	27	35	--

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 28...	--	82	--	93	--	97	--	100	--	--
JAN 04...	99	--	99	--	100	--	--	--	--	--
10...	54	--	70	--	82	--	91	--	97	100
15...	48	--	60	--	74	--	90	--	99	100
FEB 05...	71	--	84	--	92	--	98	--	99	100
13...	53	--	58	--	68	--	89	--	99	100
17...	77	--	82	--	89	--	96	--	98	100
MAR 01...	28	--	38	--	52	--	74	--	92	97
01...	--	59	--	76	--	94	--	100	--	--
02...	41	--	52	--	70	--	87	--	96	99

SANTA CLARA RIVER BASIN

11110500 HOPPER CREEK NEAR PIRU, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	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
SEP							
20...	1035	1	.40	2	4	15	50
20...	1040	1	.40	1	2	4	6
20...	1045	1	.40	2	4	7	14
20...	1050	1	.40	2	3	4	10
20...	1055	1	.40	4	11	32	57

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
SEP							
20...	83	92	94	95	95	100	--
20...	11	13	17	24	49	78	100
20...	21	25	33	46	68	86	100
20...	19	24	29	39	69	100	--
20...	74	82	88	94	100	--	--

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
JAN								
04...	1347	12.0	18	7.0	9.5	3.3	2	4
10...	1440	--	20	67	22	99	0	1
FEB								
17...	1400	15.5	11	23	22	74	0	0
MAR								
01...	1430	12.2	10	319	50	234	1	1

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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
JAN								
04...	12	29	46	61	79	96	100	--
10...	8	25	43	58	72	88	99	100
FEB								
17...	3	19	39	52	64	76	100	--
MAR								
01...	6	16	25	31	36	42	71	100

11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA

LOCATION.--Lat 34°34'40", long 119°15'25", in SE&NW&SW¼ sec.30, T.6 N., R.22 W., Ventura County, on right bank at Sespe Gorge, 1.6 mi (2.6 km) upstream from Tule Creek, and 5 mi (8 km) northeast of Wheeler Springs.

DRAINAGE AREA.--49.5 mi² (128.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year. Daily discharge for period October 1947 to July 1948 estimated on basis of weather records and records for North Fork Matilija Creek.

GAGE.--Water-stage recorder. Datum of gage is 3,500.65 ft (1,066.998 m) National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District).

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

AVERAGE DISCHARGE.--31 years, 12.2 ft³/s (0.346 m³/s), 8,840 acre-ft/yr (10.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) Feb. 10, 1978, gage height, 14.18 ft (4.322 m), from rating curve extended above 640 ft³/s (18.1 m³/s) on basis of slope-area measurement at gage height 13.60 ft (4.145 m); no flow many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 28	0700	560	15.9	4.96	1.512	Feb. 12	1945	870	24.6	5.67	1.728
Jan. 4	1645	63	1.78	3.00	0.914	Mar. 1	0830	1600	45.3	6.94	2.115
Jan. 9	1815	200	5.66	3.79	1.155	Mar. 4	0600	7360	208	12.28	3.743
Jan. 16	1815	1560	44.2	6.88	2.097	Mar. 22	0830	354	10.0	4.37	1.332
Feb. 5	0900	120	3.40	3.27	0.997	Mar. 31	0415	1150	32.6	6.20	1.890
Feb. 7	1645	125	3.54	3.29	1.003	Apr. 15	1815	386	10.9	4.47	1.362
Feb. 10	0115	*10700	303	14.18	4.322						

Minimum daily discharge, 0.12 ft³/s (0.003 m³/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.20	.60	4.5	13	884	250	62	16	7.7	4.1	1.8
2	.12	.20	.70	3.7	12	548	200	56	16	7.5	3.8	1.8
3	.12	.22	.70	3.4	11	440	165	52	16	7.2	3.7	1.8
4	.12	.23	.60	18	11	3220	156	50	15	6.8	3.5	2.5
5	.13	.24	.60	9.9	53	1000	134	48	15	6.5	3.3	12
6	.13	.25	.60	10	50	500	133	46	14	6.5	3.2	9.0
7	.13	.32	.60	5.9	63	350	131	44	14	6.4	3.1	6.8
8	.13	.32	.60	4.4	139	239	128	42	14	6.2	3.1	5.1
9	.14	.36	.60	63	3340	210	124	40	13	5.9	3.8	4.6
10	.14	.36	.52	94	3290	185	116	38	13	5.9	3.4	4.4
11	.14	.36	.60	36	517	165	108	36	13	5.8	3.5	4.2
12	.15	.36	.60	21	414	148	100	34	13	6.3	3.3	4.0
13	.15	.36	.60	15	369	132	93	33	12	6.3	3.1	3.9
14	.15	.36	.60	185	260	120	87	32	12	6.3	3.0	3.8
15	.15	.41	.60	286	195	110	204	31	12	6.3	3.0	3.7
16	.15	.40	.52	418	150	100	163	31	12	6.4	2.9	3.6
17	.16	.40	.60	220	127	92	123	29	11	6.1	2.7	3.5
18	.16	.40	.60	142	113	85	110	28	10	6.4	2.6	3.5
19	.16	.41	.52	100	98	79	104	27	10	5.6	2.6	3.4
20	.16	.44	.52	76	86	73	102	26	9.4	5.7	2.6	3.4
21	.16	.44	.70	58	76	70	97	25	8.7	6.0	2.5	3.4
22	.17	.45	.60	46	70	233	91	24	8.3	6.0	2.5	3.4
23	.17	.47	.44	37	65	148	89	24	8.2	5.1	2.6	3.4
24	.17	.49	.40	30	60	125	86	23	7.8	5.1	2.6	3.4
25	.17	.52	.40	24	55	110	91	22	7.4	5.0	2.5	3.4
26	.17	.52	6.2	20	51	98	86	22	7.4	5.0	2.3	3.4
27	.18	.58	77	16	48	86	80	20	7.8	5.0	2.2	3.1
28	.19	.60	315	15	240	76	75	19	8.1	4.8	2.1	3.1
29	.19	.60	60	14	---	71	70	18	7.8	4.8	1.9	3.1
30	.18	.60	13	14	---	175	65	18	7.7	5.1	1.8	3.1
31	.19	---	8.0	13	---	575	---	17	---	5.2	1.8	---
TOTAL	4.75	11.87	493.62	2002.8	9976	10447	3561	1017	339.6	184.9	89.1	119.6
MEAN	.15	.40	15.9	64.6	356	337	119	32.8	11.3	5.96	2.87	3.99
MAX	.19	.60	315	418	3340	3220	250	62	16	7.7	4.1	12
MIN	.12	.20	.40	3.4	11	70	65	17	7.4	4.8	1.8	1.8
AC-FT	9.4	24	979	3970	19790	20720	7060	2020	674	367	177	237

CAL YR 1977 TOTAL 1547.25 MEAN 4.24 MAX 315 MIN .08 AC-FT 3070
WTR YR 1978 TOTAL 28247.24 MEAN 77.4 MAX 3340 MIN .12 AC-FT 56030

SANTA CLARA RIVER BASIN

11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 (partial-record station), February 1962 to September 1978 (discontinued).
 SEDIMENT RECORDS: Water year 1956 (partial-record station).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1962 to September 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder since February 1962.

REMARKS.--Period of missing record Feb. 10 to Mar. 29 due to flood damage and equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 29.5°C July 25, 1977; minimum recorded, 0.0°C on several days in several years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 27.5°C Aug. 10; minimum recorded, 3.0°C Nov. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.0	9.5	13.5	12.0	7.5	10.0	10.5	7.5	9.0	10.5	9.0	10.0
2	18.0	8.0	12.0	12.0	7.5	10.0	10.5	8.0	9.5	10.5	9.0	9.5
3	17.5	7.5	12.0	12.0	7.5	10.0	10.5	7.0	8.5	9.5	8.0	8.5
4	16.5	8.5	12.5	11.0	7.5	9.5	11.0	7.5	9.5	8.5	6.5	7.5
5	17.0	10.5	13.5	9.0	6.5	8.0	11.5	8.5	10.0	8.5	7.0	8.0
6	20.0	12.5	15.5	8.5	6.0	7.0	9.5	6.0	8.0	10.0	8.0	9.0
7	19.5	11.5	15.0	10.5	5.5	8.0	9.5	6.5	8.0	9.5	7.0	8.0
8	17.5	10.5	13.5	10.0	6.0	8.0	10.0	7.0	8.5	9.5	6.5	8.0
9	18.5	10.5	13.5	10.0	5.0	7.5	10.5	6.5	8.5	8.0	7.5	8.0
10	18.0	10.5	13.5	8.5	5.0	7.0	9.5	6.0	7.5	8.0	6.5	7.5
11	18.0	9.5	13.0	10.5	5.5	8.0	8.5	5.0	7.0	8.5	5.5	7.0
12	17.0	10.0	13.0	9.0	5.0	7.0	9.0	6.5	8.0	8.0	6.0	7.5
13	16.5	9.5	13.0	8.5	4.5	6.5	9.5	6.0	7.5	9.5	6.5	8.0
14	16.5	10.0	13.0	10.0	6.0	8.0	11.0	7.0	8.5	9.0	7.0	8.0
15	17.0	9.5	13.0	10.5	7.0	9.0	10.5	8.0	9.0	9.0	6.5	7.5
16	16.0	9.5	12.5	10.5	6.5	9.0	9.0	5.5	7.5	7.5	6.5	7.0
17	16.0	9.0	12.5	10.0	6.5	8.5	10.5	8.5	9.5	9.5	6.5	8.0
18	14.5	8.5	11.0	10.5	6.5	9.0	9.5	6.5	8.5	9.5	6.0	8.0
19	13.5	9.5	11.5	9.5	5.0	7.5	7.0	4.5	5.5	8.5	7.0	8.0
20	15.0	9.0	11.5	6.5	3.0	5.0	7.0	4.5	5.5	9.0	7.0	8.0
21	15.0	9.5	12.0	8.0	5.0	6.5	7.5	5.0	6.5	8.5	5.5	7.0
22	15.0	8.5	11.5	10.0	6.0	8.0	9.5	7.5	8.5	9.0	6.5	8.0
23	14.5	9.5	12.0	9.5	6.5	8.0	10.5	9.0	9.5	7.5	5.5	6.5
24	14.5	9.0	12.0	10.5	7.0	9.0	10.5	8.0	9.5	6.5	3.5	5.5
25	15.0	9.5	12.0	11.5	8.5	10.0	11.0	9.0	10.0	7.5	4.0	6.0
26	15.0	9.5	12.0	11.5	7.5	9.5	10.5	9.5	10.0	9.0	5.5	7.0
27	13.0	9.0	11.0	12.0	9.5	10.5	10.5	9.5	10.0	9.0	5.5	7.5
28	11.5	6.0	9.0	11.0	8.5	9.5	10.0	9.0	9.5	9.0	5.5	7.5
29	12.0	6.5	9.0	10.5	7.5	9.0	14.0	10.0	12.0	10.0	6.0	8.0
30	10.5	6.5	8.5	11.0	8.5	9.5	13.5	12.0	12.5	9.0	7.0	8.0
31	11.5	7.5	9.0	---	---	---	12.0	10.5	11.5	10.0	6.0	8.0
MONTH	20.0	6.0	12.0	12.0	3.0	8.5	14.0	4.5	9.0	10.5	3.5	7.5

11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.5	6.0	7.5	---	---	---	10.5	8.0	9.5	15.5	9.0	12.0
2	10.0	5.5	7.5	---	---	---	11.5	10.0	10.5	18.5	9.5	14.0
3	10.0	5.0	7.5	---	---	---	15.0	9.0	11.5	19.5	10.5	15.0
4	10.0	7.0	8.5	---	---	---	12.5	7.5	9.5	18.5	11.0	14.5
5	8.5	6.5	8.0	---	---	---	15.0	6.0	10.0	16.0	8.0	11.5
6	10.0	7.5	8.5	---	---	---	9.5	7.0	8.5	17.5	7.0	12.0
7	8.0	6.0	7.0	---	---	---	10.0	5.5	7.5	18.0	8.0	13.0
8	8.0	4.0	6.0	---	---	---	12.0	5.0	8.0	18.5	9.5	14.0
9	8.0	6.5	7.0	---	---	---	15.5	7.0	10.5	18.0	10.0	14.0
10	---	---	---	---	---	---	17.0	6.0	11.5	18.5	8.5	13.5
11	---	---	---	---	---	---	19.0	6.5	12.0	19.5	10.5	14.5
12	---	---	---	---	---	---	22.0	6.0	12.5	21.0	10.5	15.5
13	---	---	---	---	---	---	12.5	7.5	10.0	21.0	10.5	16.0
14	---	---	---	---	---	---	10.5	7.0	8.5	21.0	11.0	16.0
15	---	---	---	---	---	---	9.0	5.0	7.5	19.5	11.0	15.0
16	---	---	---	---	---	---	10.5	6.5	8.5	18.0	9.0	13.5
17	---	---	---	---	---	---	13.0	8.0	10.0	19.0	9.5	14.0
18	---	---	---	---	---	---	14.5	9.5	11.5	20.0	9.5	15.0
19	---	---	---	---	---	---	15.5	10.0	12.5	20.0	10.5	15.5
20	---	---	---	---	---	---	15.0	10.0	12.5	20.0	11.0	15.5
21	---	---	---	---	---	---	13.5	9.0	11.0	20.0	10.5	15.5
22	---	---	---	---	---	---	14.5	8.0	11.0	20.0	11.0	15.5
23	---	---	---	---	---	---	15.5	9.0	12.5	17.5	11.0	14.5
24	---	---	---	---	---	---	13.5	10.5	12.0	17.5	8.5	13.0
25	---	---	---	---	---	---	12.0	10.5	11.0	16.5	9.0	13.0
26	---	---	---	---	---	---	14.0	9.0	11.5	18.5	9.5	13.5
27	---	---	---	---	---	---	16.0	9.0	12.5	20.0	10.5	15.0
28	---	---	---	---	---	---	16.5	10.0	13.5	20.5	12.0	16.0
29	---	---	---	---	---	---	16.0	11.0	13.5	21.5	13.0	17.0
30	---	---	---	12.0	8.5	10.5	15.5	10.5	12.5	21.5	13.0	17.0
31	---	---	---	10.5	7.0	8.5	---	---	---	21.0	13.0	19.0
MONTH	---	---	---	---	---	---	22.0	5.0	11.0	21.5	7.0	14.5
JUNE				JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	21.0	14.0	17.5	22.5	14.0	18.5	24.5	15.0	20.0	22.5	12.0	16.0
2	21.0	13.5	17.0	22.5	13.5	18.0	25.5	16.0	20.0	23.5	12.0	17.0
3	21.5	13.5	17.5	22.5	14.0	18.0	25.0	16.5	20.5	22.5	14.5	17.5
4	21.5	15.0	18.0	22.0	13.0	17.5	26.0	17.5	21.0	19.0	14.5	16.5
5	22.0	15.0	18.0	23.0	14.0	18.5	27.0	17.5	21.5	17.0	16.0	16.5
6	22.5	16.0	19.0	23.5	14.5	18.5	26.5	17.5	21.5	22.0	15.5	17.5
7	22.0	16.5	19.0	23.5	15.0	18.5	26.0	17.5	21.5	19.5	12.5	15.0
8	22.5	15.0	18.5	23.0	13.5	18.5	27.0	18.5	21.5	20.0	11.0	15.0
9	22.5	16.0	19.0	24.0	14.5	19.0	26.5	17.5	21.5	20.0	11.0	15.0
10	22.0	15.0	18.0	24.0	15.0	19.0	27.5	18.5	22.0	20.0	12.0	15.5
11	21.5	14.0	17.5	23.5	13.0	18.0	26.5	18.0	21.5	19.5	12.0	15.0
12	21.5	15.0	18.0	23.5	13.5	18.5	25.0	16.5	20.5	20.0	11.0	15.0
13	22.0	15.0	18.0	24.5	14.5	19.0	25.0	15.5	19.5	20.0	12.0	16.0
14	21.5	14.0	17.0	25.0	15.5	19.5	25.5	15.0	19.5	19.5	13.5	15.5
15	21.0	13.5	17.0	25.5	17.0	20.0	24.5	13.5	18.5	19.5	11.5	15.0
16	21.5	13.5	17.0	25.5	16.0	19.5	24.5	14.0	19.0	19.5	12.0	15.5
17	22.0	11.5	17.0	25.0	15.0	19.0	24.5	14.5	18.5	19.5	12.0	15.0
18	22.0	13.0	17.5	24.5	14.0	18.5	24.5	12.5	18.0	17.0	9.5	12.0
19	22.0	12.5	17.0	23.5	13.5	17.5	24.5	14.0	18.5	16.5	9.0	12.0
20	21.0	13.0	17.0	24.5	15.5	19.0	24.5	13.5	18.0	17.0	9.0	12.5
21	22.5	13.5	18.0	25.0	15.5	19.0	23.0	13.0	17.5	16.5	7.5	12.0
22	22.0	14.0	17.5	24.5	14.5	18.5	24.0	14.0	18.0	18.0	8.5	13.0
23	19.5	13.0	16.5	25.5	15.5	19.5	24.0	13.0	17.5	18.0	9.0	13.5
24	21.5	13.0	17.0	25.5	16.0	19.5	23.5	13.0	17.5	19.0	10.5	14.5
25	21.5	12.5	17.0	25.5	17.0	20.0	22.5	13.5	17.0	20.0	11.5	15.5
26	22.0	13.0	17.0	26.5	17.0	20.5	23.0	13.0	16.5	20.5	12.0	15.5
27	19.5	14.5	15.5	27.0	17.5	20.5	23.0	13.0	16.5	21.0	13.0	16.0
28	22.0	13.0	17.5	26.5	17.0	20.0	22.5	13.0	17.0	20.0	12.0	15.5
29	22.5	14.0	18.0	25.5	15.0	19.5	23.5	13.5	17.5	20.0	12.0	16.0
30	22.5	14.5	18.5	26.5	16.0	19.5	23.5	13.0	17.5	20.0	12.5	16.0
31	---	---	---	25.5	15.0	18.5	23.5	14.0	17.5	---	---	---
MONTH	22.5	11.5	17.5	27.0	13.0	19.0	27.5	12.5	19.0	23.5	7.5	15.0
YEAR	27.5	3.0	13.0									

11113000 SESPE CREEK NEAR FILLMORE, CA

LOCATION.--Lat 34°27'03", long 118°55'30", in NE¼NW¼NE¼ sec.12, T.4 N., R.20 W., Ventura County, on right bank 0.1 mi (0.2 km) downstream from Little Sespe Creek, and 3.5 mi (5.6 km) north of Fillmore.

DRAINAGE AREA.--251 mi² (650 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to September 1913, October 1927 to current year; combined records of creek and canal, October 1927 to current year. Prior to 1935, published as "at Sespe."

GAGE.--Water-stage recorder on creek; water-stage recorder and Parshall flume on canal. Altitude of creek gage is 580 ft (177 m), from topographic map. Canal gage is at different datum. See WSP 1315-B for history of changes prior to Jan. 17, 1946.

REMARKS.--Records good except those for periods of no gage-height record, July 9 to Aug. 30, which are fair. No regulation above station. Fillmore Irrigation Co. has diverted water 1 mi (2 km) upstream since September 1911. For records of combined discharge of Sespe Creek and Fillmore Irrigation Company's canal, see following page.

AVERAGE DISCHARGE.--Creek only: 53 years, 110 ft³/s (3.115 m³/s), 79,700 acre-ft/yr (98.3 hm³/yr).

Combined creek and canal: 51 years, 116 ft³/s (3.285 m³/s) 84,040 acre-ft/yr (104 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 73,000 ft³/s (2,070 m³/s) Feb. 10, 1978, gage height, 22.40 ft (6.828 m), from rating curve extended above 17,000 ft³/s (481 m³/s) on basis of slope-area measurement at gage height 22.40 ft (6.828 m); maximum gage height, 24.95 ft (7.605 m) Feb. 25, 1969, from debris wave; no flow at times in some years.

Combined creek and canal: Maximum discharge, 73,000 ft³/s (2,070 m³/s) Feb. 10, 1978; minimum daily, 1.1 ft³/s (0.031 m³/s) July 31, Aug. 2, 1951.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0845	8170 231	15.02 4.578	Mar. 1	1030	8260 234	13.48 4.109
Jan. 10	0200	2620 74.2	12.65 3.856	Mar. 4	1115	49800 1410	20.77 6.331
Jan. 16	2015	17200 487	17.05 5.197	Mar. 22	0930	2750 77.9	11.83 3.606
Feb. 10	0130	*73000 2070	22.40 6.828	Mar. 31	0500	4730 134	13.21 4.026
Feb. 12	2215	6390 181	12.79 3.898	Apr. 15	2245	3060 86.7	12.08 3.682

Minimum daily discharge, 0.25 ft³/s (0.007 m³/s) Nov. 26-28, Dec. 15, 16.

Combined creek and canal: Maximum discharge, 73,000 ft³/s (2,070 m³/s) Feb. 10; minimum daily, 2.8 ft³/s (0.079 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.46	.57	55	112	5600	1750	320	110	61	30	19
2	.32	.42	.42	48	102	4070	1260	310	110	59	30	18
3	.34	.40	.38	47	93	2580	1010	292	110	56	29	17
4	.32	.46	.35	199	86	20600	964	279	109	54	29	17
5	.31	.48	.31	183	369	8310	822	265	107	56	28	26
6	.31	.46	.31	198	548	4200	810	252	106	55	28	54
7	.51	.44	.30	156	448	2670	935	242	104	55	27	47
8	.65	.56	.31	84	926	2030	753	230	102	52	27	37
9	.39	.90	.31	486	28000	1890	674	222	100	50	27	29
10	.38	1.2	.31	1600	25100	1370	627	216	98	49	26	29
11	.38	.54	.31	552	5510	1180	575	209	96	48	26	26
12	.34	.46	.29	319	3640	1040	534	194	94	47	25	21
13	.35	.42	.27	215	3500	911	501	186	92	46	25	21
14	.38	.41	.26	970	2300	830	476	182	90	45	24	21
15	.38	.38	.25	4520	1400	750	1320	179	89	44	24	21
16	.36	.35	.25	5330	1100	670	1440	169	87	43	24	22
17	.40	.31	1.1	2870	904	610	845	162	85	42	23	22
18	.52	.31	2.8	820	773	560	710	157	84	41	23	21
19	.67	.31	.66	591	672	500	632	153	82	40	23	21
20	.80	.29	.59	534	594	450	575	147	80	39	22	19
21	.65	.29	1.2	379	563	470	531	144	79	38	22	17
22	.51	.31	4.4	316	510	1700	490	141	77	37	22	16
23	.46	.31	4.4	268	460	1020	464	139	76	36	22	16
24	.50	.31	4.3	233	425	738	441	134	74	36	21	16
25	.57	.30	3.5	210	392	628	452	132	73	35	21	15
26	.50	.25	.78	193	363	566	442	131	72	34	21	15
27	.51	.25	661	176	347	520	398	127	70	33	20	15
28	.46	.25	3980	159	1210	479	380	120	69	33	20	14
29	.53	.30	488	144	---	449	355	116	68	32	19	14
30	.74	.43	168	132	---	646	335	113	63	32	19	14
31	.53	---	77	122	---	3280	---	112	---	31	19	---
TOTAL	14.81	12.56	5480.15	22109	80447	71317	21501	5775	2656	1359	746	660
MEAN	.48	.42	177	713	2873	2301	717	186	88.5	43.8	24.1	22.0
MAX	.80	1.2	3980	5330	28000	20600	1750	320	110	61	30	54
MIN	.31	.25	.25	47	86	449	335	112	63	31	19	14
AC-FT	29	25	10870	43850	159600	141500	42650	11450	5270	2700	1480	1310
CAL YR 1977	TOTAL	11132.75	MEAN	30.5	MAX	3980	MIN	.20	AC-FT	22080		
WTR YR 1978	TOTAL	212077.52	MEAN	581	MAX	28000	MIN	.25	AC-FT	420700		

11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SESPE CREEK AND FILLMORE
IRRIGATION CO.'S CANAL NEAR FILLMORE, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.6	3.5	55	112	5600	1750	320	110	68	34	27
2	3.3	3.4	3.6	48	102	4070	1260	310	110	66	34	26
3	3.2	3.3	3.6	47	93	2580	1010	292	110	62	33	25
4	3.1	3.5	3.7	199	86	20600	964	279	109	59	33	25
5	3.1	4.0	3.6	183	369	8310	822	265	107	62	32	32
6	3.0	3.8	3.5	198	548	4200	810	252	106	61	32	54
7	2.9	3.5	3.5	156	448	2670	935	242	104	60	31	47
8	3.4	3.4	3.6	84	926	2030	753	230	102	62	31	38
9	3.3	3.3	3.6	486	28000	1890	674	222	100	56	29	33
10	3.4	3.7	3.7	1600	25100	1370	627	216	98	55	30	32
11	3.4	3.6	3.7	552	5510	1180	575	209	96	54	30	31
12	3.2	3.7	3.8	319	3640	1040	534	194	94	53	29	31
13	3.1	3.6	3.7	215	3500	911	501	186	92	52	29	30
14	3.1	3.6	3.7	970	2300	830	476	182	90	51	29	30
15	3.1	3.6	3.8	4520	1400	750	1320	179	89	50	30	30
16	3.0	3.5	3.8	5330	1100	670	1440	169	87	48	31	30
17	2.8	3.4	5.7	2870	904	610	845	162	86	48	31	29
18	2.9	3.6	8.0	820	773	560	710	157	86	48	32	29
19	3.2	3.7	5.4	591	672	500	632	153	85	46	32	27
20	3.7	3.7	4.4	534	594	450	575	147	86	45	31	26
21	3.9	3.7	3.8	379	563	470	531	144	86	44	31	26
22	3.6	3.7	4.4	316	510	1700	490	141	84	43	31	25
23	3.4	3.7	4.4	268	460	1020	464	139	83	41	31	25
24	3.2	3.5	4.3	233	425	738	441	134	81	41	29	25
25	3.5	3.6	4.4	210	392	628	452	132	80	41	30	24
26	3.4	3.6	79	193	363	566	442	131	79	39	30	23
27	3.5	3.4	661	176	347	520	398	127	77	38	29	23
28	3.5	3.2	3980	159	1210	479	380	120	76	38	29	23
29	3.4	3.1	488	144	---	449	355	116	75	37	27	23
30	3.9	3.0	168	132	---	646	335	113	70	37	27	23
31	3.7	---	77	122	---	3280	---	112	---	35	27	---
TOTAL	102.7	106.0	5556.2	22109	80447	71317	21501	5775	2738	1540	944	872
MEAN	3.31	3.53	179	713	2873	2301	717	186	91.3	49.7	30.5	29.1
MAX	3.9	4.0	3980	5330	28000	20600	1750	320	110	68	34	54
MIN	2.8	3.0	3.5	47	86	449	335	112	70	35	27	23
AC-FT	204	210	11020	43850	159600	141500	42650	11450	5430	3050	1870	1730
CAL YR 1977 TOTAL	12519.4			MEAN 34.3	MAX 3980	MIN 2.7	AC-FT 24830					
WTR YR 1978 TOTAL	213007.9			MEAN 584	MAX 28000	MIN 2.8	AC-FT 422500					

SANTA CLARA RIVER BASIN

11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-62, 1967 to current year.

CHEMICAL ANALYSES: Water years 1967 to current year.

WATER TEMPERATURES: Water years 1967 to September 1978 (discontinued).

SEDIMENT RECORDS: Water years 1956-62, 1967 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

SEDIMENT RECORDS: October 1966 to September 1978 (discontinued).

INSTRUMENTATION.--Specific-conductance recorder since October 1969.

REMARKS.--Periods of missing specific-conductance data due to probe silted, not in contact with water, or recorder malfunction.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,590 micromhos Dec. 17, 1977; minimum recorded, 112 micromhos Feb. 9, 1978.

WATER TEMPERATURES: (Water year 1970): Maximum 29.5°C July 4, 18, 20, 1970; minimum, 4.5°C Jan. 4, 1970.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 33,800 mg/L Mar. 4, 1978; minimum daily, 1 mg/L on many days in 1966-69 and 1976-77.

SEDIMENT DISCHARGE: Maximum daily, 3,280,000 tons (2,976,000 metric tons) Feb. 9, 1978; minimum daily, 0 tons on many days in most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,590 micromhos Dec. 17; minimum recorded, 112 micromhos Feb. 9.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 33,800 mg/L Mar. 4; minimum daily, 2 mg/L Dec. 11-16, June 5.

SEDIMENT DISCHARGE: Maximum daily, 3,280,000 tons (2,976,000 metric tons) Feb. 9; minimum daily, 0 tons on many days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 06...	1415	.31	1210	8.4	19.0	0	11.7	400	250	120	836
FEB 24...	1505	425	790	8.5	13.0	20	10.2	400	270	12	566
MAY 02...	1545	310	820	8.7	19.0	2	9.4	400	310	11	653
JUL 24...	1130	36	840	8.6	24.5	0	8.9	380	320	28	673

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY 15...	1115	179	0	0	10	10	10	.0	10

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

OCTOBER				NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1070	1020	1050	1120	1080	1110	1180	1120	1160	---	---	---
2	1100	1030	1070	1130	1090	1110	1190	1120	1170	---	---	---
3	1100	1040	1070	1150	1090	1120	1200	1130	1180	---	---	---
4	1100	1040	1080	1150	1070	1120	1210	1140	1180	---	---	---
5	1100	1040	1070	1220	1130	1160	1210	1140	1180	---	---	---
6	1100	1050	1070	1170	1100	1130	1200	1140	1180	782	500	644
7	1110	1030	1070	1160	1080	1130	1210	1150	1190	732	670	709
8	1080	1020	1050	1160	1070	1120	1210	1160	1190	772	696	732
9	1100	1020	1060	1160	1070	1120	1210	1170	1190	792	182	576
10	1110	1030	1070	1150	1090	1120	1220	1170	1200	414	184	288
11	1120	1040	1080	1160	1100	1130	1230	1180	1210	---	---	---
12	1100	1040	1070	1160	1100	1130	1230	1150	1200	---	---	---
13	1090	1040	1070	1170	1110	1140	1220	1160	1190	---	---	---
14	1100	1030	1070	1180	1060	1130	1220	1150	1190	---	---	---
15	1090	1030	1060	1140	1040	1090	1230	1200	1210	402	206	305
16	1100	1040	1070	1150	1040	1100	1240	1180	1210	462	180	350
17	1110	1040	1080	1150	1060	1110	1590	1200	1310	438	230	354
18	1120	1040	1080	1170	1090	1140	1350	1030	1220	556	434	490
19	1130	1070	1100	1170	1100	1140	1340	1270	1320	600	528	559
20	1110	1030	1080	1190	1110	1160	1370	1260	1300	620	586	609
21	1110	1040	1080	1190	1110	1150	1370	1200	1300	874	620	640
22	1110	1040	1080	1180	1120	1160	1210	1170	1190	---	---	---
23	1100	1050	1080	1180	1090	1140	1210	1170	1190	---	---	---
24	1110	1050	1080	1180	1090	1140	1210	1180	1200	---	---	---
25	1110	1050	1080	1170	1090	1140	1210	1180	1200	---	---	---
26	1110	1060	1090	1180	1090	1140	1220	358	938	---	---	---
27	1120	1060	1090	1180	1100	1150	830	234	534	---	---	---
28	1130	1070	1100	1170	1090	1140	784	256	332	---	---	---
29	1130	1080	1110	1180	1080	1130	606	368	490	---	---	---
30	1130	1070	1100	1180	1110	1160	---	---	---	---	---	---
31	1120	1070	1100	---	---	---	---	---	---	---	---	---
MONTH	1130	1020	1080	1220	1040	1130	1590	234	1120	---	---	---
FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	478	234	306	612	216	349	---	---	---
2	804	790	797	380	306	346	662	614	639	---	---	---
3	802	778	795	---	---	---	700	658	682	818	798	808
4	802	784	796	316	174	246	714	676	701	800	790	795
5	802	382	616	464	298	410	738	702	719	802	790	795
6	618	432	536	582	478	537	748	618	726	814	796	807
7	572	460	526	642	582	615	710	610	683	820	810	813
8	604	122	510	684	644	665	740	716	731	814	804	809
9	296	112	208	710	682	696	754	740	749	812	806	808
10	398	200	295	---	---	---	766	746	754	812	806	809
11	528	406	475	---	---	---	762	752	757	812	798	805
12	580	344	515	---	---	---	766	756	763	816	798	807
13	536	386	460	---	---	---	770	762	767	814	796	804
14	608	540	576	---	---	---	774	766	772	816	786	799
15	---	---	---	---	---	---	---	---	---	790	784	787
16	---	---	---	---	---	---	---	---	---	794	790	792
17	---	---	---	---	---	---	---	---	---	796	792	795
18	---	---	---	---	---	---	---	---	---	798	786	793
19	---	---	---	---	---	---	---	---	---	786	704	759
20	---	---	---	---	---	---	---	---	---	704	618	651
21	---	---	---	---	---	---	---	---	---	614	584	597
22	---	---	---	---	---	---	---	---	---	594	534	585
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	776	254	713	---	---	---	---	---	---
31	---	---	---	240	180	203	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

[illegible][illegible]

11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	.74	6	.01	.46	6	.01	.57	10	.02			
2	.32	6	.01	.42	4	0	.42	13	.01			
3	.34	6	.01	.40	4	0	.38	16	.02			
4	.32	6	.01	.46	4	0	.35	10	.01			
5	.31	8	.01	.48	4	.01	.31	7	.01			
6	.31	9	.01	.46	4	0	.31	5	0			
7	.51	7	.01	.44	3	0	.30	4	0			
8	.65	5	.01	.56	3	0	.31	3	0			
9	.39	5	.01	.90	3	.01	.31	3	0			
10	.38	5	.01	1.2	4	.01	.31	3	0			
11	.38	6	.01	.54	5	.01	.31	2	0			
12	.34	6	.01	.46	5	.01	.29	2	0			
13	.35	5	0	.42	5	.01	.27	2	0			
14	.38	5	.01	.41	6	.01	.26	2	0			
15	.38	5	.01	.38	6	.01	.25	2	0			
16	.36	5	0	.35	6	.01	.25	2	0			
17	.40	5	.01	.31	6	.01	1.1	21	.22			
18	.52	13	.02	.31	7	.01	2.8	129	1.7			
19	.67	10	.02	.31	7	.01	.66	10	.02			
20	.80	9	.02	.29	6	0	.59	8	.01			
21	.65	7	.01	.29	5	0	1.2	6	.02			
22	.51	6	.01	.31	5	0	4.4	4	.05			
23	.46	6	.01	.31	5	0	4.4	4	.05			
24	.50	5	.01	.31	5	0	4.3	3	.03			
25	.57	5	.01	.30	5	0	3.5	3	.03			
26	.50	5	.01	.25	5	0	78	1180	1000			
27	.51	5	.01	.25	6	0	661	7430	27400			
28	.46	6	.01	.25	6	0	3980	5980	84800			
29	.53	7	.01	.30	7	.01	488	681	1220			
30	.74	6	.01	.43	7	.01	168	140	64			
31	.53	6	.01	---	---	---	77	130	27			
TOTAL	14.81	---	.32	12.56	---	.15	5480.15	---	114513.2			
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	55	180	27	112	14	4.2	5600	5070	88300			
2	48	170	22	102	12	3.3	4070	2050	24800			
3	47	165	21	93	11	2.8	2580	1270	10100			
4	199	212	180	86	10	2.3	20600	33800	2540000			
5	183	168	93	369	269	384	.8310	7030	170000			
6	198	210	128	548	341	523	4200	2740	33500			
7	156	240	101	448	226	288	2670	1000	7210			
8	84	160	36	926	742	5380	2030	800	4380			
9	486	457	1190	28000	25000	3280000	1890	600	3060			
10	1600	1520	7210	25100	21200	2030000	1370	466	1720			
11	552	380	566	5510	5380	90200	1180	400	1270			
12	319	100	86	3640	2500	24600	1040	350	983			
13	215	50	29	3500	1400	13200	911	300	738			
14	970	1320	13200	2300	800	4970	830	250	560			
15	4520	3800	68900	1400	330	1250	750	200	405			
16	5330	5780	175000	1100	212	630	670	190	344			
17	2870	3920	43300	904	200	488	610	180	296			
18	820	800	1770	773	150	313	560	167	253			
19	591	400	638	672	125	227	500	160	216			
20	534	106	153	594	100	160	450	150	182			
21	379	100	102	563	90	137	470	213	270			
22	316	90	77	510	80	110	1700	1400	7450			
23	268	85	62	460	75	93	1020	530	1460			
24	233	80	50	425	73	84	738	180	359			
25	210	77	44	392	70	74	628	150	254			
26	193	60	31	363	60	59	566	100	153			
27	176	40	19	347	55	52	520	80	112			
28	159	28	12	1210	1310	10900	479	64	83			
29	144	25	9.7	---	---	---	449	66	80			
30	132	20	7.1	---	---	---	646	252	805			
31	122	15	4.9	---	---	---	3280	3220	30800			
TOTAL	22109	---	313068.7	80447	---	5464135	71317	---	2930143			

11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1750	778	3980	320	40	35	110	10	3.0
2	1260	310	1050	310	40	33	110	8	2.4
3	1010	250	682	292	40	32	110	6	1.8
4	964	220	573	279	40	30	109	4	1.2
5	822	180	399	265	40	29	107	3	.87
6	810	140	306	252	40	27	106	2	.57
7	935	127	321	242	40	26	104	5	1.4
8	753	100	203	230	40	25	102	5	1.4
9	674	95	173	222	37	22	100	4	1.1
10	627	90	152	216	35	20	98	4	1.1
11	575	84	130	209	35	20	96	4	1.0
12	534	70	101	194	35	18	94	4	1.0
13	501	60	81	186	35	17	92	4	.99
14	476	50	64	182	35	17	90	5	1.2
15	1320	931	5940	179	35	17	89	7	1.7
16	1440	831	4170	169	30	14	87	9	2.1
17	845	220	502	162	30	13	85	9	2.1
18	710	200	383	157	30	13	84	8	1.8
19	632	150	256	153	30	12	82	8	1.8
20	575	100	155	147	30	12	80	7	1.5
21	531	80	115	144	25	9.7	79	7	1.5
22	490	60	79	141	25	9.5	77	7	1.5
23	464	40	50	139	25	9.4	76	6	1.2
24	441	36	43	134	25	9.0	74	6	1.2
25	452	40	49	132	25	8.9	73	4	.79
26	442	42	50	131	25	8.8	72	4	.78
27	398	40	43	127	20	6.9	70	3	.57
28	380	40	41	120	15	4.9	69	3	.56
29	355	40	38	116	13	4.1	68	6	1.1
30	335	40	36	113	12	3.7	63	6	1.0
31	---	---	---	112	12	3.6	---	---	---
TOTAL	21501	---	20165	5775	---	511.5	2656	---	40.23
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	61	6	.99	30	12	.97	19	5	.26
2	59	6	.96	30	7	.57	18	6	.29
3	56	6	.91	29	10	.78	17	7	.32
4	54	6	.87	29	15	1.2	17	9	.41
5	56	6	.91	28	19	1.4	26	10	.70
6	55	6	.89	28	19	1.4	54	16	2.3
7	55	6	.89	27	19	1.4	47	10	1.3
8	52	6	.84	27	19	1.4	37	8	.80
9	50	6	.81	27	17	1.2	29	7	.55
10	49	6	.79	26	15	1.1	29	6	.47
11	48	7	.91	26	12	.84	26	6	.42
12	47	7	.89	25	11	.74	21	6	.34
13	46	7	.87	25	10	.68	21	6	.34
14	45	7	.85	24	9	.58	21	6	.34
15	44	7	.83	24	7	.45	21	6	.34
16	43	8	.93	24	6	.39	22	6	.36
17	42	8	.91	23	5	.31	22	6	.36
18	41	8	.89	23	4	.25	21	6	.34
19	40	8	.86	23	4	.25	21	6	.34
20	39	8	.84	22	5	.30	19	6	.31
21	38	9	.92	22	5	.30	17	6	.28
22	37	9	.90	22	5	.30	16	6	.26
23	36	9	.87	22	5	.30	16	6	.26
24	36	9	.87	21	5	.28	16	6	.26
25	35	10	.94	21	12	.68	15	6	.24
26	34	10	.92	21	10	.57	15	6	.24
27	33	10	.89	20	6	.32	15	6	.24
28	33	11	.98	20	4	.22	14	6	.23
29	32	11	.95	19	4	.21	14	6	.23
30	32	11	.95	19	4	.21	14	6	.23
31	31	11	.92	19	4	.21	---	---	---
TOTAL	1359	---	27.75	746	---	19.81	660	---	13.36
YEAR 212077.5			8842638						

11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC										
18...	1040	14.5	1.8	133	.65	--	--	--	--	--
27...	1500	13.5	490	14500	19200	--	35	41	62	81
28...	1025	13.0	5560	5220	78400	--	29	42	57	71
30...	1130	--	171	81	37	--	--	--	--	--
JAN										
05...	1030	11.0	228	263	162	36	44	54	63	71
10...	1115	--	1550	1220	5110	--	21	29	36	43
15...	1055	--	3910	3740	39500	--	26	35	46	57
FEB										
05...	1550	11.0	548	381	564	34	43	53	64	72
10...	1435	11.5	15600	13500	569000	--	20	24	40	55
MAR										
04...	1645	14.0	13600	51200	1880000	--	18	20	32	46
10...	1550	--	1330	466	1670	31	39	50	64	76
APR										
16...	1415	12.0	1150	451	1400	37	46	58	71	80

DATE	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. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC										
18...	--	99	--	100	--	--	--	--	--	--
27...	93	--	99	--	100	--	--	--	--	--
28...	82	--	93	--	98	--	100	--	--	--
30...	--	82	--	85	--	87	--	89	91	100
JAN										
05...	--	79	--	88	--	95	--	98	100	--
10...	--	48	--	53	--	62	--	75	87	95
15...	--	64	--	69	--	75	--	81	89	94
FEB										
05...	--	77	--	80	--	84	--	90	96	100
10...	68	--	85	--	96	--	100	--	--	--
MAR										
04...	--	59	--	76	--	90	--	98	100	--
10...	--	86	--	92	--	95	--	99	100	--
APR										
16...	--	87	--	92	--	96	--	99	100	--

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	14.81	0.32	0	0
NOVEMBER ...	12.56	0.15	0	0
DECEMBER ...	5480.15	114513.20	10200	125000
JANUARY 1978	22109.00	313068.70	38100	351000
FEBRUARY ...	80447.00	5464134.60	378000	5840000
MARCH	71317.00	2930143.00	215000	3150000
APRIL	21501.00	20165.00	19800	40000
MAY	5775.00	511.50	1960	2470
JUNE	2656.00	40.23	424	464
JULY	1359.00	27.75	88	116
AUGUST	746.00	19.81	15	35
SEPTEMBER ..	660.00	13.36	16	29
TOTAL	212077.52	8842637.62	663603	9509114

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM
DEC 09...	1545	13.0	9	366	51	32	--	1
JAN 05...	1315	10.5	18	201	51	48	--	2
10...	1300	10.0	11	1550	61	921	1	2

DATE	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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
DEC 09...	4	10	17	25	53	92	100	--
JAN 05...	5	15	41	72	94	100	--	--
10...	7	14	21	31	46	75	98	100

11113300 SANTA CLARA RIVER NEAR SANTA PAULA, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 34°21'14", long 119°01'38", in SW¼NE¼SE¼ sec.12, T.3 N., R.21 W., Ventura County, 1.5 mi (2.4 km) upstream from Riverside Road bridge, and 1.8 mi (2.9 km) east of Santa Paula.

PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES: Water years 1967 to current year.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)
DEC 06...	1225	2070	8.3	17.0	1	11.2	840	580
FEB 24...	1325	1280	8.2	17.0	40	9.3	570	360
MAY 02...	1345	1140	8.5	23.0	10	9.4	530	340
JUL 24...	1005	1380	8.4	24.0	15	9.0	620	--

DATE	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CaCO3)
DEC 06...	210	79	150	28	2.0	6.0	320	0	262
FEB 24...	150	50	86	24	2.0	4.0	260	3	218
MAY 02...	140	45	72	22	1.0	4.0	230	0	189
JUL 24...	160	57	96	25	1.7	5.0	--	--	--

DATE	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRATE, DIS-SOLVED (MG/L AS N)	NITROGEN, NITRATE, DIS-SOLVED (MG/L AS NO3)
DEC 06...	2.6	760	65	1.0	1550	1450	5.4	24
FEB 24...	2.7	470	34	.9	1040	933	2.0	9.0
MAY 02...	1.2	430	27	.6	921	848	3.6	16
JUL 24...	--	530	41	1.1	1110	--	2.9	13

SANTA CLARA RIVER BASIN

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA

LOCATION.-- Lat 34°23'44", long 119°04'32", in NW¼SW¼SW¼ sec.27, T.4 N., R.21 W., Ventura County, on right bank upstream from Santa Paula Water Works diversion dam, 200 ft (60 m) upstream from Mud Creek, and 3 mi (5 km) north of Santa Paula.

DRAINAGE AREA.-- 40.0 mi² (103.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-- October 1927 to current year. March 1912 to September 1913, at site 2.5 mi (4.0 km) upstream; records not equivalent.

GAGE.--Water-stage recorder and concrete diversion dam control. Datum of gage is 619.43 ft (188.802 m) Corps of Engineers datum. Oct. 1, 1927, to Feb. 19, 1931, at site 500 ft (150 m) downstream at different datum. Feb. 20, 1931, to Dec. 5, 1963, and July 30, 1965, to March 7, 1973 at site 50 ft (15 m) downstream. Feb. 20, 1931 to May 5, 1969 at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records poor. No gage-height record Feb. 9-15, Mar. 24 to May 18. No stage-discharge relation June 8 to Aug. 6. No regulation above station. Diversion above station for irrigation of 60 acres (243,000 m²) by Santa Paula Water Works began prior to October 1927; 205 acre-ft (253,000 m³) was diverted during current year.

COOPERATION.--Records of diversion were furnished by Santa Paula Water Works.

AVERAGE DISCHARGE.--51 years, 22.8 ft³/s (0.646 m³/s), 16,520 acre-ft/yr (20.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s (595 m³/s) Feb. 25, 1969, gage height, 18.18 ft (5.541 m), from floodmark, present datum, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of critical-depth measurement at gage height 15.2 ft (4.63 m); no flow at times in 1949, 1951-52, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*), from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0615	1340 37.9	7.99 2.435	Mar. 4	0915	9320 264	11.31 3.447
Jan. 16	1645	2860 81.0	8.63 2.630	Mar. 22	0900	542 15.3	7.26 2.213
Feb. 10	Unknown	*16000 453	13.80 4.206	Mar. 31	Unknown	Unknown	Unknown
Mar. 1	Unknown	Unknown	Unknown	Apr. 15	Unknown	370 10.5	Unknown

Minimum daily discharge, 0.42 ft³/s (0.012 m³/s) Oct. 1-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	1.2	1.2	11	22	1100	400	53	30	18	12	8.1
2	.42	1.3	1.2	9.2	20	683	305	52	30	18	12	8.1
3	.42	1.3	1.3	8.7	20	496	240	51	29	18	12	8.1
4	.42	1.4	1.0	38	22	3520	185	50	29	18	12	8.4
5	.42	1.7	.87	25	46	1860	155	49	28	17	12	13
6	.42	1.5	.86	49	58	983	150	49	28	17	11	15
7	.42	1.5	.81	32	84	602	170	48	27	17	11	13
8	.42	1.4	.84	22	163	506	135	47	27	16	11	12
9	.42	1.4	.92	50	6300	391	125	46	27	16	11	11
10	.42	1.4	.93	139	5000	291	120	45	26	16	11	11
11	.42	1.3	.97	80	2500	256	117	44	26	16	11	11
12	.42	1.3	.97	51	1400	227	114	44	25	15	11	11
13	.42	1.4	1.1	39	800	190	112	43	25	15	10	10
14	.44	.97	1.2	90	400	159	110	42	24	15	10	10
15	.65	.71	1.3	587	280	148	230	41	24	15	10	11
16	.85	.70	1.2	674	220	129	250	40	24	15	10	10
17	.95	.74	1.8	464	189	119	145	40	23	15	10	11
18	.90	1.1	2.3	181	167	132	120	39	23	14	10	11
19	1.2	1.4	1.8	118	150	132	110	38	22	14	9.8	9.8
20	1.2	1.5	1.7	87	135	118	96	38	22	14	9.5	8.7
21	1.3	1.4	2.3	70	124	119	88	37	22	14	9.3	8.4
22	1.3	1.4	2.5	56	115	307	82	36	21	14	9.5	8.1
23	.91	1.4	2.4	47	105	172	76	36	21	14	8.7	8.4
24	.75	1.3	2.4	41	97	145	71	35	21	13	9.0	8.6
25	.75	.92	2.5	36	91	125	67	34	20	13	9.5	8.9
26	.75	1.0	3.3	30	85	120	63	34	20	13	9.5	9.2
27	.70	1.2	74	27	80	115	60	33	20	13	9.5	9.4
28	.80	1.1	340	26	300	112	58	33	19	13	8.4	9.6
29	.89	1.1	49	25	---	111	56	32	19	13	8.1	9.5
30	.91	1.2	22	25	---	111	54	31	19	12	8.1	9.4
31	.95	---	15	23	---	600	---	31	---	12	7.9	---
TOTAL	21.66	37.24	539.67	3160.9	18973	14079	4064	1271	721	463	313.8	300.7
MEAN	.70	1.24	17.4	102	678	454	135	41.0	24.0	14.9	10.1	10.0
MAX	1.3	1.7	340	674	6300	3520	400	53	30	18	12	15
MIN	.42	.70	.81	8.7	20	111	54	31	19	12	7.9	8.1
AC-FT	43	74	1070	6270	37630	27930	8060	2520	1430	918	622	596
CAL YR 1977	TOTAL	1584.49	MEAN	4.34	MAX	340	MIN	.35	AC-FT	3140		
WTR YR 1978	TOTAL	43944.97	MEAN	120	MAX	6300	MIN	.42	AC-FT	87160		

WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE: Maximum recorded, 1,280 micromhos Oct. 14; minimum recorded, 204 micromhos Dec. 28.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY 12...	1150	40	0	0	0	0	0	.0	10

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1150	1000	1080	1080	986	1030	1100	1030	1070	---	---	---
2	1140	1030	1100	1080	994	1050	1150	1050	1110	---	---	---
3	1150	1040	1100	1110	1020	1070	1160	1060	1110	---	---	---
4	1150	1020	1090	1150	1020	1090	1130	1080	1110	894	346	710
5	1150	1040	1090	1240	1040	1090	1160	1090	1130	702	572	659
6	1200	1080	1140	1130	1060	1100	1170	1080	1130	720	444	571
7	1260	1130	1200	1140	1090	1110	1160	1090	1130	614	552	586
8	1240	1140	1200	1150	1080	1120	1160	1070	1120	668	618	643
9	1220	1120	1180	1160	1070	1120	1150	1140	1140	682	300	597
10	1210	1130	1170	1180	1080	1140	1150	1060	1110	432	322	394
11	1200	1090	1160	1200	1090	1150	1140	1050	1100	516	436	477
12	1250	1150	1200	1170	1080	1130	1140	1050	1090	580	520	551
13	1260	1150	1210	1160	1060	1110	1150	1030	1090	618	574	596
14	1280	1160	1220	1150	1070	1110	1130	1030	1080	636	320	571
15	1250	1110	1190	1170	1070	1120	1100	1050	1080	432	250	345
16	1220	1090	1160	1160	1070	1110	1110	1020	1070	610	248	406
17	1170	1070	1130	1150	1060	1110	1100	964	1060	470	318	402
18	1200	1070	1130	1160	1030	1100	1100	960	1070	552	474	519
19	1150	1050	1100	1110	1040	1080	1120	1040	1090	602	552	584
20	1100	982	1050	1110	1050	1080	1160	1110	1140	638	600	622
21	1080	976	1030	1130	1030	1080	1160	1090	1120	668	614	649
22	1080	992	1050	1130	1020	1080	1110	1050	1090	682	656	670
23	1100	1030	1060	1120	1030	1080	1110	1050	1090	700	672	689
24	1110	1040	1070	1090	1020	1060	1100	1040	1080	718	680	707
25	1130	1030	1080	1110	1040	1070	1100	1040	1080	732	718	725
26	1120	1030	1070	1130	1010	1070	1080	910	1040	752	734	741
27	1110	1030	1070	1080	984	1040	1060	342	842	758	748	752
28	1110	1000	1060	1110	1010	1060	454	204	342	768	742	761
29	1070	1000	1040	1120	1010	1070	---	---	---	774	766	770
30	1080	996	1040	1090	1000	1050	---	---	---	780	774	777
31	1080	996	1040	---	---	---	---	---	---	786	760	781
MONTH	1280	976	1110	1240	984	1090	1170	204	1060	894	248	616

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	792	766	788	---	---	---						
2	798	790	796	---	---	---						
3	802	794	797	---	---	---						
4	797	777	794	---	---	---						
5	796	598	687	---	---	---						
6	706	518	563	---	---	---						
7	641	531	557	---	---	---						
8	592	334	543	---	---	---						
9	---	---	---	---	---	---						
10	---	---	---	---	---	---						
11	---	---	---	614	586	604						
12	---	---	---	610	498	578						
13	---	---	---	594	328	446						
14	---	---	---	496	254	374						
15	---	---	---	---	---	---						
16	---	---	---	---	---	---						
17	---	---	---	---	---	---						
18	---	---	---	---	---	---						
19	---	---	---	---	---	---						
20	---	---	---	---	---	---						
21	---	---	---	---	---	---						
22	---	---	---	616	428	508						
23	---	---	---	---	---	---						
24	---	---	---	---	---	---						
25	---	---	---	---	---	---						
26	---	---	---	---	---	---						
27	---	---	---	---	---	---						
28	---	---	---	---	---	---						
29	---	---	---	---	---	---						
30	---	---	---	---	---	---						
31	---	---	---	---	---	---						
MONTH	---	---	---	---	---	---						

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

SANTA CLARA RIVER BASIN

11113900 SATICOY DIVERSION NEAR SATICOY, CA

LOCATION.--Lat 34°17'35", long 119°06'00", in Santa Paula Y Saticoy Grant, Ventura County, on diversion works at Santa Clara River, 1.9 mi (3.1 km) east of Saticoy.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1969 to current year. October 1928 to April 1969 in files of United Water Conservation District.

GAGE.--Water-stage recorder. Altitude of gage is 160 ft (49 m), from topographic map.

REMARKS.--Water is diverted from left bank of Santa Clara River to percolation basin near Los Angeles Avenue (State Highway 118) and for irrigation in Pleasant Valley. Imported water from the California Water Project released to the basin at Castaic Dam and Pyramid Dam since 1972.

COOPERATION.--Records were furnished by United Water Conservation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 416 ft³/s (11.8 m³/s) Jan. 21, 1978; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.0	4.8	81	134		0	380	238	258	116	105
2	4.2	3.2	5.5	60	126		0	404	270	258	113	122
3	4.8	2.6	4.2	67	120		0	408	287	263	115	123
4	4.2	4.5	5.3	98	113		0	410	282	258	141	129
5	4.2	5.0	7.0	266	108		0	410	278	264	139	159
6	4.2	6.4	5.3	280	0		0	408	266	235	141	156
7	3.5	6.4	5.3	94	85		0	400	245	226	131	131
8	2.8	6.4	5.0	69	32		0	390	258	225	132	112
9	3.2	4.2	5.0	86	0		0	386	264	224	130	101
10	4.0	1.2	5.0	0	0		0	388	263	237	136	98
11	6.1	1.6	6.4	30	0		0	388	272	229	131	98
12	5.0	4.0	7.2	32	0		0	365	270	235	136	90
13	4.2	4.5	5.8	135	0		0	345	263	213	143	85
14	3.7	5.3	6.4	168	0		0	338	247	218	143	79
15	2.6	5.5	5.8	0	0		0	328	250	189	134	76
16	2.0	5.3	5.3	8.6	0		0	330	258	163	131	77
17	5.0	4.5	7.0	0	0		0	320	252	147	128	84
18	5.3	5.3	21	0	0		0	299	256	135	128	86
19	5.0	6.4	12	0	0		0	332	55	122	125	76
20	4.8	6.4	9.4	304	0		0	395	122	120	136	76
21	4.5	7.5	9.4	416	0		0	378	256	122	141	76
22	4.2	5.8	11	398	0		0	338	256	124	134	63
23	4.2	6.7	11	376	0		0	334	235	188	128	56
24	5.0	5.3	11	276	81		0	309	245	138	129	84
25	5.3	5.3	12	285	365		0	260	258	127	132	77
26	3.7	5.0	15	247	398		0	256	263	123	132	92
27	3.7	5.8	20	237	398		66	258	300	126	129	76
28	3.7	7.2	0	228	217		365	258	310	119	134	61
29	4.0	9.4	35	221	---		368	226	258	105	128	78
30	4.8	6.4	125	215	---		375	216	362	122	124	96
31	5.3	---	122	208	---		---	218	---	130	120	---
TOTAL	131.2	158.1	510.1	4885.6	2177	0	1174	10475	7639	5583	4060	2822
MEAN	4.23	5.27	16.5	158	77.8	0	39.1	338	255	180	131	94.1
MAX	6.1	9.4	125	416	398	0	375	410	362	264	143	159
MIN	2.0	1.2	0	0	0	0	0	216	55	105	113	56
AC-FT	260	314	1010	9690	4320	0	2330	20780	15150	11070	8050	5600
CAL YR 1977 TOTAL	10204.9			MEAN 28.0	MAX 164	MIN 0	AC-FT 20240					
WTR YR 1978 TOTAL	39615.0			MEAN 109	MAX 416	MIN 0	AC-FT 78580					

11113900 SATICOY DIVERSION NEAR SATICOY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

SPECIFIC CONDUCTANCE: Water years 1969 to current year.

WATER TEMPERATURES: Water years 1969 to 1970.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to current year.

WATER TEMPERATURES: April 1969 to September 1970.

INSTRUMENTATION.--Specific-conductance recorder since April 1969.

REMARKS.--Interruptions in record were due to malfunctions of the instrument and periods of no flow.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,320 micromhos Oct. 21, 1972; minimum recorded, 517 micromhos Jan. 11, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,130 micromhos Nov. 12; minimum recorded, 517 micromhos Jan. 11.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2020	1990	2010	1950	1910	1930	2040	2020	2030	1390	1270	1330
2	2000	1960	1970	1960	1930	1940	2030	1980	2010	1500	1390	1450
3	1970	1940	1950	1970	1950	1960	2030	1980	2010	1560	1510	1540
4	1960	1940	1940	1970	1940	1960	2040	1930	2020	1610	709	1330
5	1950	1940	1940	1940	1920	1940	2030	1980	2000	934	609	738
6	1950	1930	1940	1950	1930	1940	1980	1930	1940	1060	770	882
7	1950	1930	1940	1960	1940	1950	1930	1890	1910	990	810	911
8	1970	1940	1950	1970	1930	1950	1940	1910	1930	1100	991	1040
9	1960	1930	1940	1980	1940	1970	1940	1890	1910	---	---	---
10	1950	1920	1930	2020	1990	2000	1940	1910	1920	---	---	---
11	1940	1900	1920	2120	2020	2080	1940	1910	1930	667	517	583
12	1940	1930	1930	2130	2080	2100	1970	1880	1910	837	677	765
13	1950	1940	1940	2080	2020	2050	1910	1880	1900	943	848	896
14	1990	1950	1970	2040	1990	2020	1930	1840	1900	1000	788	962
15	2010	1980	1990	2000	1980	1990	1930	1810	1900	---	---	---
16	2020	2010	2020	2020	1990	2000	1930	1920	1920	---	---	---
17	2020	1950	1980	2010	1980	2000	1930	1820	1890	---	---	---
18	1970	1940	1950	2000	1970	1980	1840	1230	1550	---	---	---
19	1980	1970	1970	1980	1960	1970	1920	1710	1870	---	---	---
20	1990	1960	1970	1980	1950	1960	2000	1770	1930	---	---	---
21	1970	1950	1960	1960	1930	1940	2000	1830	1940	912	847	883
22	1970	1890	1930	1950	1910	1930	1980	1890	1950	967	912	938
23	1960	1870	1920	1960	1940	1950	1940	1890	1920	1010	963	987
24	1980	1920	1940	1960	1940	1950	1950	1920	1940	1060	1020	1040
25	1940	1880	1910	1960	1930	1940	1940	1910	1920	1100	1060	1080
26	1990	1900	1920	1970	1940	1960	1920	1780	1880	1120	1090	1100
27	1940	1920	1930	1970	1950	1960	1910	1510	1680	1150	1120	1130
28	1960	1900	1940	1970	1940	1950	1610	1400	1480	1170	1150	1160
29	1960	1940	1950	2030	1940	1970	1400	1310	1350	1200	1170	1180
30	1960	1930	1940	2030	1990	2010	1330	911	1130	1210	1190	1200
31	1960	1930	1940	---	---	---	1250	1050	1150	1220	1200	1210
MONTH	2020	1870	1950	2130	1910	1980	2040	911	1830	---	---	---

FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1230	1210	1220				---	---	---	1070	1050	1060
2	1260	1230	1240				---	---	---	1080	1050	1060
3	1280	1250	1270				---	---	---	1080	1050	1060
4	1290	1280	1280				---	---	---	1100	1060	1080
5	---	---	---				---	---	---	1100	1080	1090
6	---	---	---				---	---	---	1110	1080	1100
7	---	---	---				---	---	---	1100	1090	1100
8	---	---	---				---	---	---	1110	1090	1110
9	---	---	---				---	---	---	1120	1100	1110
10	---	---	---				---	---	---	1130	1110	1120
11	---	---	---				---	---	---	1130	1110	1120
12	---	---	---				---	---	---	1150	1120	1130
13	---	---	---				---	---	---	1140	1110	1130
14	---	---	---				---	---	---	1140	1120	1130
15	---	---	---				---	---	---	1140	1120	1130
16	---	---	---				---	---	---	1150	1130	1140
17	---	---	---				---	---	---	1160	1140	1150
18	---	---	---				---	---	---	1160	1130	1140
19	---	---	---				---	---	---	1150	1130	1150
20	---	---	---				---	---	---	1140	1110	1120
21	---	---	---				---	---	---	1130	1110	1130
22	---	---	---				---	---	---	1140	1130	1140
23	---	---	---				---	---	---	1170	1130	1150
24	---	---	---				---	---	---	1170	1150	1160
25	1040	1010	1020				---	---	---	1180	1160	1170
26	1050	1020	1040				---	---	---	1190	1170	1180
27	1070	1040	1060				---	---	---	1200	1160	1180
28	---	---	---				1040	1000	1020	1190	1170	1180
29	---	---	---				1040	1020	1030	1200	1180	1190
30	---	---	---				1050	1030	1040	1210	1180	1200
31	---	---	---				---	---	---	1200	1190	1190
MONTH	---	---	---				---	---	---	1210	1050	1130
JUNE				JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1210	1180	1200	---	---	---	1250	1240	1240	1280	1270	1270
2	1200	1150	1180	---	---	---	1250	1240	1250	1340	1280	1310
3	1190	1170	1180	---	---	---	1260	1230	1250	1340	1330	1330
4	1200	1180	1190	---	---	---	1250	1240	1250	1340	1330	1330
5	---	---	---	---	---	---	1250	1240	1250	1370	1170	1300
6	---	---	---	---	---	---	1250	1230	1240	1440	1280	1370
7	---	---	---	---	---	---	1260	1240	1240	1440	1370	1420
8	---	---	---	---	---	---	1260	1240	1250	1450	1420	1430
9	---	---	---	---	---	---	1270	1260	1270	1450	1430	1440
10	---	---	---	---	---	---	1280	1260	1270	1450	1420	1440
11	---	---	---	---	---	---	1300	1270	1280	1460	1410	1440
12	---	---	---	---	---	---	1310	1290	130			

11114000 SANTA CLARA RIVER AT MONTALVO, CA

LOCATION.--Lat 34°14'31", long 119°11'21", in San Miguel Grant, Ventura County, on downstream end of center pier southbound bridge on U.S. Highway 101, 0.9 mi (1.4 km) southeast of Montalvo, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--1,612 mi² (4,175 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to September 1932, October 1949 to current year. Monthly discharge only for 1950-67, published in WRD 1968 report. October 1949 to September 1969, published as "at Saticoy."

GAGE.--Water-stage recorder. Datum of gage is 51.88 ft (15.813 m) National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District). Oct. 1, 1927, to Sept. 30, 1932, and Oct. 1, 1949, to Sept. 30, 1967, at same site at different datums. Oct. 1, 1967, to Feb. 2, 1970, at site 3.9 mi (6.3 km) upstream at different datum.

REMARKS.--Records good. Flow partly regulated by Lake Piru (station 11109500) 33 mi (53 km) upstream since May 1955; by Pyramid Lake, capacity, 173,500 acre-ft (214 hm³) 42 mi (68 km) upstream since December 1971; and by Castaic Reservoir, capacity, 324,000 acre-ft (399 hm³) 43 mi (69 km) upstream since January 1972. Natural flow affected by ground-water withdrawals, diversions, municipal use, and ground-water replenishment. Imported water from the California Water Project released to the basin at Castaic Dam and Pyramid Dam. Diversion to spreading grounds and for irrigation in Pleasant Valley, at site 6.0 mi (9.7 km) upstream (station 11113900). AVERAGE DISCHARGE represents flow to the ocean regardless of upstream development.

COOPERATION.--Seventeen discharge measurements were furnished by Ventura County Flood Control District.

AVERAGE DISCHARGE.--34 years, 133 ft³/s (3.767 m³/s), 96,360 acre-ft/yr (119 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft³/s (4,670 m³/s) Jan. 25, 1969, gage height, 17.41 ft (5.307 m), present datum; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, 120,000 ft³/s (3,400 m³/s), estimated by Ventura County Flood Control District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 102,200 ft³/s (2,890 m³/s) Mar. 4, gage height, 12.08 ft (3.682 m); no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	4.8	1.0	12600	1920	117	1.2	.64	.18	.12
2			0	3.7	.9	9150	902	59	1.2	.49	.18	.08
3			0	3.2	.8	6980	940	33	1.1	.42	.18	.06
4			0	65	60	60700	1420	18	.83	.42	.26	.04
5			0	173	400	30300	1240	12	.83	.42	.18	.18
6			0	37	900	12000	1350	7.1	.73	.31	.10	62
7			0	8.7	403	4260	1560	1.3	.83	.42	.18	1.8
8			0	3.8	794	3450	997	1.1	.93	.49	.18	1.1
9			0	108	21100	2630	919	1.2	1.2	.31	.26	.93
10			0	2090	44600	2050	832	1.2	1.1	.26	.22	1.2
11			0	966	20000	1600	763	1.2	.73	.56	.26	.49
12			0	321	9000	1300	763	1.1	.49	.64	.18	.56
13			0	138	3970	1260	724	1.1	.64	.73	.15	.73
14			0	173	2490	1150	790	.93	.93	.64	.15	.49
15			0	5170	1700	882	1770	.83	1.5	.26	.31	.73
16			0	5530	1410	630	2120	.93	1.6	.18	.36	.83
17			0	6270	1100	504	1140	1.1	.93	.22	.42	.56
18			0	1290	717	450	832	1.3	.64	.36	.42	.56
19			0	1030	687	370	737	1.1	64	.36	.10	.49
20			0	550	672	325	662	.93	126	.26	.06	.64
21			0	360	658	300	639	.64	.93	.26	.08	.93
22			0	220	575	2850	616	5.7	.49	.15	.12	.93
23			0	135	537	1530	616	20	.42	.10	.18	.36
24			0	80	512	1180	616	2.6	.42	.08	.22	.26
25			0	50	61	881	639	2.4	.42	.12	.22	.22
26			0	30	30	840	616	2.4	.31	.22	.08	.36
27			9.1	19	35	790	465	2.0	.42	.15	.06	.64
28			2680	10	1500	750	195	1.1	.56	.22	.08	.36
29			1190	5.0	---	712	145	1.1	1.1	.18	.15	.56
30			161	3.0	---	929	153	.93	1.1	.08	.15	.26
31		---	7.5	2.0	---	4250	---	.93	---	.06	.06	---
TOTAL	0	0	4047.6	24849.2	113913.7	167603	27081	301.22	213.58	10.01	5.73	78.47
MEAN	0	0	131	802	4068	5407	903	9.72	7.12	.32	.18	2.62
MAX	0	0	2680	6270	44600	60700	2120	117	126	.73	.42	.62
MIN	0	0	0	2.0	.80	300	145	.64	.31	.06	.06	.04
AC-FT	0	0	8030	49290	225900	332400	53720	597	424	20	11	156

CAL YR 1977 TOTAL 7418.72 MEAN 20.3 MAX 2680 MIN 0 AC-FT 14720
WTR YR 1978 TOTAL 338103.51 MEAN 926 MAX 60700 MIN 0 AC-FT 670600

SANTA CLARA RIVER BASIN

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--Prior to October 1969, published as "at Saticoy" (station 11113920).

WATER TEMPERATURES: October 1967 to September 1969, October 1970 to current year.

SEDIMENT RECORDS: October 1967 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD. --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 108,000 mg/L Mar. 4, 1978; minimum daily mean, no flow for many days each year.

SEDIMENT DISCHARGE: Maximum daily, 20,400,000 tons (18,500,000 metric tons) Feb. 25, 1969; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR. --

SEDIMENT CONCENTRATIONS: Maximum daily mean, 108,000 mg/L Mar. 4; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 11,800,000 tons (10,700,000 metric tons) Mar. 4; minimum daily, 0 tons on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

[illegible]

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

OCTOBER					NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1							0	0	0	
2							0	0	0	
3							0	0	0	
4							0	0	0	
5							0	0	0	
6							0	0	0	
7							0	0	0	
8							0	0	0	
9							0	0	0	
10							0	0	0	
11							0	0	0	
12							0	0	0	
13							0	0	0	
14							0	0	0	
15							0	0	0	
16							0	0	0	
17							0	0	0	
18							0	0	0	
19							0	0	0	
20							0	0	0	
21							0	0	0	
22							0	0	0	
23							0	0	0	
24							0	0	0	
25							0	0	0	
26							0	0	0	
27							9.1	11	4.4	
28							2680	5820	47500	
29							1190	1740	7880	
30							161	261	188	
31							7.5	29	.63	
TOTAL	0	0	0	0	0	0	4047.60	---	55573.03	

JANUARY					FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	4.8	25	.32	1.0	14	.04	12600	24700	934000	
2	3.7	25	.25	.90	16	.04	9150	24000	610000	
3	3.2	25	.22	.80	16	.03	6980	11700	226000	
4	65	496	327	60	80	13	60700	108000	11800000	
5	173	784	803	400	719	777	30300	41600	3300000	
6	37	327	47	900	4410	10700	12000	23100	781000	
7	8.7	140	3.7	403	2200	2390	4260	18100	208000	
8	3.8	70	.72	794	2300	4930	3450	14300	133000	
9	108	425	408	21100	16200	1480000	2630	14400	73900	
10	2090	3360	19500	44600	49800	7630000	2050	2660	14700	
11	966	1390	4200	20000	10000	351000	1600	2700	11700	
12	321	306	279	9000	4400	107000	1300	2750	9650	
13	138	153	78	3970	9980	107000	1260	2790	9490	
14	173	523	2180	2490	4550	30600	1150	3510	10900	
15	5170	9040	140000	1700	3020	13900	882	1800	4290	
16	5530	6790	205000	1410	1960	7460	630	1700	2890	
17	6270	11000	228000	1100	548	1630	504	1300	1770	
18	1290	1940	7450	717	505	978	450	1200	1460	
19	1030	2000	5560	687	462	857	370	950	949	
20	550	580	861	672	418	758	325	820	720	
21	360	280	272	658	375	666	300	780	632	
22	220	120	71	575	332	515	2850	6720	57800	
23	135	50	18	537	380	551	1530	4000	16500	
24	80	7	1.5	512	429	593	1180	1830	5830	
25	50	7	.94	61	210	35	881	1500	3570	
26	30	8	.65	30	141	11	840	1400	3180	
27	19	9	.46	35	73	6.9	790	1150	2450	
28	10	10	.27	1500	2670	10800	750	3060	6200	
29	5.0	11	.15	---	---	---	712	3060	5880	
30	3.0	12	.10	---	---	---	929	3580	11000	
31	2.0	13	.07	---	---	---	4250	22100	284000	
TOTAL	24849.2	---	615063.4	113913.7	---	9763171	167603	---	18531461	

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	APRIL				MAY				JUNE			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)			
1	1920	5640	33900	117	250	79	1.2	65	.21			
2	902	1750	4320	59	200	32	1.2	61	.20			
3	940	1700	4350	33	194	17	1.1	57	.17			
4	1420	4270	17300	18	189	9.2	.83	52	.12			
5	1240	3200	10700	12	184	6.0	.83	48	.11			
6	1350	3360	14000	7.1	179	3.4	.73	48	.09			
7	1560	6480	29400	1.3	174	.61	.83	48	.11			
8	997	1400	3770	1.1	170	.50	.93	48	.12			
9	919	1290	3200	1.2	165	.53	1.2	48	.16			
10	832	1190	2670	1.2	160	.52	1.1	48	.14			
11	763	1080	2220	1.2	155	.50	.73	48	.09			
12	763	974	2010	1.1	150	.45	.49	48	.06			
13	724	890	1740	1.1	145	.43	.64	48	.08			
14	790	800	1710	.93	140	.35	.93	48	.12			
15	1770	5390	39800	.83	135	.30	1.5	48	.19			
16	2120	8380	56000	.93	130	.33	1.6	48	.21			
17	1140	2100	6800	1.1	125	.37	.93	48	.12			
18	832	1400	3140	1.3	121	.42	.64	48	.08			
19	737	1200	2390	1.1	116	.34	.64	896	379			
20	662	925	1650	.93	110	.28	1.26	1760	889			
21	639	913	1580	.64	100	.17	.93	100	.25			
22	616	901	1500	5.7	125	2.6	.49	23	.03			
23	616	889	1480	20	180	13	.42	23	.03			
24	616	881	1470	2.6	100	.70	.42	23	.03			
25	639	874	1510	2.4	96	.62	.42	23	.03			
26	616	866	1440	2.4	91	.59	.31	23	.02			
27	465	858	1100	2.0	87	.47	.42	23	.03			
28	195	480	253	1.1	83	.25	.56	23	.03			
29	145	320	125	1.1	78	.23	1.1	23	.07			
30	153	343	142	.93	74	.19	1.1	23	.07			
31	---	---	---	.93	70	.18	---	---	---			
TOTAL	27081	---	251670	301.22	---	171.53	213.58	---	1270.97			

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	.64	23	.04	.18	13	.01	.12	11	0
2	.49	22	.03	.18	13	.01	.08	11	0
3	.42	22	.02	.18	13	.01	.06	11	0
4	.42	22	.02	.26	12	.01	.04	11	0
5	.42	21	.02	.18	12	.01	.18	25	.01
6	.31	21	.02	.10	12	0	62	381	124
7	.42	21	.02	.18	12	.01	1.8	62	.30
8	.49	21	.03	.18	11	.01	1.1	30	.09
9	.31	20	.02	.26	11	.01	.93	11	.03
10	.26	20	.01	.22	11	.01	1.2	11	.04
11	.56	20	.03	.26	11	.01	.49	11	.01
12	.64	19	.03	.18	11	.01	.56	11	.02
13	.73	19	.04	.15	11	0	.73	11	.02
14	.64	19	.03	.15	11	0	.49	11	.01
15	.26	18	.01	.31	11	.01	.73	11	.02
16	.18	18	.01	.36	11	.01	.83	11	.02
17	.22	18	.01	.42	11	.01	.56	11	.02
18	.36	17	.02	.42	11	.01	.56	11	.02
19	.36	17	.02	.10	11	0	.49	11	.01
20	.26	17	.01	.06	11	0	.64	11	.02
21	.26	16	.01	.08	11	0	.93	11	.03
22	.15	16	.01	.12	11	0	.93	11	.03
23	.10	16	0	.18	11	.01	.36	11	.01
24	.08	16	0	.22	11	.01	.26	11	.01
25	.12	15	0	.22	11	.01	.22	11	.01
26	.22	15	.01	.08	11	0	.36	11	.01
27	.15	15	.01	.06	11	0	.64	11	.02
28	.22	14	.01	.08	11	0	.36	11	.01
29	.18	14	.01	.15	11	0	.56	11	.02
30	.08	14	0	.15	11	0	.26	11	.01
31	.06	14	0	.06	11	0	---	---	---
TOTAL	10.01	---	.50	5.73	---	.18	78.47	---	124.80

YEAR 338103.5

29218506

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	0.0	0.0	0	0
NOVEMBER ...	0.0	0.0	0	0
DECEMBER ...	4047.60	55573.03	19800	75400
JANUARY 1978	24849.20	615063.35	136000	751000
FEBRUARY ...	113913.70	9763171.01	780000	10500000
MARCH	167603.00	18531461.00	1120000	19700000
APRIL	27081.00	251670.00	77000	329000
MAY	301.22	171.53	76	248
JUNE	213.58	1270.97	69	1340
JULY	10.01	0.50	0	0
AUGUST	5.73	0.18	0	0
SEPTEMBER ..	78.47	124.80	18	143
TOTAL	338103.51	29218506.37	2132963	-31357131

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	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
DEC 29...	1200	14.5	615	1440	2390	58	76	88	94	--
JAN 10...	1500	12.0	2460	3430	22800	60	76	91	97	--
13...	1135	12.5	210	215	122	--	--	--	--	--
FEB 07...	1125	14.0	403	2200	2390	24	32	40	46	--
MAR 03...	0930	13.0	5980	11500	186000	13	15	21	29	39
04...	1645	10.0	82100	70000	1.55E+07	19	26	36	50	--
05...	1200	--	25800	37300	2600000	18	26	35	47	--
17...	1050	16.5	786	2320	4920	12	16	21	28	36
23...	1230	19.5	1680	3260	14800	18	23	30	38	48

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 29...	95	--	96	--	97	--	99	--	100	--
JAN 10...	100	--	--	--	--	--	--	--	--	--
13...	44	--	45	--	46	--	69	--	98	100
FEB 07...	49	--	51	--	53	--	65	--	79	96
MAR 03...	--	58	--	88	--	98	--	100	--	--
04...	61	--	79	--	91	--	98	--	100	--
05...	61	--	77	--	86	--	93	--	97	99
17...	--	53	--	90	--	99	--	100	--	--
23...	--	72	--	95	--	98	--	100	--	--

SANTA CLARA RIVER BASIN

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	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
SEP							
20...	1315	1	.64	3	12	35	77
20...	1320	1	.64	2	6	19	42
20...	1325	1	.64	--	1	10	48
20...	1330	1	.64	4	8	14	18
20...	1335	1	.64	5	11	24	48
20...	1340	1	.64	5	13	26	54
20...	1345	1	.64	3	9	24	58

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
SEP							
20...	93	97	98	99	100	--	--
20...	62	73	80	86	99	100	--
20...	77	90	97	99	100	--	--
20...	19	20	21	24	35	78	100
20...	71	80	86	88	93	100	--
20...	78	86	89	92	95	100	--
20...	84	92	96	99	100	--	--

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
DEC								
29...	1320	14.5	5	689	270	247	--	0
JAN								
11...	1000	10.0	27	872	293	251	--	0
18...	1130	12.5	2	1560	165	1370	--	0
20...	1300	12.5	35	550	177	330	--	0
FEB								
07...	1140	14.0	17	297	170	437	--	0
13...	1700	--	2	3970	425	--	0	1
16...	1115	11.5	24	1410	420	1070	0	2
24...	1030	15.5	18	512	170	729	--	0
MAR								
17...	1030	16.5	23	786	226	527	0	4
23...	1225	19.5	31	1680	400	718	1	5
28...	1430	21.5	20	695	221	311	--	0
MAY								
03...	1410	19.5	22	35	47	32	--	0
JUN								
20...	1530	28.5	22	34	48	63	--	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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
DEC								
29...	7	52	82	93	98	100	--	--
JAN								
11...	3	40	83	94	98	100	--	--
18...	3	14	39	66	80	89	96	100
20...	3	30	64	82	91	95	98	100
FEB								
07...	2	27	63	85	94	98	99	100
13...	12	38	55	70	83	92	98	100
16...	18	66	87	96	99	100	--	--
24...	7	46	76	89	95	98	100	--
MAR								
17...	31	68	88	95	98	99	100	--
23...	30	57	81	90	95	98	100	--
28...	4	41	76	90	95	97	98	100
MAY								
03...	12	61	92	98	100	--	--	--
JUN								
20...	11	68	93	97	99	99	100	--

11115000 MATILIJA RESERVOIR AT MATILIJA HOT SPRINGS, CA

LOCATION.--Lat 34°29'08", long 119°18'25", in NE¼NW¼SE¼ sec.29, T.5 N., R.23 W., Ventura County, on left end of dam on Ventura River, 0.2 mi (0.3 km) east of Matilija Hot Springs, and 1.8 mi (2.9 km) southwest of Wheeler Springs.

DRAINAGE AREA.--54.4 mi² (140.9 km²).

PERIOD OF RECORD.--March 1948 to September 1965, October 1970 to current year. Prior to October 1953, published as "at Matilija."

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft (0.00 m) Ventura County Department of Public Works datum. Prior to Nov. 12, 1970, at site near right end of dam at same datum.

REMARKS.--Reservoir is formed by concrete-arch dam. Dam was completed in 1948. Storage began Mar. 14, 1948. Capacity table is dated October 1970 (furnished by Ventura County Flood Control District). Lowest sluice gate silted, elevation, 1,000 ft (304.8 m). Usable capacity, 2,380 acre-ft (2.93 hm³) between elevations 1,045 ft (318.5 m), lowest usable outlet and 1,095 ft (333.8 m), crest of spillway. Dead storage below lowest usable outlet, 93 acre-ft (115,000 m³). Capacity below spillway, 2,473 acre-ft (3.05 hm³). Water is released from reservoir to natural stream for recharge of ground-water basin in Ventura River Valley and since May 1959 is at times diverted at Robles diversion dam downstream to Lake Casitas on Coyote Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,399 acre-ft (9.12 hm³) Apr. 3, 1958, elevation, 1,128.10 ft (343.845 m); minimum, 5.90 acre-ft (7,270 m³) Oct. 31, 1970, elevation, 1,038.31 ft (316.477 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum contents from October 1965 to September 1970, 3,128 acre-ft (3.86 hm³) Jan. 25, 1969, elevation, 1,103.6 ft (336.38 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,058 acre-ft (3.77 hm³) Mar. 4, elevation, 1,102.58 ft (336.066 m); minimum, unknown, less than 93 acre-ft (115,000 m³).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1078.60	1400	--
Oct. 31.....	1078.52	1390	-10
Nov. 30.....	1078.51	1390	0
Dec. 31.....	1084.59	1760	+370
CAL YR 1977.....	--	--	+1180
Jan. 31.....	1095.60	2520	+760
Feb. 28.....	1095.90	2540	+20
Mar. 31.....	1094.76	2460	-80
Apr. 30.....	1091.69	2240	-220
May 31.....	1088.02	1990	-250
June 30.....	--	*	--
July 31.....	--	*	--
Aug. 31.....	--	*	--
Sept. 30.....	--	*	--
WTR YR 1978.....	--	*	*

* Contents below dead storage; less than 93 acre-feet.

VENTURA RIVER BASIN

11115500 MATILIJA CREEK AT MATILIJA HOT SPRINGS, CA

LOCATION.--Lat 34°28'58", long 119°18'03", in SW¼NW¼SW¼ sec.28, T.5 N., R.23 W., Ventura County, on right bank 0.2 mi (0.3 km) east of Matilija Hot Springs, 0.2 mi (0.3 km) upstream from North Fork, and 0.4 mi (0.6 km) downstream from Matilija Dam.

DRAINAGE AREA.--54.6 mi² (141.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year. Combined monthly records for creek and diversion, May 1951 to September 1969. Prior to October 1953, published as "at Matilija."

GAGE.--Water-stage recorder. Concrete control since September 1969. Altitude of gage is 900 ft (274 m), from topographic map. Prior to Feb. 11, 1939, at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by Matilija Reservoir March 1948 to March 1964, capacity, 7,020 acre-ft (8.66 hm³) and partly regulated since March 1964, capacity, 2,470 acre-ft (3.05 hm³). Water diverted at dam by Matilija conduit to Ventura River basin and Ojai Valley for irrigation from May 1951 to January 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Jan. 25, 1969, gage height, 16.5 ft (5.03 m), from rating curve extended above 4,200 ft³/s (119 m³/s) on basis of computation of maximum flow over dam; minimum daily, 0.10 ft³/s (0.003 m³/s) for several days in some years of regulated flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,500 ft³/s (467 m³/s) Mar. 4, gage height, 13.91 ft (4.240 m), from rating curve extended as explained above; minimum daily, 0.27 ft³/s (0.008 m³/s) Nov. 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.58	1.1	2.5	48	1160	381	161	21	28	16	11
2	.69	.31	1.1	2.5	44	784	313	156	8.1	27	15	11
3	1.1	.27	1.1	2.5	40	666	274	69	3.3	27	15	11
4	1.5	.27	1.1	57	39	7020	268	43	1.8	26	15	10
5	1.4	.27	1.1	56	69	1480	240	24	54	26	14	12
6	1.3	.57	1.1	2.5	76	675	237	133	70	25	14	18
7	1.3	1.2	1.1	2.4	73	650	225	183	54	25	14	16
8	1.3	1.2	1.1	2.4	148	640	209	166	1.4	24	14	15
9	.54	.96	1.1	59	3280	573	199	67	327	23	14	14
10	.49	.96	1.1	119	5220	486	188	1.4	431	23	13	13
11	.49	.96	1.1	131	1070	425	179	98	107	23	13	13
12	.48	.97	1.1	104	766	377	172	124	43	23	13	12
13	.47	.98	1.1	102	720	338	167	1.4	41	22	13	12
14	.62	1.0	1.5	92	545	307	163	7.3	40	21	10	12
15	.61	1.0	2.4	451	442	277	304	96	41	20	11	11
16	.62	.98	1.5	932	363	255	311	128	38	20	13	11
17	.62	1.0	1.3	578	308	237	242	58	36	19	13	11
18	.62	1.1	1.1	261	278	228	216	109	35	19	13	11
19	.63	1.1	.98	190	237	221	203	132	35	20	12	11
20	.62	1.1	.96	154	212	207	193	96	33	20	12	11
21	.62	1.1	1.0	111	193	234	183	187	33	19	13	9.7
22	.62	1.1	1.5	97	178	369	177	62	31	19	12	9.2
23	.62	1.1	1.9	96	168	276	170	1.7	31	18	12	9.0
24	.80	1.1	1.9	54	163	237	165	24	30	18	12	9.0
25	.96	1.1	1.9	63	161	215	164	100	30	17	11	9.0
26	.96	1.1	2.1	64	161	201	162	80	30	17	12	9.1
27	.97	1.0	3.4	61	160	190	161	62	31	17	12	8.7
28	.97	1.0	100	59	221	180	162	49	30	17	12	8.3
29	.97	1.1	190	53	---	174	162	39	30	16	11	8.1
30	.96	1.0	130	51	---	212	162	31	28	16	11	8.3
31	.83	---	2.5	49	---	580	---	26	---	16	11	---
TOTAL	25.45	27.48	460.24	4058.8	15383	19874	6352	2514.8	1724.6	651	396	334.4
MEAN	.82	.92	14.8	131	549	641	212	81.1	57.5	21.0	12.8	11.1
MAX	1.5	1.2	190	932	5220	7020	381	187	431	28	16	18
MIN	.47	.27	.96	2.4	39	174	161	1.4	1.4	16	10	8.1
AC-FT	50	55	913	8050	30510	39420	12600	4990	3420	1290	785	663
CAL YR 1977	TOTAL	1926.71	MEAN	5.28	MAX	190	MIN	.27	AC-FT	3820		
WTR YR 1978	TOTAL	51801.77	MEAN	142	MAX	7020	MIN	.27	AC-FT	102700		

11115500 MATILIJA CREEK AT MATILIJA HOT SPRINGS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

CHEMICAL ANALYSES: Water years 1972 to current year.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)
DEC 06...	0850	1.1	1010	8.3	12.0	1	8.5	390	190
FEB 06...	1705	87	680	8.6	13.0	0	10.2	350	170
MAY 01...	1700	161	720	8.5	16.0	3	9.6	370	210
JUL 21...	1120	20	830	8.3	23.5	100	7.7	410	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
DEC 06...	110	30	57	24	1.0	2.0	250	0	205
FEB 06...	100	24	30	16	.7	2.0	220	0	180
MAY 01...	110	27	27	13	.6	2.0	200	0	164
JUL 21...	120	28	38	17	.8	2.0	--	--	--

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
DEC 06...	2.0	240	43	.9	635	601	.05	.20
FEB 06...	.9	210	11	.6	520	486	.18	.80
MAY 01...	1.0	250	6.1	.6	569	513	.02	.10
JUL 21...	--	270	19	.8	646	--	.00	.00

VENTURA RIVER BASIN

11115500 MATILIJA CREEK AT MATILIJA HOT SPRINGS, CA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)
DEC 06...	0850	1.1	1010	8.3	12.0	--	1000
FEB 06...	1705	87	680	8.6	13.0	--	340
MAY 01...	1700	161	720	8.5	16.0	--	200
12...	1325	188	--	--	--	0	--
JUL 21...	1120	20	830	8.3	23.5	--	600

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 06...	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--
12...	0	0	0	0	.0	10
JUL 21...	--	--	--	--	--	--

11116000 NORTH FORK MATILIJA CREEK AT MATILIJA HOT SPRINGS, CA

LOCATION.--Lat 34°29'33", long 119°18'20", in NE¼NW¼NE¼ sec.29, T.5 N., R.23 W., Ventura County, on right bank at bridge on State Highway 33, 0.7 mi (1.1 km) north of Matilija Hot Springs, and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--15.6 mi² (40.4 km²).

PERIOD OF RECORD.--October 1928 to September 1932, October 1933 to current year. Prior to October 1953, published as "at Matilija."

GAGE.--Water-stage recorder. Concrete control since September 1966. Datum of gage is 1,141.62 ft (347.966 m) National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District). Prior to Nov. 12, 1948, at site 0.3 mi (0.5 km) downstream at different datum.

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

COOPERATION.--Records were furnished by Ventura County Flood Control District and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--49 years, 10.6 ft³/s (0.300 m³/s), 7,680 acre-ft/yr (9.47 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,440 ft³/s (267 m³/s) Feb. 24, 1969, gage height, 11.0 ft (3.35 m), from floodmark, from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of slope-area measurement at gage height 10.0 ft (3.05 m); minimum daily, 0.10 ft³/s (0.003 m³/s) for several days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement at gage height 10.0 ft (3.05 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 16	1630	1620 45.9	5.95 1.814	Feb. 12	2045	435 12.3	4.15 1.265
Feb. 10	0115	5050 143	8.44 2.573	Mar. 4	0900	*5780 164	8.94 2.725

Minimum daily discharge, 0.37 ft³/s (0.010 m³/s) Oct. 1-10, 13-19, 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.42	.61	4.8	14	147	90	37	17	10	5.2	3.8
2	.37	.42	.61	3.8	13	180	78	36	17	9.7	5.6	3.5
3	.37	.42	.61	3.2	13	169	69	35	16	9.7	5.2	3.5
4	.37	.48	.61	12	12	2520	71	35	15	9.1	5.2	3.8
5	.37	.48	.61	8.2	19	663	62	34	15	9.1	4.8	7.2
6	.37	.54	.61	11	23	295	66	34	15	9.1	4.8	7.7
7	.37	.54	.61	8.2	27	182	64	34	14	9.1	5.2	5.6
8	.37	.48	.61	6.8	79	152	59	33	13	9.1	5.6	4.8
9	.37	.48	.61	58	1420	140	56	31	13	9.1	5.6	4.4
10	.37	.48	.61	68	2130	120	53	30	13	8.6	5.6	4.4
11	.42	.48	.61	29	322	108	50	30	13	8.6	5.6	4.4
12	.42	.48	.61	16	236	98	48	29	12	8.6	5.6	4.1
13	.37	.48	.61	12	207	86	47	28	12	7.7	5.6	4.1
14	.37	.48	.61	77	138	79	45	27	12	7.7	6.0	4.4
15	.37	.48	.61	195	104	71	98	26	12	7.7	5.6	4.4
16	.37	.48	.61	311	88	66	82	25	12	7.7	5.2	4.1
17	.37	.54	.98	154	75	59	62	25	12	7.7	5.2	4.4
18	.37	.54	1.5	78	62	56	57	24	12	7.7	5.2	4.4
19	.37	.61	1.1	47	57	51	54	24	11	7.7	5.2	4.1
20	.42	.68	.82	33	54	50	51	23	10	7.2	5.2	3.8
21	.42	.68	.90	27	51	64	50	22	10	6.8	5.2	3.5
22	.42	.68	1.1	23	48	128	47	22	10	6.4	4.8	3.5
23	.42	.68	.98	22	45	75	47	22	10	6.4	4.8	3.5
24	.42	.68	.98	20	42	62	45	21	9.7	6.4	5.2	3.2
25	.37	.61	.98	18	40	57	47	21	9.1	6.4	5.2	3.2
26	.37	.61	3.0	18	37	54	42	20	10	6.0	4.8	3.5
27	.37	.61	38	16	36	51	41	19	11	6.0	4.8	3.5
28	.37	.61	136	16	54	51	40	18	11	6.0	4.8	3.5
29	.42	.61	17	16	---	50	40	17	10	5.6	4.4	3.2
30	.48	.61	8.2	16	---	78	38	17	9.7	5.6	4.4	3.2
31	.42	---	6.4	15	---	139	---	17	---	5.2	4.4	---
TOTAL	12.03	16.37	227.70	1343.0	5446	6101	1699	816	366.5	237.7	160.0	124.7
MEAN	.39	.55	7.35	43.3	195	197	56.6	26.3	12.2	7.67	5.16	4.16
MAX	.48	.68	136	311	2130	2520	98	37	17	10	6.0	7.7
MIN	.37	.42	.61	3.2	12	50	38	17	9.1	5.2	4.4	3.2
AC-FT	24	32	452	2660	10800	12100	3370	1620	727	471	317	247

CAL YR 1977 TOTAL 688.15 MEAN 1.89 MAX 136 MIN .28 AC-FT 1360
WTR YR 1978 TOTAL 16550.00 MEAN 45.3 MAX 2520 MIN .37 AC-FT 32830

VENTURA RIVER BASIN

11116550 VENTURA RIVER NEAR MEINERS OAKS, CA

LOCATION.--Lat 34°27'54", long 119°17'20", in SE¼SW¼SE¼ sec.33, T.5 N., R.23 W., Ventura County, on right bank 50 ft (15 m) downstream from Robles diversion dam, and 1.2 mi (1.9 km) northwest of Meiners Oaks.

DRAINAGE AREA.--76.4 mi² (197.9 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 750.00 ft (228.600 m) Bureau of Reclamation datum. Prior to Oct. 30, 1969, at site 500 ft (152 m) downstream at datum 5.40 ft (1.646 m) lower.

REMARKS.--Records poor. Flow regulated by Matilija Reservoir, capacity, 2,470 acre-ft (3.05 hm³). Flow up to 500 ft³/s (14.2 m³/s) diverted since May 1959 at Robles diversion dam to Lake Casitas on Coyote Creek. Flow reported herein is that released downstream from Robles diversion dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s), estimated, Jan. 25, 1969, gage height unknown; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,900 ft³/s (563 m³/s), estimated, Mar. 4, gage height unknown; no flow Oct. 1 to Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	6.4	1.4	914	355	158	38	35	19	10
2			0	7.0	2.5	556	277	158	25	35	19	10
3			0	7.0	4.0	413	259	104	16	35	18	10
4			0	19	3.0	9230	251	78	14	35	18	11
5			0	27	3.5	1950	227	58	83	33	17	16
6			0	15	4.4	598	243	167	139	33	17	21
7			0	12	1.7	659	227	217	19	32	16	11
8			0	8.4	28	620	219	199	8.9	30	16	12
9			0	16	4340	580	204	98	23	30	15	12
10			0	19	7140	546	190	31	107	32	15	12
11			0	9.6	902	520	183	128	126	28	15	12
12			0	7.9	530	475	190	153	44	26	14	13
13			0	9.5	402	424	177	29	42	28	14	13
14			0	23	165	386	177	34	32	30	13	13
15			0	240	103	324	353	122	25	35	13	13
16			0	924	80	314	306	153	23	33	12	12
17			0	177	60	159	251	83	19	30	12	12
18			0	20	43	93	227	133	19	30	12	12
19			0	2.0	30	96	211	156	19	30	11	12
20			0	2.6	23	161	197	119	16	29	11	12
21			0	3.5	16	245	190	209	16	28	11	11
22			0	2.5	9.0	451	190	84	16	27	11	11
23			0	11	4.7	259	177	24	15	26	11	11
24			0	16	2.8	204	170	45	16	26	10	11
25			0	16	2.9	183	177	121	16	25	10	11
26			.60	10	3.1	170	164	100	25	24	10	10
27			14	4.6	3.3	152	164	81	38	23	10	10
28			31	5.3	79	130	158	67	35	23	9.0	10
29			31	4.3	---	89	158	56	44	22	9.0	10
30			30	3.0	---	230	158	48	40	21	9.0	9.0
31		---	11	2.0	---	630	---	43	---	20	10	---
TOTAL	0	0	117.60	1630.6	13987.3	21761	6430	3256	1098.9	894	407.0	353.0
MEAN	0	0	3.79	52.6	500	702	214	105	36.6	28.8	13.1	11.8
MAX	0	0	31	924	7140	9230	355	217	139	35	19	21
MIN	0	0	0	2.0	1.4	89	158	24	8.9	20	9.0	9.0
AC-FT	0	0	233	3230	27740	43160	12750	6460	2180	1770	807	700
CAL YR 1977	TOTAL	919.79	MEAN	2.52	MAX	44	MIN	0	AC-FT	1820		
WTR YR 1978	TOTAL	49935.40	MEAN	137	MAX	9230	MIN	0	AC-FT	99050		

11117500 SAN ANTONIO CREEK AT CASITAS SPRINGS, CA

LOCATION.--Lat 34°22'49", long 119°18'13", in Santa Ana Grant, Ventura County, on left bank at downstream side of bridge on State Highway 33, 0.2 mi (0.3 km) upstream from mouth, and 0.9 mi (1.4 km) north of Casitas Springs.

DRAINAGE AREA.--51.2 mi² (132.6 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 306.72 ft (93.488 m) National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District). Prior to Jan. 30, 1962, at datum 0.83 ft (0.253 m) higher.

REMARKS.--Records good. No regulation above station; pumping from wells 100 ft (30 m) upstream for irrigation during summer months.

COOPERATION.--Records were furnished by Ventura County Flood Control District and reviewed by Geological Survey.

AVERAGE DISCHARGE.--29 years, 12.8 ft³/s (0.362 m³/s), 9,270 acre-ft/yr (11.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) Jan. 25, 1969, gage height, 14.30 ft (4.359 m), from inside gage, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of maximum flow; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*), from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of slope-area measurements at gage heights 11.80 ft (3.597 m) and 14.30 ft (4.359 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 27	1815	1040 29.5	7.98 2.432	Mar. 1	0830	882 25.0	5.23 1.594
Jan. 4	1515	227 6.43	6.65 2.027	Mar. 4	0730	9530 270	11.31 3.447
Jan. 16	1645	8030 227	11.80 3.597	Mar. 22	0715	683 19.3	5.15 1.570
Feb. 7	1515	340 9.63	7.72 2.353	Mar. 31	1000	344 9.74	4.44 1.353
Feb. 10	0045	*13900 394	13.82 4.212	Apr. 15	1730	397 11.2	4.56 1.390
Feb. 12	2145	1380 39.1	5.80 1.768				

Minimum daily discharge, no flow Oct. 1 to Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.29	3.6	475	126	51	25	13	9.3	8.3
2			0	.44	3.3	454	106	49	24	13	8.8	7.8
3			0	.44	3.3	317	102	48	23	13	8.3	7.8
4			0	22	2.8	3890	110	46	23	12	8.3	8.3
5			0	4.8	23	1280	100	46	23	12	7.8	23
6			0	23	22	536	102	45	23	12	7.8	15
7			0	4.6	57	348	100	44	22	12	7.8	7.3
8			0	2.8	176	235	88	42	22	12	7.8	6.5
9			0	11	3080	179	81	42	23	12	7.8	6.1
10			0	29	4300	150	70	41	24	12	7.8	6.5
11			0	8.7	443	132	70	40	23	12	8.3	6.1
12			0	5.0	421	117	67	37	24	12	8.3	6.5
13			0	3.6	339	106	65	37	24	11	8.3	6.5
14			0	79	152	104	62	37	23	11	8.8	6.9
15			0	362	102	94	157	37	23	10	8.8	6.9
16			0	1160	72	83	132	37	23	10	8.8	6.5
17			0	248	59	81	81	34	22	10	8.8	6.9
18			0	77	53	72	75	34	19	10	8.8	6.5
19			0	66	44	67	74	33	18	10	8.8	6.1
20			0	25	37	65	70	32	18	9.8	8.8	6.1
21			0	15	32	100	68	31	14	9.8	8.8	7.3
22			0	12	29	312	65	30	13	9.3	8.8	7.8
23			0	12	26	106	63	30	14	9.3	8.8	6.5
24			0	9.3	25	92	62	30	15	9.3	8.8	6.9
25			0	8.3	25	74	67	29	17	9.3	8.8	6.5
26			.12	8.8	25	72	62	29	15	9.3	8.3	6.5
27			112	6.9	25	72	59	28	15	9.3	7.8	6.5
28			96	5.7	107	70	56	27	15	9.3	8.3	6.5
29			6.2	5.7	---	70	54	26	15	9.3	7.8	6.1
30			.44	5.7	---	98	53	26	14	9.3	8.3	6.1
31		---	.36	4.6	---	231	---	26	---	9.3	8.3	---
TOTAL	0	0	215.12	2226.67	9687.0	10082	2447	1124	596	331.6	260.8	228.3
MEAN	0	0	6.94	71.8	346	325	81.6	36.3	19.9	10.7	8.41	7.61
MAX	0	0	112	1160	4300	3890	157	51	25	13	9.3	23
MIN	0	0	0	.29	2.8	65	53	26	13	9.3	7.8	6.1
AC-FT	0	0	427	4420	19210	20000	4850	2230	1180	658	517	453
CAL YR 1977	TOTAL	615.06	MEAN	1.69	MAX	112	MIN	0	AC-FT	1220		
WTR YR 1978	TOTAL	27198.49	MEAN	74.5	MAX	4300	MIN	0	AC-FT	53950		

VENTURA RIVER BASIN

11117500 SAN ANTONIO CREEK AT CASITAS SPRINGS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977 to September 1978 (discontinued).

WATER TEMPERATURES: Water year 1977 to September 1978 (discontinued).

SEDIMENT RECORD: Water year 1977 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: October 1976 to September 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS:--Maximum daily mean, 28,100 mg/L Feb. 10, 1978; minimum daily mean, no flow for many days in each year.

SEDIMENT DISCHARGE: Maximum daily mean, 592,000 tons (534,000 metric tons) Feb. 10, 1978; 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 28,100 mg/L Feb. 10; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily mean, 592,000 tons (534,000 metric tons) Feb. 10; minimum daily mean, 0 tons on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	---	14.0	13.0	---	---	---	---	---
2			---	---	16.5	14.0	14.0	---	---	---	---	---
3			---	---	---	13.0	---	---	---	---	20.0	---
4			---	13.0	16.0	14.0	16.0	17.5	25.0	26.0	---	---
5			---	12.0	14.0	13.0	14.0	---	20.0	---	---	22.0
6			---	14.0	14.0	12.0	14.0	---	---	---	---	---
7			---	13.0	13.0	12.0	12.0	---	---	---	---	---
8			---	---	11.0	14.0	16.0	---	---	---	25.0	---
9			---	13.0	13.0	14.0	---	---	27.0	26.0	---	---
10			---	13.0	12.0	11.0	---	24.0	---	---	---	25.0
11			---	10.0	10.0	---	---	---	---	---	---	---
12			---	---	10.0	---	---	---	---	---	---	---
13			---	---	10.0	---	17.0	---	---	---	25.0	---
14			---	14.0	10.0	---	---	---	27.0	28.0	---	---
15			---	12.0	10.0	20.0	15.0	24.0	---	---	---	25.0
16			---	12.0	10.0	---	11.0	---	---	---	---	---
17			---	12.0	9.0	---	11.0	---	---	---	---	---
18			---	11.0	10.0	---	---	---	---	---	---	---
19			---	12.0	10.0	---	---	---	26.0	26.0	26.0	---
20			---	10.0	10.0	18.0	---	24.0	---	---	---	24.0
21			---	---	11.0	17.0	---	---	---	---	---	---
22			---	---	12.0	14.0	22.0	---	---	---	---	---
23			---	---	---	15.0	---	---	---	---	---	---
24			---	---	---	21.0	---	---	27.0	26.0	---	---
25			---	14.0	---	---	18.0	23.0	---	---	26.0	27.0
26			---	---	---	---	---	---	---	---	---	---
27			---	---	16.0	---	---	---	---	---	---	---
28			15.0	---	16.0	22.0	---	---	---	---	---	---
29			14.0	---	---	---	---	---	21.0	26.0	---	---
30			16.5	15.0	---	17.0	18.0	27.0	---	---	---	26.0
31			---	---	---	13.0	---	---	---	---	22.5	---
MONTH			---	---	12.0	---	---	---	---	---	---	---

11117500 SAN ANTONIO CREEK AT CASITAS SPRINGS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	0	0
2							0	0	0
3							0	0	0
4							0	0	0
5							0	0	0
6							0	0	0
7							0	0	0
8							0	0	0
9							0	0	0
10							0	0	0
11							0	0	0
12							0	0	0
13							0	0	0
14							0	0	0
15							0	0	0
16							0	0	0
17							0	0	0
18							0	0	0
19							0	0	0
20							0	0	0
21							0	0	0
22							0	0	0
23							0	0	0
24							0	0	0
25							0	0	0
26							.12	3	0
27							112	1170	1680
28							96	1100	478
29							6.2	87	1.5
30							.44	25	.03
31							.36	22	.02
TOTAL	0	0	0	0	0	0	215.12	---	2159.55

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	.29	20	.02	3.6	40	.39	475	5070	8020
2	.44	20	.02	3.3	52	.46	454	4040	5350
3	.44	18	.02	3.3	40	.36	317	1520	1360
4	22	466	128	2.8	20	.15	3890	23700	367000
5	4.8	60	.78	23	524	74	1280	6690	24400
6	23	214	37	22	496	51	536	3030	4390
7	4.6	40	.50	57	1620	708	348	1880	1770
8	2.8	28	.21	176	1760	3510	235	1400	888
9	11	74	5.0	3080	18900	269000	179	1480	715
10	29	246	22	4300	28100	592000	150	1850	749
11	8.7	68	2.0	443	4100	5590	132	2030	723
12	5.0	33	.45	421	2400	4110	117	1660	524
13	3.6	39	.38	339	2390	2770	106	1480	424
14	79	583	1080	152	1050	431	104	1250	351
15	362	2840	8290	102	1400	386	94	800	203
16	1160	5830	69200	72	960	187	83	800	179
17	248	1810	1790	59	650	104	81	660	144
18	77	324	75	53	440	63	72	750	146
19	66	343	87	44	380	45	67	540	98
20	25	97	6.5	37	510	51	65	260	46
21	15	80	3.2	32	610	53	100	785	463
22	12	61	2.0	29	320	25	312	3210	3640
23	12	44	1.4	26	320	22	106	500	143
24	9.3	30	.75	25	400	27	92	520	129
25	8.3	12	.27	25	310	21	74	400	80
26	8.8	14	.33	25	280	19	72	300	58
27	6.9	12	.22	25	250	17	72	210	41
28	5.7	11	.17	107	1230	825	70	160	30
29	5.7	10	.15	---	---	---	70	160	30
30	5.7	10	.15	---	---	---	98	460	122
31	4.6	20	.25	---	---	---	231	2340	1460
TOTAL	2226.67	---	80733.77	9687.0	---	880090.4	10082	---	423676

11117500 SAN ANTONIO CREEK AT CASITAS SPRINGS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	126	390	133	51	50	6.9	25	2	.14
2	106	230	66	49	58	7.7	24	2	.13
3	102	340	94	48	63	8.2	23	1	.06
4	110	486	157	46	68	8.4	23	2	.12
5	100	250	67	46	45	5.6	23	9	.56
6	102	410	113	45	36	4.4	23	7	.43
7	100	260	70	44	30	3.6	22	5	.30
8	88	240	57	42	24	2.7	22	3	.18
9	81	100	22	42	20	2.3	23	2	.12
10	70	200	38	41	10	1.1	24	2	.13
11	70	100	19	40	10	1.1	23	2	.12
12	67	100	18	37	10	1.0	24	2	.13
13	65	100	18	37	9	.90	24	3	.19
14	62	105	18	37	8	.80	23	3	.19
15	157	764	526	37	7	.70	23	3	.19
16	132	490	175	37	7	.70	23	3	.19
17	81	520	114	34	6	.55	22	3	.18
18	75	292	59	34	6	.55	19	3	.15
19	74	245	49	33	5	.45	18	3	.15
20	70	200	38	32	4	.35	18	4	.20
21	68	155	28	31	4	.33	14	2	.08
22	65	118	21	30	5	.41	13	3	.11
23	63	127	22	30	5	.41	14	4	.15
24	62	138	23	30	5	.41	15	4	.16
25	67	150	27	29	5	.39	17	5	.23
26	62	136	23	29	5	.39	15	5	.20
27	59	115	18	28	4	.30	15	5	.20
28	56	94	14	27	4	.29	15	6	.24
29	54	72	10	26	3	.21	15	6	.24
30	53	50	7.2	26	2	.14	14	6	.23
31	---	---	---	26	2	.14	---	---	---
TOTAL	2447	---	2044.2	1124	---	61.42	596	---	5.70

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	13	6	.21	9.3	11	.28	8.3	5	.11
2	13	6	.21	8.8	13	.31	7.8	5	.11
3	13	6	.21	8.3	14	.31	7.8	5	.11
4	12	6	.19	8.3	15	.34	8.3	5	.11
5	12	6	.19	7.8	16	.34	23	18	2.0
6	12	7	.23	7.8	17	.36	15	9	.36
7	12	7	.23	7.8	18	.38	7.3	5	.10
8	12	8	.26	7.8	19	.40	6.5	6	.11
9	12	8	.26	7.8	19	.40	6.1	7	.12
10	12	8	.26	7.8	19	.40	6.5	8	.14
11	12	8	.26	8.3	19	.43	6.1	7	.12
12	12	8	.26	8.3	19	.43	6.5	7	.12
13	11	8	.24	8.3	19	.43	6.5	6	.11
14	11	21	.62	8.8	19	.45	6.9	5	.09
15	10	29	.78	8.8	19	.45	6.9	4	.07
16	10	29	.78	8.8	19	.45	6.5	4	.07
17	10	29	.78	8.8	19	.45	6.9	5	.09
18	10	28	.76	8.8	19	.45	6.5	5	.09
19	10	28	.76	8.8	19	.45	6.1	6	.10
20	9.8	27	.71	8.8	17	.40	6.1	6	.10
21	9.8	25	.66	8.8	15	.36	7.3	6	.12
22	9.3	24	.60	8.8	13	.31	7.8	7	.15
23	9.3	22	.55	8.8	10	.24	6.5	7	.12
24	9.3	20	.50	8.8	8	.19	6.9	7	.13
25	9.3	18	.45	8.8	6	.14	6.5	7	.12
26	9.3	16	.40	8.3	5	.11	6.5	8	.14
27	9.3	14	.35	7.8	5	.11	6.5	8	.14
28	9.3	11	.28	8.3	5	.11	6.5	9	.16
29	9.3	9	.23	7.8	5	.11	6.1	9	.15
30	9.3	9	.23	8.3	5	.11	6.1	10	.16
31	9.3	10	.25	8.3	7	.16	---	---	---
TOTAL	331.6	---	12.70	260.8	---	9.86	228.3	---	5.62
YEAR	27198.49		1388799						

11117500 SAN ANTONIO CREEK AT CASITAS SPRINGS, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	0.0	0.0	0	0
NOVEMBER ...	0.0	0.0	0	0
DECEMBER ...	215.12	2159.55	178	2340
JANUARY 1978	2226.67	80733.77	9560	90300
FEBRUARY ...	9687.00	880090.36	115000	995000
MARCH	10082.00	423676	79100	503000
APRIL	2447.00	2044.20	1720	3770
MAY	1124.00	61.42	224	285
JUNE	596.00	5.70	32	38
JULY	331.60	12.70	2	15
AUGUST	260.80	9.86	0	10
SEPTEMBER ..	228.30	5.62	2	8
TOTAL	27198.49	1388799.18	205818	1594766

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
DEC 28...	1620	16.0	46	537	67	63	82	91	97	99
JAN 06...	0800	14.0	106	611	175	50	66	81	94	99
17...	1330	14.0	171	985	455	--	59	73	85	92
FEB 10...	0825	12.0	4980	22700	305000	--	27	33	46	58
MAR 02...	0920	13.9	520	6160	8650	--	24	31	36	52

DATE	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
DEC 28...	--	99	--	99	--	100	--	--	--
JAN 06...	--	100	--	--	--	--	--	--	--
17...	--	96	--	97	--	99	--	100	--
FEB 10...	71	--	87	--	96	--	99	--	100
MAR 02...	62	--	73	--	86	--	97	--	100

VENTURA RIVER BASIN

11117500 SAN ANTONIO CREEK AT CASITAS SPRINGS, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
JAN 17...	1415	14.0	18	161	36	82	0	1
FEB 07...	1350	13.0	24	35	50	5.3	1	3
MAR 24...	1215	21.0	32	93	68	32	0	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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
JAN 17...	7	41	63	78	88	95	100	--
FEB 07...	10	30	58	77	89	95	100	--
MAR 24...	4	33	66	81	88	91	96	100

11117600 COYOTE CREEK NEAR OAK VIEW, CA

LOCATION.--Lat 34°25'02", long 119°22'01", in Santa Ana Grant, Ventura County, on right bank 1,000 ft (305 m) downstream from Los Padres National Forest boundary, 0.6 mi (1.0 km) upstream from Poplin Creek, and 4.2 mi (6.8 km) northwest of Oak View.

DRAINAGE AREA.--13.2 mi² (34.2 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 560.47 ft (170.831 m) Bureau of Reclamation datum.

REMARKS.--Records fair except those for Mar. 8 to Aug. 29 when gage was in backwater, which are poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years, 7.87 ft³/s (0.223 m³/s), 5,700 acre-ft/yr (7.03 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Jan. 25, 1969, gage height, 12.00 ft (3.658 m), from floodmarks, from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of slope-area measurements at gage heights 9.10 ft (2.774 m) and 12.00 ft (3.658 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*), from rating curve extended above 6.0 ft³/s (0.17 m³/s) on basis of slope-area measurement at gage height 12.00 ft (3.658 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0730	1200 34.0	7.88 2.402	Mar. 1	0715	866 24.5	7.21 2.198
Jan. 16	1600	3180 90.1	11.55 3.520	Mar. 4	0530	*6130 174	11.28 3.438
Feb. 10	0100	4710 133	10.55 3.216	Mar. 22	Unknown	Unknown	Unknown

† Maximum gage height due to backwater from growth in channel.

Minimum daily discharge, 0.05 ft³/s (0.001 m³/s) Oct. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.08	.10	1.1	4.0	555	58	15	7.0	3.1	1.6	1.1
2	.09	.08	.09	.87	3.8	255	40	15	7.0	3.0	1.6	1.1
3	.08	.07	.10	.79	3.6	151	33	14	7.0	2.9	1.6	1.1
4	.08	.08	.13	16	3.4	2980	35	14	7.0	2.9	1.6	1.1
5	.08	.08	.13	5.8	7.5	900	25	13	7.0	2.8	1.6	1.8
6	.08	.08	.13	27	8.2	394	24	12	7.0	2.8	1.5	2.3
7	.08	.08	.13	7.0	24	240	23	11	6.9	2.7	1.5	1.6
8	.06	.08	.15	3.4	154	92	22	11	6.8	2.7	1.5	1.4
9	.08	.08	.15	20	2220	75	21	10	6.4	2.6	1.5	1.3
10	.08	.08	.13	45	1850	58	21	9.4	6.0	2.6	1.5	1.3
11	.10	.08	.13	14	273	54	20	8.6	5.4	2.5	1.5	1.3
12	.10	.06	.13	7.0	302	50	20	8.4	5.0	2.5	1.5	1.3
13	.08	.08	.13	4.6	230	46	20	8.1	4.6	2.4	1.5	1.3
14	.08	.08	.13	103	160	44	33	7.9	4.2	2.4	1.5	1.2
15	.08	.08	.13	248	115	40	51	7.6	4.0	2.3	1.5	1.2
16	.08	.08	.13	468	84	38	40	7.4	3.6	2.3	1.5	1.3
17	.08	.08	.30	140	62	35	31	7.2	3.6	2.2	1.4	1.3
18	.08	.10	.30	76	45	33	25	7.0	3.5	2.2	1.4	1.2
19	.08	.10	.13	43	35	30	22	7.0	3.5	2.1	1.4	1.1
20	.08	.10	.13	31	29	35	19	7.0	3.4	2.1	1.4	1.0
21	.08	.13	.15	23	24	55	18	7.0	3.3	2.0	1.4	1.0
22	.08	.13	.15	17	21	105	18	7.1	3.2	2.0	1.4	1.0
23	.06	.13	.15	14	18	29	17	7.1	3.2	2.0	1.3	.94
24	.06	.13	.15	11	16	24	17	7.0	3.2	1.9	1.3	.94
25	.05	.11	.15	8.7	15	23	17	7.0	3.2	1.9	1.3	.86
26	.05	.11	.63	7.1	14	22	16	7.0	3.2	1.8	1.3	.86
27	.06	.10	29	6.1	13	21	16	7.0	3.2	1.8	1.3	.86
28	.07	.10	260	5.4	118	20	16	7.0	3.2	1.8	1.3	.79
29	.07	.10	12	4.9	---	19	15	6.8	3.2	1.7	1.2	.79
30	.09	.09	3.2	4.6	---	19	15	6.8	3.2	1.7	1.2	.79
31	.07	---	1.7	4.3	---	100	---	7.0	---	1.6	1.1	---
TOTAL	2.39	2.76	310.16	1367.66	5852.5	6542	748	277.4	141.0	71.3	44.2	35.13
MEAN	.077	.092	10.0	44.1	209	211	24.9	8.95	4.70	2.30	1.43	1.17
MAX	.10	.13	260	468	2220	2980	58	15	7.0	3.1	1.6	2.3
MIN	.05	.06	.09	.79	3.4	19	15	6.8	3.2	1.6	1.1	.79
AC-FT	4.7	5.5	615	2710	11610	12980	1480	550	280	141	88	70
CAL YR 1977	TOTAL	567.96	MEAN	1.56	MAX	260	MIN	.03	AC-FT	1130		
WTR YR 1978	TOTAL	15394.50	MEAN	42.2	MAX	2980	MIN	.05	AC-FT	30530		

VENTURA RIVER BASIN

11117800 SANTA ANA CREEK NEAR OAK VIEW, CA

LOCATION.--Lat 34°25'25", long 119°20'25", in Santa Ana Grant, Ventura County, on upstream end of right abutment of bridge on Santa Ana Road, 400 ft (120 m) upstream from unnamed tributary, and 3.0 mi (4.8 km) northwest of Oak View.

DRAINAGE AREA.--9.11 mi² (23.6 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 612.43 ft (186.669 m) Bureau of Reclamation datum. Prior to Aug. 17, 1970, on downstream end of right abutment at same datum.

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

AVERAGE DISCHARGE.--20 years, 5.95 ft³/s (0.169 m³/s), 4,310 acre-ft/yr (5.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,330 ft³/s (151 m³/s) Mar. 4, 1978, gage height, 10.01 ft (3.051 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-area measurement at gage height 8.57 ft (2.612 m), maximum gage height, 10.70 ft (3.261 m) Jan. 25, 1969; no flow at times in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 3,780 ft³/s (107 m³/s), by slope-area measurement at site 2.0 mi (3.2 km) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0845	380 10.8	5.52 1.682	Mar. 1	0730	703 19.9	6.70 2.042
Jan. 16	1615	2740 77.6	8.57 2.612	Mar. 4	0545	*5330 151	10.01 3.051
Feb. 10	0100	4240 120	9.47 2.886	Mar. 22	0800	247 7.00	5.68 1.731

Minimum daily discharge, no flow Oct. 1 to Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	1.9	5.0	314	43	12	4.7	1.6	.09	.23
2			0	1.5	4.5	190	33	11	4.4	1.4	.11	.19
3			0	1.4	4.3	125	28	11	4.2	1.4	.13	.16
4			0	7.5	4.1	1730	30	11	4.3	1.2	.16	.16
5			0	5.1	6.2	355	24	10	4.3	1.2	.21	.30
6			0	15	7.7	157	24	9.7	4.0	1.2	.14	.26
7			0	7.8	17	96	23	9.4	3.8	1.1	.11	.20
8			0	4.8	75	70	21	9.1	3.8	1.0	.12	.18
9			0	30	953	56	19	8.8	3.6	.88	.13	.16
10			0	67	1060	45	17	8.7	3.7	.88	.11	.16
11			0	25	186	38	16	8.3	3.7	.88	.11	.15
12			0	14	158	32	16	8.1	3.6	.88	.11	.15
13			0	10	142	29	15	7.9	3.4	.73	.16	.15
14			0	113	69	28	14	7.8	3.1	.64	.30	.15
15			0	193	49	24	46	7.9	3.1	.51	.29	.15
16			0	434	39	22	38	7.3	3.0	.42	.18	.14
17			0	129	31	20	27	6.9	2.8	.35	.19	.14
18			0	43	26	18	23	6.8	2.6	.30	.15	.14
19			0	34	22	17	21	6.6	2.6	.26	.14	.14
20			0	22	18	16	19	6.6	2.4	.23	.12	.14
21			0	16	16	28	18	6.6	2.3	.20	.13	.14
22			0	14	14	88	17	6.6	2.1	.18	.22	.14
23			0	12	13	37	16	6.3	2.1	.16	.21	.13
24			0	9.9	12	28	15	6.0	1.9	.15	.26	.13
25			0	8.8	12	24	15	5.8	1.7	.13	.27	.13
26			0	8.1	12	21	14	5.7	1.7	.12	.27	.13
27			13	7.4	11	20	13	5.6	1.9	.11	.23	.13
28			143	6.8	71	18	12	5.4	2.0	.11	.36	.13
29			11	6.2	---	18	12	5.0	1.9	.10	.23	.13
30			3.7	5.9	---	26	12	4.8	1.8	.09	.19	.12
31		---	2.4	5.3	---	74	---	4.8	---	.09	.28	---
TOTAL	0	0	173.1	1259.4	3037.8	3764	641	237.5	90.5	18.50	5.71	4.76
MEAN	0	0	5.58	40.6	108	121	21.4	7.66	3.02	.60	.18	.16
MAX	0	0	143	434	1060	1730	46	12	4.7	1.6	.36	.30
MIN	0	0	0	1.4	4.1	16	12	4.8	1.7	.09	.09	.12
AC-FT	0	0	343	2500	6030	7470	1270	471	180	37	11	9.4
CAL YR 1977	TOTAL	250.49	MEAN	.69	MAX	143	MIN	0	AC-FT	497		
WTR YR 1978	TOTAL	9232.27	MEAN	25.3	MAX	1730	MIN	0	AC-FT	18310		

11118000 COYOTE CREEK NEAR VENTURA, CA

LOCATION.--Lat 34°21'26", long 119°18'46", near southeast corner of Santa Ana Grant, Ventura County, on right bank 200 ft (60 m) downstream from bridge on Santa Ana Road, 0.3 mi (0.5 km) upstream from mouth, 1.6 mi (2.6 km) downstream from Casitas Reservoir, and 5.5 mi (8.8 km) northwest of Ventura.

DRAINAGE AREA.--41.2 mi² (106.7 km²).

PERIOD OF RECORD.--October 1927 to September 1932, October 1933 to September 1958, October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 224.95 ft (68.565 m) Ventura County Flood Control datum. See WSP 1735 for history of changes prior to Oct. 1, 1969.

REMARKS.--Records fair. Flow mostly regulated by Casitas Reservoir since October 1959, capacity, 267,000 acre-ft (329 hm³).

AVERAGE DISCHARGE.--30 years (water years 1928-32, 1934-58), 13.2 ft³/s (0.374 m³/s), 9,560 acre-ft/yr (11.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 420 ft³/s (11.9 m³/s) Feb. 10, gage height, 11.63 ft (3.545 m); no flow several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.53	33	23	25	.35	.32	.13	.02
2			0	.01	.50	24	26	23	.35	.31	.12	.03
3			0	.04	.50	16	28	21	.41	.30	.12	.02
4			0	.97	.57	128	34	20	.35	.29	.10	.03
5			0	.10	1.2	29	36	19	.35	.28	.08	.55
6			0	1.6	.75	18	38	17	.30	.27	.06	.20
7			0	.19	5.3	13	41	15	.30	.26	.05	.09
8			0	.16	6.8	8.7	40	12	.30	.26	.04	.06
9			0	.96	48	132	39	11	.30	.25	.04	.05
10			0	1.8	71	279	39	10	.30	.24	.05	.04
11			0	.51	11	261	38	9.1	.30	.24	.05	.05
12			0	.44	11	226	38	8.0	.30	.23	.04	.04
13			0	.44	11	173	36	7.0	.30	.22	.04	.04
14			0	3.6	6.1	7.3	35	5.4	.31	.23	.04	.05
15			0	8.8	4.5	6.0	43	4.4	.32	.21	.04	.04
16			0	27	3.5	4.0	54	1.9	.30	.20	.03	.04
17			0	5.8	2.9	3.3	53	1.3	.35	.20	.03	.06
18			0	1.9	2.5	3.0	52	1.0	.35	.19	.03	.06
19			0	3.2	2.3	2.7	48	.71	.35	.19	.03	.02
20			0	1.4	2.1	2.5	46	.71	.35	.18	.03	.01
21			0	1.1	2.1	3.5	43	.71	.45	.18	.03	.01
22			0	1.0	2.0	37	40	.71	.39	.17	.03	.01
23			0	.90	1.9	86	38	.62	.39	.17	.02	0
24			0	.81	1.8	110	36	.54	.38	.16	.02	0
25			0	.74	1.6	90	35	.47	.39	.16	.01	0
26			0	.72	1.5	89	34	.47	.41	.15	.01	0
27			1.5	.64	1.9	65	33	.47	.38	.15	.01	0
28			2.6	.64	7.7	7.3	30	.41	.35	.14	0	0
29			.07	.57	---	3.7	28	.35	.33	.14	0	0
30			.03	.57	---	5.7	27	.35	.32	.14	.01	0
31		---	.01	.57	---	20	---	.35	---	.13	.02	---
TOTAL	0	0	4.21	67.18	212.55	1886.7	1131	217.97	10.33	6.56	1.31	1.52
MEAN	0	0	.14	2.17	7.59	60.9	37.7	7.03	.34	.21	.042	.051
MAX	0	0	2.6	27	71	279	54	25	.45	.32	.13	.55
MIN	0	0	0	0	.50	2.5	23	.35	.30	.13	0	0
AC-FT	0	0	8.4	133	422	3740	2240	432	20	13	2.6	3.0
CAL YR 1977	TOTAL	40.28	MEAN	.11	MAX	7.3	MIN	0	AC-FT	80		
WTR YR 1978	TOTAL	3539.33	MEAN	9.70	MAX	279	MIN	0	AC-FT	7020		

VENTURA RIVER BASIN

11118500 VENTURA RIVER NEAR VENTURA, CA

LOCATION.--Lat 34°21'08", long 119°18'27", in southeast corner of Santa Ana Grant, Ventura County, on right bank 50 ft (15 m) downstream from bridge on Casitas Pass Road at Foster Memorial Park, 0.2 mi (0.3 km) downstream from Coyote Creek, and 5 mi (8 km) north of Ventura.

DRAINAGE AREA.--188 mi² (487 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to January 1914, October 1929 to current year; combined records of river and diversion, October 1932 to current year.

GAGE.--Water-stage recorder on river; water-stage recorder and Parshall flume on diversion. Datum of gage is 205.23 ft (62.554 m) Ventura County Flood Control datum. See WSP 1315-B for history of changes prior to Nov. 2, 1949. Nov. 2, 1949, to June 12, 1969, at site 450 ft (137 m) downstream at datum 4.00 ft (1.219 m) lower.

REMARKS.--Records fair. Flow partly regulated since March 1948 by Matilija Reservoir, usable capacity, 2,380 acre-ft (2.93 hm³) and since October 1959 by Casitas Reservoir, capacity, 267,000 acre-ft (329 hm³). Water diverted to Casitas Reservoir on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. AVERAGE DISCHARGE (River only) represents flow to ocean regardless of upstream development. For records of combined discharge of river and Ventura City diversion, see following page.

AVERAGE DISCHARGE.--River only: 51 years (water years 1912-13, 1930-78), 58.2 ft³/s (1.648 m³/s), 42,170 acre-ft/yr (52.0 hm³/yr).

Combined river and diversion: 46 years, 67.6 ft³/s (1.914 m³/s), 48,980 acre-ft/yr (60.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 63,600 ft³/s (1,800 m³/s) Feb. 10, 1978, gage height, 19.14 ft (5.834 m), from rating curve extended above 34,000 ft³/s (963 m³/s); maximum gage height, 24.3 ft (7.41 m) Jan. 25, 1969, present datum, from floodmarks; no flow at times in many years. Combined river and diversion: Maximum discharge, 63,600 ft³/s (1,800 m³/s) Feb. 10, 1978; no flow Nov. 28, 29, 1977.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 63,600 ft³/s (1,800 m³/s) Feb. 10, gage height, 19.14 ft (5.834 m), from rating curve extended as explained above; no flow for several months. Combined river and diversion: Maximum discharge, 63,600 ft³/s (1,800 m³/s) Feb. 10, no flow Nov. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.02	1.3	2220	674	274	180	65	27	12
2			0	0	1.2	1470	558	269	59	60	25	11
3			0	0	1.4	978	492	215	44	50	23	12
4			0	19	5.7	18500	534	114	44	48	26	15
5			0	13	50	5280	472	219	41	48	25	17
6			0	30	44	2470	482	183	167	50	25	22
7			0	.52	192	1510	485	269	49	48	23	15
8			0	.03	811	909	445	263	49	46	19	15
9			0	13	22000	942	418	185	71	44	19	15
10			0	62	20000	1090	392	81	133	44	18	15
11			0	9.5	865	919	379	108	246	44	20	12
12			0	1.0	567	797	373	232	92	41	22	11
13			0	.11	536	708	360	74	69	42	22	14
14			0	87	493	550	342	60	72	40	21	14
15			0	771	268	492	635	141	74	39	14	11
16			0	3100	154	451	638	144	87	37	14	14
17			0	797	102	331	479	153	76	35	14	15
18			0	71	112	132	438	103	79	36	14	12
19			0	89	98	128	405	202	76	34	16	7.7
20			0	32	83	137	392	105	62	34	16	13
21			0	18	70	338	366	237	67	33	12	11
22			0	11	66	887	354	162	67	31	12	10
23			0	7.1	60	576	336	52	65	31	13	12
24			0	4.9	57	535	330	41	60	27	12	13
25			0	3.9	49	479	336	40	58	25	12	9.6
26			0	3.6	46	465	324	36	58	24	16	8.0
27			77	3.1	47	414	301	36	65	26	16	9.4
28			148	2.2	268	330	301	40	58	28	12	7.0
29			13	2.1	---	216	296	116	60	29	7.0	8.3
30			1.5	2.2	---	269	290	155	60	29	9.3	11
31		---	.09	1.6	---	1080	---	183	---	25	14	---
TOTAL	0	0	239.59	5154.88	47047.6	45603	12627	4492	2388	1193	538.3	372.0
MEAN	0	0	7.73	166	1680	1471	421	145	79.6	38.5	17.4	12.4
MAX	0	0	148	3100	22000	18500	674	274	246	65	27	22
MIN	0	0	0	0	1.2	128	290	36	41	24	7.0	7.0
AC-FT	0	0	475	10220	93320	90450	25050	8910	4740	2370	1070	738
CAL YR 1977 TOTAL	642.78			MEAN 1.76	MAX 148	MIN 0	AC-FT 1270					
WTR YR 1978 TOTAL	119655.37			MEAN 328	MAX 22000	MIN 0	AC-FT 237300					

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA, CA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.4	4.2	3.5	14	2230	682	283	190	73	36	24
2	5.1	3.9	3.9	7.1	14	1480	564	280	68	68	36	21
3	5.0	4.0	3.7	8.0	11	987	502	226	54	60	37	20
4	5.0	3.9	3.5	28	11	18500	544	122	50	59	35	21
5	4.9	3.9	3.3	21	57	5280	482	229	51	61	34	31
6	4.8	3.8	3.2	40	54	2470	492	193	177	60	34	30
7	4.8	3.7	3.1	6.7	198	1510	492	279	62	58	33	28
8	4.8	3.7	2.7	6.9	821	912	455	271	59	56	32	24
9	4.8	3.7	2.2	23	22000	945	424	196	81	56	31	23
10	4.7	3.6	2.4	72	20000	1090	402	90	143	54	31	22
11	4.7	3.6	2.8	22	865	923	389	120	251	54	29	23
12	4.6	3.6	2.6	10	567	801	383	246	102	54	30	25
13	4.6	3.5	2.2	11	536	712	370	81	85	52	30	21
14	5.0	3.5	2.2	99	493	554	352	67	84	50	30	21
15	4.8	3.4	2.1	780	268	496	642	152	87	48	26	24
16	4.8	3.4	2.3	3110	154	455	644	156	97	46	26	20
17	4.8	3.4	2.3	807	102	335	489	165	87	44	27	21
18	4.4	3.4	2.3	75	112	135	448	114	84	45	24	23
19	4.9	3.3	2.3	94	98	131	415	215	89	43	24	22
20	4.6	3.3	2.2	41	83	145	403	115	78	43	24	21
21	4.5	3.2	2.2	25	78	348	375	243	79	43	24	23
22	4.7	3.2	2.0	17	74	893	362	170	79	39	24	23
23	4.9	3.2	1.9	18	64	583	345	60	77	39	22	20
24	4.5	3.2	2.1	18	65	545	340	53	73	37	24	19
25	4.8	3.1	2.1	15	57	489	346	49	70	38	24	24
26	4.9	3.1	2.1	11	56	470	334	46	69	38	21	22
27	5.8	1.4	79	13	56	424	313	44	75	38	20	19
28	4.4	0	156	19	274	339	312	49	73	36	27	22
29	3.7	0	24	12	---	223	303	123	71	37	25	20
30	3.8	1.3	9.4	9.7	---	278	297	166	70	37	21	19
31	4.4	---	7.6	11	---	1090	---	197	---	36	21	---
TOTAL	146.6	94.7	343.9	5433.9	47182	45773	12901	4800	2715	1502	862	676
MEAN	4.73	3.16	11.1	175	1685	1477	430	155	90.5	48.5	27.8	22.5
MAX	5.8	4.4	156	3110	22000	18500	682	283	251	73	37	31
MIN	3.7	0	1.9	3.5	11	131	297	44	50	36	20	19
AC-FT	291	188	682	10780	93590	90790	25590	9520	5390	2980	1710	1340
WTR YR 1977	TOTAL	3305.6	MEAN	9.06	MAX	156	MIN	0	AC-FT	6560		
WTR YR 1978	TOTAL	122430.1	MEAN	335	MAX	22000	MIN	0	AC-FT	242800		

VENTURA RIVER BASIN

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1907 to December 1908, water years 1967 to current year.

CHEMICAL ANALYSES: December 1907 to December 1908, water years 1967 to current year.

WATER TEMPERATURES: Water years 1969, 1971-73, 1975 to current year.

SEDIMENT RECORDS: Water years 1969-73, 1975 to current year.

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: October 1968 to September 1973, October 1974 to current year.

WATER TEMPERATURES: October 1968 to September 1969, October 1970 to September 1973, October 1975 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 32,000 mg/L (estimated) Jan. 25, 1969; minimum daily mean, no flow for many days most years.

SEDIMENT DISCHARGE: Maximum daily, 2,220,000 tons (2,010,000 metric tons), estimated, Jan. 25, 1969; minimum daily, 0 tons on many days most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 19,700 mg/L Mar. 4; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 1,300,000 tons (1,180,000 metric tons) Feb. 10; minimum daily, 0 tons many days.

REMARKS.--Zero bedload discharge observed for flows less than 81 ft³/s (2.29 m³/s).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
FEB 24...	1020	E60	1020	8.2	16.0	190	9.4	510	290	44	754
MAY 02...	1050	274	837	8.5	19.0	2	10.1	280	250	17	602
JUL 21...	1005	34	850	8.4	22.0	0	10.4	390	260	30	660

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	13.0	13.0	13.0	---	---	---	---	---
2			---	---	---	14.0	14.0	---	---	---	---	---
3			---	---	---	12.0	---	16.0	---	---	22.5	---
4			---	---	16.0	14.0	15.0	---	24.0	24.0	---	---
5			---	11.0	14.0	12.0	13.0	21.0	23.0	---	---	20.0
6			---	15.0	15.5	11.0	13.0	---	---	---	---	---
7			---	13.0	13.0	12.0	12.0	---	---	---	---	---
8			---	---	13.0	14.0	16.0	---	---	---	23.0	---
9			---	13.0	12.0	14.0	---	---	25.0	24.0	---	---
10			---	13.0	11.0	11.0	---	23.0	---	---	---	23.0
11			---	14.0	13.0	---	---	---	---	---	---	---
12			---	---	---	---	---	---	---	---	---	---
13			---	---	13.0	---	17.0	---	---	---	24.0	---
14			---	14.0	15.0	15.0	---	---	25.0	26.0	---	---
15			---	12.0	10.0	19.0	14.0	23.0	---	---	---	23.0
16			---	13.0	11.0	---	11.0	---	---	---	---	---
17			---	13.5	10.0	---	11.0	---	---	---	---	---
18			---	11.0	10.0	18.0	---	---	---	---	---	---
19			---	15.0	10.0	---	---	---	24.0	22.0	24.0	---
20			---	13.5	10.0	---	---	22.0	---	---	---	23.0
21			---	---	11.0	16.0	---	---	---	---	---	---
22			---	---	12.0	14.0	21.0	---	---	---	---	---
23			---	---	---	15.0	---	---	---	---	---	---
24			---	---	---	22.0	---	---	25.0	24.0	---	---
25			---	14.0	---	---	17.0	22.0	---	---	24.0	25.0
26			---	---	---	---	---	---	---	---	---	---
27			---	---	16.0	---	---	---	---	---	---	---
28			14.5	---	16.0	20.0	---	---	---	---	---	---
29			14.0	---	---	---	---	---	19.5	24.0	---	---
30			15.0	---	---	16.0	18.0	25.0	---	---	---	24.0
31			---	---	---	12.0	---	---	---	---	20.5	---
MONTH			---	---	---	---	---	---	---	---	---	---

B Estimated

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	0	0
2							0	0	0
3							0	0	0
4							0	0	0
5							0	0	0
6							0	0	0
7							0	0	0
8							0	0	0
9							0	0	0
10							0	0	0
11							0	0	0
12							0	0	0
13							0	0	0
14							0	0	0
15							0	0	0
16							0	0	0
17							0	0	0
18							0	0	0
19							0	0	0
20							0	0	0
21							0	0	0
22							0	0	0
23							0	0	0
24							0	0	0
25							0	0	0
26							0	0	0
27							77	204	234
28							148	576	300
29							13	56	2.5
30							1.5	15	.08
31							.09	10	0
TOTAL	0	0	0	0	0	0	239.59	---	536.58

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	.02	6	0	1.3	33	.12	2220	3250	24000
2	0	0	0	1.2	26	.08	1470	2030	9550
3	0	0	0	1.4	18	.07	978	1370	4970
4	19	76	15	5.7	11	.17	18500	19700	1160000
5	13	95	4.0	50	258	54	5280	5210	84800
6	30	145	25	44	202	34	2470	2030	14000
7	.52	24	.07	192	856	1210	1510	659	2710
8	.03	10	0	811	1120	12700	909	521	1260
9	13	71	11	22000	8900	760000	942	690	1880
10	62	225	41	20000	16200	1300000	1090	1180	3470
11	9.5	47	1.5	865	2410	6940	919	950	2360
12	1.0	19	.07	567	630	964	797	770	1660
13	.11	10	0	536	820	1190	708	546	1050
14	87	419	635	493	667	915	550	400	594
15	771	1700	6310	268	460	437	492	390	518
16	3100	3800	81800	154	650	270	451	380	463
17	797	1480	5850	102	580	160	331	288	279
18	71	185	39	112	500	151	132	190	68
19	89	363	129	98	180	48	128	180	62
20	32	105	9.0	83	260	58	137	435	164
21	18	82	4.4	70	200	38	338	404	364
22	11	50	1.5	66	650	116	887	1640	5070
23	7.1	38	.73	60	770	125	576	403	673
24	4.9	25	.33	57	840	129	535	420	607
25	3.9	13	.14	49	840	111	479	300	388
26	3.6	13	.13	46	800	99	465	230	289
27	3.1	12	.10	47	826	108	414	153	174
28	2.2	12	.07	268	1680	2430	330	90	80
29	2.1	11	.06	---	---	---	216	43	25
30	2.2	11	.07	---	---	---	269	205	287
31	1.6	22	.10	---	---	---	1080	1100	3460
TOTAL	5154.88	---	94877.27	47047.6	---	2088287	45603	---	1325275

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	674	168	314	274	29	21	180	5	2.4
2	558	120	181	269	34	25	59	4	.64
3	492	110	146	215	38	22	44	4	.48
4	534	190	285	114	38	12	44	4	.48
5	472	158	201	219	37	22	41	4	.44
6	482	140	186	183	36	18	167	3	1.4
7	485	167	219	269	35	25	49	3	.40
8	445	205	246	263	33	23	49	2	.26
9	418	165	186	185	32	16	71	2	.38
10	392	110	116	81	31	6.8	133	2	.72
11	379	75	77	108	31	9.0	246	3	2.0
12	373	52	52	232	30	19	92	3	.75
13	360	40	39	74	30	6.0	69	4	.75
14	342	38	35	60	29	4.7	72	4	.78
15	635	314	789	141	29	11	74	4	.80
16	638	205	374	144	26	10	87	3	.70
17	479	172	222	153	22	9.1	76	3	.62
18	438	190	225	103	19	5.3	79	2	.43
19	405	173	189	202	15	8.2	76	2	.41
20	392	143	151	105	12	3.4	62	2	.33
21	366	103	102	237	14	9.0	67	2	.36
22	354	86	82	162	15	6.6	67	3	.54
23	336	69	63	52	17	2.4	65	3	.53
24	330	52	46	41	18	2.0	60	3	.49
25	336	35	32	40	20	2.2	58	3	.47
26	324	33	29	36	17	1.7	58	3	.47
27	301	31	25	36	14	1.4	65	2	.35
28	301	29	24	40	11	1.2	58	2	.31
29	296	27	22	116	8	2.5	60	2	.32
30	290	25	20	155	5	2.1	60	3	.49
31	---	---	---	183	5	2.5	---	---	---
TOTAL	12627	---	4678	4492	---	310.1	2388	---	19.50
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	65	3	.53	27	17	1.2	12	19	.62
2	60	4	.65	25	19	1.3	11	21	.62
3	50	4	.54	23	20	1.2	12	22	.71
4	48	5	.65	26	18	1.3	15	24	.97
5	48	5	.65	25	16	1.1	17	26	1.2
6	50	5	.68	25	14	.94	22	26	1.5
7	48	4	.52	23	12	.75	15	24	.97
8	46	4	.50	19	10	.51	15	22	.89
9	44	4	.48	19	14	.72	15	19	.77
10	44	7	.83	18	18	.87	15	17	.69
11	44	10	1.2	20	22	1.2	12	15	.49
12	41	12	1.3	22	26	1.5	11	13	.39
13	42	15	1.7	22	30	1.8	14	10	.38
14	40	18	1.9	21	29	1.6	14	8	.30
15	39	16	1.7	14	27	1.0	11	6	.18
16	37	13	1.3	14	26	.98	14	6	.23
17	35	11	1.0	14	25	.94	15	7	.28
18	36	8	.78	14	23	.87	12	7	.23
19	34	6	.55	16	22	.95	7.7	8	.17
20	34	7	.64	16	20	.86	13	8	.28
21	33	8	.71	12	19	.62	11	9	.27
22	31	10	.84	12	17	.55	10	9	.24
23	31	11	.92	13	15	.53	12	10	.32
24	27	12	.87	12	14	.45	13	10	.35
25	25	12	.81	12	12	.39	9.6	11	.29
26	24	12	.78	16	13	.56	8.0	11	.24
27	26	13	.91	16	14	.60	9.4	11	.28
28	28	13	.98	12	14	.45	7.0	11	.21
29	29	13	1.0	7.0	15	.28	8.3	11	.25
30	29	14	1.1	9.3	16	.40	11	11	.33
31	25	16	1.1	14	17	.64	---	---	---
TOTAL	1193	---	28.12	538.3	---	27.06	372.0	---	14.65
YEAR 119655.4			3514054						

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1977	0.0	0.0	0	0
NOVEMBER ...	0.0	0.0	0	0
DECEMBER ...	239.59	536.58	16	553
JANUARY 1978	5154.88	94877.27	15400	110000
FEBRUARY ...	47047.60	2088287.44	166000	2250000
MARCH	45603.00	1325275.00	141000	1470000
APRIL	12627.00	4678.00	6860	11500
MAY	4492.00	310.10	654	964
JUNE	2388.00	19.50	149	168
JULY	1193.00	28.12	15	43
AUGUST	538.30	27.06	2	29
SEPTEMBER ..	372.00	14.65	1	16
TOTAL	119655.37	3514053.72	330097	3843273

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
DEC 28...	0920	14.5	226	539	329	--	80	90	97	97	--
JAN 06...	1155	15.0	60	241	39	70	86	95	99	99	--
06...	1400	15.0	29	198	16	73	86	93	94	95	--
15...	0810	12.0	1090	2150	6330	--	48	64	80	93	--
16...	1645	13.0	15000	14200	575000	--	36	39	53	68	80
17...	1130	13.5	582	859	1350	--	53	66	77	83	--
FEB 09...	1625	15.0	3780	12500	128000	--	26	36	47	60	--
MAR 01...	0815	13.0	1690	5570	25400	--	24	32	41	53	66
04...	1630	14.0	11600	18400	576000	--	25	36	49	63	--

VENTURA RIVER BASIN

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 28...	98	--	99	--	99	--	100	--	--	--
JAN 06...	100	--	--	--	--	--	--	--	--	--
06...	95	--	97	--	100	--	--	--	--	--
15...	97	--	98	--	99	--	99	--	100	--
16...	--	94	--	99	--	100	--	--	--	--
17...	88	--	92	--	96	--	99	--	100	--
FEB 09...	74	--	88	--	96	--	98	--	99	99
MAR 01...	--	79	--	94	--	99	--	100	--	--
04...	73	--	83	--	94	--	99	--	100	--

PARTICLE-SIZE DISTRIBUTION OF BED SEDIMENT IN TRANSIT WITHIN 0.25 FT OF BED SURFACE,
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
DEC 28...	0940	14.5	25	226	48	15	--	0
JAN 17...	1210	13.5	37	582	172	92	0	1
FEB 14...	1345	15.0	17	480	83	250	--	0
MAR 14...	1055	15.0	20	565	100	86	--	0
24...	1500	22.0	20	550	95	75	--	1

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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
DEC 28...	2	8	13	17	20	24	32	100
JAN 17...	13	71	92	76	98	99	100	--
FEB 14...	2	8	15	27	44	59	86	100
MAR 14...	6	33	52	57	62	69	82	100
24...	11	46	69	74	76	78	82	100

11119530 FRANKLIN CREEK AT CARPINTERIA, CA

LOCATION (REVISED).---Lat 34°24'17", long 119°31'05", in Pueblo Lands of Santa Barbara, Santa Barbara County, on right bank 20 ft (6 m) downstream from Malibu Drive bridge, 0.5 mi (0.8 km) north of Carpinteria, and 0.9 mi (1.4 km) upstream from mouth.

DRAINAGE AREA.--1.81 mi² (4.69 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to September 1978 (discontinued).

GAGE.--Water-stage recorder and concrete channel. Altitude of gage is 30 ft (9 m), from topographic map. Prior to Aug. 29, 1977, at site 300 ft (90 m) downstream at different datum.

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

AVERAGE DISCHARGE.--8 years, 0.87 ft³/s (0.025 m³/s), 630 acre-ft/yr (777,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft³/s (45.3 m³/s) Dec. 27, 1971, gage height, 6.1 ft (1.86 m), from floodmark, datum then in use, from rating curve extended above 25 ft³/s (0.71 m³/s) on basis of computation of flow in concrete channel; minimum daily, 0.01 ft³/s (<0.001 m³/s) Oct. 1 to Nov. 24, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended above 4.0 ft³/s (0.11 m³/s) on basis of theoretical computation of flow in concrete channel:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 28	0700	178	5.04	2.08	0.634	Feb. 9	2300	*1210	34.3	3.95	1.204
Jan. 16	1445	518	14.7	2.86	0.872	Mar. 4	0500	593	16.8	3.00	0.914

Minimum daily discharge, 0.02 ft³/s (0.001 m³/s) July 14, 16-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.06	.25	.17	.27	5.1	1.6	.56	.27	.25	.11	.38
2	.11	.12	.20	.12	.30	8.8	1.1	.42	.27	.25	.11	.53
3	.11	.26	.20	.59	.31	5.5	.88	.52	.38	.25	.16	.88
4	.11	.32	.20	7.5	.38	126	1.6	.38	.38	.24	.18	2.9
5	.12	.39	.18	.31	1.1	14	.84	.38	.38	.24	.21	3.0
6	.07	.04	.23	6.0	.36	4.8	1.4	.38	.38	.23	.26	.47
7	.07	.04	.27	.29	4.6	2.6	.89	.26	.37	.23	.20	.24
8	.07	.14	.27	.22	7.4	1.9	.78	.26	.36	.22	.23	.21
9	.10	.16	.27	3.4	177	3.2	.72	.38	.36	.14	.29	.11
10	.12	.05	.28	1.3	89	1.7	.74	.26	.35	.08	.26	.13
11	.04	.07	.33	.27	3.7	1.4	.64	.38	.35	.06	.18	.15
12	.05	.07	.38	.27	3.9	1.3	.55	.38	.34	.06	.22	.14
13	.05	.07	.38	.20	3.7	1.1	.53	.38	.34	.07	.20	.13
14	.07	.08	.40	7.5	1.7	1.1	.53	.38	.33	.02	.22	.14
15	.07	.13	.47	7.0	1.3	.98	4.2	.26	.32	.04	.21	.13
16	.05	.07	.40	68	1.0	.88	1.5	.26	.32	.02	.21	.10
17	.04	.05	1.7	13	.87	.88	.77	.38	.32	.02	.18	.11
18	.06	.11	.35	2.7	.72	.88	.69	.26	.31	.02	.15	.10
19	.07	.04	.11	4.3	.60	.88	.64	.26	.30	.02	.17	.09
20	.07	.04	.14	.86	.53	.72	.58	.26	.30	.04	.11	.10
21	.04	.03	.20	.54	.43	1.0	.59	.18	.29	.04	.14	.10
22	.06	.04	.23	.38	.38	2.8	.53	.18	.29	.04	.20	.10
23	.08	.04	.35	.27	.38	1.1	.55	.18	.29	.05	.25	.07
24	.10	.04	.34	.27	.30	.88	.53	.18	.28	.04	.29	.07
25	.15	.04	.26	.27	.59	.77	.52	.18	.28	.05	.38	.07
26	.13	.06	.55	.27	.31	.72	.38	.18	.27	.08	.88	.10
27	.11	.07	8.7	.27	.18	.72	.38	.21	.27	.10	.53	.11
28	.13	.15	32	.27	1.6	.72	.38	.21	.26	.06	.18	.14
29	.18	.11	.37	.23	---	.74	.38	.34	.26	.07	.18	.12
30	.22	.21	.25	.26	---	2.4	.49	.30	.26	.08	.18	.12
31	.04	---	.18	.27	---	8.6	---	.27	---	.07	.27	---
TOTAL	2.80	3.10	50.44	127.30	302.91	204.17	25.91	9.41	9.48	3.18	7.34	11.04
MEAN	.090	.10	1.63	4.11	10.8	6.59	.86	.30	.32	.10	.24	.37
MAX	.22	.39	.32	.68	.177	.126	4.2	.56	.38	.25	.88	3.0
MIN	.04	.03	.11	.12	.18	.72	.38	.18	.26	.02	.11	.07
AC-FT	5.6	6.1	100	252	601	405	51	19	19	6.3	15	22
CAL YR 1977	TOTAL 182.75	MEAN .50	MAX 32	MIN .03	AC-FT 362							
WTR YR 1978	TOTAL 757.08	MEAN 2.07	MAX 177	MIN .02	AC-FT 1500							

FRANKLIN CREEK BASIN

11119530 FRANKLIN CREEK AT CARPINTERIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT						
03...	1450	.10	1500	8.6	24.5	1020
NOV						
02...	1330	.09	1540	8.5	21.0	916
30...	1250	.07	1420	8.3	18.0	799
DEC						
30...	0845	.09	1800	8.2	15.0	964
FEB						
01...	1500	.10	1700	8.6	20.0	968
APR						
10...	1115	.71	1320	8.0	24.5	498
MAY						
02...	1345	.41	1320	8.0	27.5	803
31...	1355	.28	1500	7.7	21.0	1030
JUL						
07...	1456	.20	1510	8.6	29.4	1050
AUG						
03...	1335	.19	1600	8.6	25.0	--
25...	1420	.38	1235	8.3	30.5	883

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
AUG										
03...	1335	.19	1600	8.6	25.0	580	68	99	130	33

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
AUG										
03...	2.4	1.3	320	310	63	.9	14	33	.01	.03

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	2.0	97	24	4.6	1.1			0
2		0	0	0	2.0	117	16	4.5	1.0			0
3		0	0	2.5	2.0	89	9.8	4.3	.92			0
4		0	0	3.9	2.3	879	20	4.2	.87			2.2
5		.51	0	.18	9.9	163	14	4.0	.82			4.5
6		0	0	7.6	6.1	77	13	3.8	.77			0
7		0	0	.75	46	43	11	3.6	.75			0
8		0	0	.18	112	31	9.8	3.4	.68			0
9		0	0	13	524	34	8.4	3.2	.66			0
10		0	0	255	356	26	7.0	8.0	.67			0
11		0	0	12	58	17	5.7	14	.68			0
12		0	0	4.3	126	15	5.2	12	.69			0
13		0	0	2.2	71	14	4.6	10	.70			0
14		0	0	219	38	14	20	8.5	.70			0
15		0	0	132	26	13	69	7.0	9.0			0
16		0	0	386	17	10	29	6.1	.72			0
17		0	2.2	98	13	9.0	15	5.4	.62			0
18		0	.08	25	11	8.0	12	4.5	.50			0
19		0	0	25	9.8	7.0	11	4.0	.41			0
20		0	0	12	9.0	6.5	9.8	3.5	.32			0
21		0	0	3.0	8.0	12	8.0	3.2	.26			0
22		0	0	3.0	7.5	81	6.2	2.8	.23			0
23		0	0	3.0	6.7	18	5.6	2.6	.19			0
24		0	0	2.5	6.2	11	5.0	2.2	.23			0
25		0	.01	2.5	5.7	8.0	6.0	2.0	.27			0
26		0	.95	2.5	5.4	6.0	5.8	1.8	.31			0
27		0	37	2.5	5.0	4.5	5.5	1.6	.36			0
28		0	231	2.5	50	4.0	5.3	1.5	.23			0
29		0	.34	2.5	---	10	5.0	1.4	.14			0
30		0	0	2.0	---	37	4.7	1.3	.01			0
31		---	0	2.0	---	69	---	1.2	---			---
TOTAL	0	.51	271.58	1226.61	1535.6	1930.0	371.4	140.2	24.81	0	0	6.7
MEAN	0	.017	8.76	39.6	54.8	62.3	12.4	4.52	.83	0	0	.22
MAX	0	.51	231	386	524	879	69	14	9.0	0	0	4.5
MIN	0	0	0	0	2.0	4.0	4.6	1.2	.01	0	0	0
AC-FT	0	1.0	539	2430	3050	3830	737	278	49	0	0	13
CAL YR 1977	TOTAL	391.31	MEAN	1.07	MAX 231	MIN 0	AC-FT	776				
WTR YR 1978	TOTAL	5507.41	MEAN	15.1	MAX 879	MIN 0	AC-FT	10920				

11119760 VICTORIA STREET DRAIN AT OUTLET, AT SANTA BARBARA, CA

LOCATION.--Lat 34°25'09", long 119°42'36", in Pueblo Lands of Santa Barbara, Santa Barbara County, near downstream end of culvert at intersection of Euclid Avenue and Victoria Street in Santa Barbara.

DRAINAGE AREA.--0.625 mi² (1.619 km²).

PERIOD OF RECORD.--October 1970 to Sept. 30, 1978 (discontinued). Prior to October 1972, published as "near Santa Barbara."

GAGE.--Water-stage recorder and culvert control. Datum of gage is 58.69 ft (17.889 m) Santa Barbara County Flood Control and Water Conservation District datum.

REMARKS.--Records fair. Flow is from street drainage. During periods of heavy rainfall flood gates on the upper end of this watershed could be closed which would reduce the drainage area by 140 acres (567,000 m²).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 296 ft³/s (8.38 m³/s) Feb. 9, 1978, gage height, 5.61 ft (1.710 m); no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 4.26 ft (1.298 m), from floodmark, discharge, 178 ft³/s (5.04 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 296 ft³/s (8.38 m³/s) Feb. 9, gage height, 5.61 ft (1.710 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	0	5.7	.16	0	0			0
2		0	0	0	0	5.2	.01	.01	0			0
3		0	0	.49	.03	4.4	0	.01	0			.04
4		0	0	1.2	0	33	1.2	0	0			1.4
5		.37	0	.09	1.9	2.4	0	0	0			1.7
6		0	0	1.7	.23	.52	.67	0	0			.02
7		0	0	0	6.1	.13	0	0	0			0
8		0	0	0	13	.03	0	0	0			0
9		0	0	2.7	30	1.8	0	0	0			0
10		0	0	21	7.0	.15	0	0	0			0
11		0	0	.39	.45	.02	0	.11	0			0
12		0	0	.01	6.0	0	0	.07	0			0
13		0	0	0	1.2	0	0	0	0			0
14		0	0	16	.13	0	0	0	0			0
15		0	0	3.5	.01	0	4.8	0	.01			0
16		0	0	22	0	0	.17	0	0			0
17		0	1.5	4.5	0	0	0	0	0			.15
18		0	.06	.58	0	0	0	0	0			0
19		0	0	1.7	0	0	0	0	0			0
20		0	0	.06	0	0	0	0	0			0
21		0	.05	0	0	1.9	0	0	0			0
22		0	0	0	0	5.4	0	0	0			0
23		0	0	0	0	.10	.07	0	0			0
24		0	0	0	0	0	.06	0	0			0
25		0	.12	0	0	0	.33	0	0			0
26		0	.60	0	0	0	.01	0	0			0
27		0	9.8	0	.17	0	.08	0	0			0
28		0	14	0	4.4	0	.02	0	0			0
29		0	.06	0	---	.38	0	0	0			0
30		0	0	0	---	3.7	0	0	0			0
31		---	0	0	---	2.8	---	0	---			---
TOTAL	0	.37	26.19	75.92	70.62	67.63	7.58	.20	.01	0	0	3.31
MEAN	0	.012	.84	2.45	2.52	2.18	.25	.007	.0003	0	0	.11
MAX	0	.37	14	22	30	33	4.8	.11	.01	0	0	1.7
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.7	52	151	140	134	15	.4	.02	0	0	6.6
CAL YR 1977	TOTAL	56.38	MEAN .15	MAX 14	MIN 0	AC-FT 112						
WTR YR 1978	TOTAL	251.83	MEAN .69	MAX 33	MIN 0	AC-FT 500						

11119780 ARROYO BURRO CREEK AT SANTA BARBARA, CA

LOCATION.--Lat 34°26'13", long 119°44'44", in Pueblo Lands of Santa Barbara, Santa Barbara County, on right bank 0.4 mi (0.6 km) south of State Street on Hope Avenue in Santa Barbara.

DRAINAGE AREA.--6.65 mi² (17.22 km²).

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WDR CA-76-1: 1974, 1975 (M).

GAGE.--Water-stage recorder. Concrete-lined channel with a low-water control. Altitude of gage is 160 ft (49 m), from topographic map.

REMARKS.--Records fair. Small amount of inflow occurs at times from large shopping center that empties water directly into the stream. Partial regulation by Lauro Canyon Reservoir on San Roque Creek.

AVERAGE DISCHARGE.--8 years, 2.78 ft³/s (0.079 m³/s), 2,010 acre-ft/yr (2.48 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) Mar. 4, 1978, gage height, 5.67 ft (1.728 m), from rating curve extended above 50 ft³/s (1.42 m³/s) on basis of computation of flow in trapezoidal section; no flow many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 28	0700	1070	30.3	4.43	1.350	Feb. 12	2045	524	14.8	3.31	1.009
Jan. 10	1215	906	25.7	4.12	1.256	Mar. 4	0500	*1850	52.4	5.67	1.728
Jan. 16	1545	1390	39.4	4.96	1.512	Mar. 22	0645	830	23.5	3.97	1.210
Feb. 9	2115	1110	31.4	4.50	1.372						

Minimum daily discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.03	.03	.21	.81	61	9.1	2.3	.49	0	0	0
2	0	0	.03	.24	.70	119	6.7	2.3	.38	0	0	0
3	0	0	.03	3.2	.60	61	5.9	2.2	.30	0	0	0
4	.01	.03	.05	5.0	.53	585	10	1.9	.26	0	0	2.2
5	0	1.1	.05	.56	8.5	153	5.6	1.8	.26	0	0	4.6
6	.02	0	.03	6.5	4.4	58	7.3	1.5	.24	0	0	.27
7	0	0	0	.13	.49	31	5.5	1.4	.25	0	0	.02
8	.03	0	0	.01	129	21	4.9	1.3	.21	0	.01	0
9	.03	0	.01	16	266	29	4.4	1.3	.21	0	0	0
10	.03	.06	0	174	220	15	4.7	1.4	.22	0	.03	.01
11	.01	0	0	8.5	45	11	5.0	1.1	.28	0	.01	0
12	.01	.01	.01	3.0	141	8.7	4.7	1.0	.20	0	0	.01
13	0	0	.01	1.8	72	7.5	4.4	.92	.13	0	0	.01
14	0	.01	.01	106	25	6.8	4.1	.88	0	0	0	.01
15	0	.08	.02	94	16	6.2	32	.89	.01	0	0	0
16	.03	.34	.02	243	12	5.6	10	1.0	0	0	0	.01
17	.03	.24	4.0	59	8.9	4.8	7.5	.80	0	0	.04	.02
18	.05	.49	.13	17	7.2	4.3	6.6	.73	0	0	0	.03
19	.05	.58	.05	20	6.1	3.9	5.8	.68	0	0	0	.01
20	0	.01	.02	7.8	5.0	3.6	5.3	.70	0	0	0	0
21	0	.01	.27	5.7	4.3	9.7	4.8	.78	0	0	0	0
22	0	.01	.03	4.4	3.7	68	4.3	.85	0	0	0	0
23	.03	0	.15	3.5	3.2	8.2	4.0	.79	0	0	0	0
24	.03	0	.06	2.8	2.9	6.1	3.8	.51	.01	0	0	.01
25	.03	0	.52	2.5	2.6	5.3	5.2	.51	.02	0	0	0
26	.03	0	2.8	2.3	2.4	4.7	3.4	.51	0	.01	0	0
27	.03	.01	36	1.8	2.8	4.4	3.2	.42	0	.02	0	0
28	.03	.01	115	1.4	43	4.2	3.1	.34	0	0	0	0
29	.05	0	1.5	1.2	---	6.1	2.8	.34	0	0	0	.02
30	.03	.01	.57	1.0	---	30	2.4	.27	0	0	0	.03
31	0	---	.34	.91	---	28	---	.30	---	0	0	---
TOTAL	.57	3.03	161.74	793.46	1082.64	1370.1	186.5	31.72	3.47	.03	.09	7.26
MEAN	.018	.10	5.22	25.6	38.7	44.2	6.22	1.02	.12	.001	.003	.24
MAX	.05	1.1	115	243	266	585	32	2.3	.49	.02	.04	4.6
MIN	0	0	0	.01	.53	3.6	2.4	.27	0	0	0	0
AC-FT	1.1	6.0	321	1570	2150	2720	370	63	6.9	.06	.2	14

CAL YR 1977 TOTAL 305.50 MEAN .84 MAX 115 MIN 0 AC-FT 606
WTR YR 1978 TOTAL 3640.61 MEAN 9.97 MAX 585 MIN 0 AC-FT 7220

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA

LOCATION.--Lat 34°26'42", long 119°48'10", in Goleta Grant, Santa Barbara County, on right bank at University Drive, 0.2 mi (0.3 km) east of Patterson Avenue, and 1.5 mi (2.4 km) northeast of Goleta.

DRAINAGE AREA.--6.35 mi² (16.4 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 60 ft (18 m), from topographic map.

REMARKS.--Records fair. No regulation. Some pumping for irrigation.

AVERAGE DISCHARGE.--8 years, 1.87 ft³/s (0.053 m³/s), 1,350 acre-ft/yr (1.66 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) Jan. 16, 1978, gage height, 5.87 ft (1.789 m), from rating curve extended above 290 ft³/s (8.21 m³/s) on basis of slope-area measurement of peak flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft³/s (2.12 m³/s) and maximum (*), from rating curve extended above 290 ft³/s (8.21 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	Unknown	246 6.97	2.50 0.762	Mar. 4	0430	1200 34.0	4.48 1.366
Jan. 10	Unknown	490 13.9	3.00 0.914	Mar. 9	1715	111 3.14	2.13 0.649
Jan. 16	1515	*1650 46.7	5.87 1.789	Mar. 22	0630	265 7.50	2.51 0.765
Feb. 9	2200	1020 28.9	4.07 1.241	Mar. 31	0715	163 4.62	2.31 0.704
Feb. 12	1945	695 19.7	3.40 1.036				

Minimum daily discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	1.0	46	9.2	1.9	.57	0	0	0
2		0	0	0	.95	100	6.3	1.7	.40	0	0	0
3		0	0	.42	.95	43	4.6	1.7	.42	0	0	0
4		0	0	.55	1.2	429	2.6	1.5	.52	0	0	.93
5		.02	0	.30	3.7	80	4.1	1.2	.50	0	0	1.3
6		0	0	3.8	5.3	37	6.4	1.1	.31	0	0	.03
7		0	0	.27	24	24	7.7	1.0	.24	0	0	0
8		0	0	.10	104	18	6.6	.92	.35	0	0	0
9		0	0	10	309	29	5.1	.78	.30	0	0	0
10		0	0	90	193	19	4.3	.80	.29	0	0	0
11		0	0	10	32	13	3.8	.83	.63	0	0	0
12		0	0	1.3	121	11	3.7	.69	.76	0	0	0
13		0	0	.70	51	9.4	3.5	.73	.25	0	0	0
14		0	0	101	22	8.3	3.3	.62	.20	0	0	0
15		0	0	63	15	7.2	16	.60	.17	0	0	0
16		0	0	258	12	6.3	7.7	.43	.18	0	.09	0
17		0	.12	34	9.0	5.5	4.7	.56	.04	0	.24	0
18		0	0	9.1	7.4	5.1	4.4	.37	0	0	.13	0
19		0	0	9.5	6.4	5.1	3.7	.30	0	0	0	0
20		0	0	3.7	5.3	4.7	3.1	.54	0	0	.17	0
21		0	.01	3.0	4.4	5.5	3.1	.57	0	0	.08	0
22		0	0	2.5	3.8	36	3.1	.70	0	0	.07	0
23		0	0	2.2	3.3	8.8	2.9	.43	0	0	.01	0
24		0	0	1.9	2.9	5.7	2.6	.57	0	.05	0	0
25		0	.01	1.6	2.6	4.6	2.9	.64	0	0	0	0
26		0	.13	1.5	2.3	3.8	2.6	.50	0	0	0	0
27		0	10	1.5	2.0	3.2	2.6	.63	0	0	0	0
28		0	50	1.3	23	2.8	2.2	.62	.20	0	0	0
29		0	1.9	1.2	---	3.1	2.1	.55	.49	0	0	0
30		0	.43	1.1	---	13	1.9	.53	.58	0	0	0
31		---	.08	1.0	---	32	---	.50	---	0	0	---
TOTAL	0	.02	62.68	614.54	968.50	1019.1	136.8	24.51	7.40	.05	.79	2.26
MEAN	0	.0007	2.02	19.8	34.6	32.9	4.56	.79	.25	.002	.026	.075
MAX	0	.02	50	258	309	429	16	1.9	.76	.05	.24	1.3
MIN	0	0	0	0	.95	2.8	1.9	.30	0	0	0	0
AC-FT	0	.04	124	1220	1920	2020	271	49	15	.10	1.6	4.5
CAL YR 1977	TOTAL	104.77	MEAN	.29	MAX	50	MIN	0	AC-FT	208		
WTR YR 1978	TOTAL	2836.65	MEAN	7.77	MAX	429	MIN	0	AC-FT	5630		

11120000 ATASCADERO CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°25'29", long 119°48'39", in La Goleta Grant, Santa Barbara County, on downstream side of center pier of county road bridge 100 ft (30 m) downstream from Maria Ygnacio Creek, 1.3 mi (2.1 km) upstream from mouth, and 1.3 mi (2.1 km) southeast of Goleta.

DRAINAGE AREA.--18.9 mi² (49.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1947, published as Alascadero Creek near Goleta.

GAGE.--Water-stage recorder. Datum of gage is 10.59 ft (3.228 m) Santa Barbara County datum. Prior to Oct. 1, 1976, at same site, datum 2.00 ft (0.610 m) higher. Prior to Dec. 14, 1967, at site 275 ft (84 m) downstream, datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair. No regulation above station. Small diversions for irrigation above station. Some low flow results from return irrigation waste water.

AVERAGE DISCHARGE.--37 years, 4.68 ft³/s (0.133 m³/s), 3,390 acre-ft/yr (4.18 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,380 ft³/s (152 m³/s) Jan. 18, 1973, gage height, 13.1 ft (3.99 m), from rating curve extended above 2,300 ft³/s (65.1 m³/s); maximum gage height, 13.3 ft (4.05 m), from floodmark, Dec. 3, 1974, datum then in use; no flow some days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended above 700 ft³/s (19.8 m³/s):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0845	704 19.9	5.48 1.670	Mar. 4	0400 †	3670 † 104	8.00 † 2.438
Jan. 10	1245	979 27.7	5.85 1.783	Mar. 9	1815	418 11.8	3.83 1.167
Jan. 16	1515	*4310 122	8.47 2.582	Mar. 22	0715	945 26.8	4.70 1.433
Feb. 9	2230	2610 73.9	7.11 2.167	Mar. 31	0815	512 14.5	3.87 1.180
Feb. 12	1815	1390 39.4	5.72 1.743	Apr. 15	1245	153 4.33	2.81 0.856

Minimum daily discharge, no flow many days.

† Estimated.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	.07	2.2	113	42	5.1	1.6	.02	0	0
2		0	0	.10	2.2	238	31	4.8	1.3	.03	.01	0
3		0	.15	3.2	2.3	81	26	4.8	1.1	.01	.02	0
4		0	.20	4.7	2.5	943	43	4.7	1.0	.01	.01	5.4
5		.49	.11	1.3	33	151	23	4.5	.81	.02	.02	12
6		.42	0	20	35	90	28	3.9	.79	.04	.01	1.4
7		.06	.01	.57	136	61	24	3.6	.58	.15	0	.20
8		.02	.05	0	256	47	20	3.5	.40	.14	0	.15
9		.05	.07	.44	516	120	15	3.4	.42	.30	0	.35
10		0	.01	256	341	42	12	3.2	.61	.09	1.8	.05
11		0	0	20	63	32	11	3.3	.31	.25	.52	.02
12		.08	0	4.2	231	28	11	3.1	.32	.32	.01	.02
13		.23	0	2.0	89	24	10	3.1	.23	.05	.01	1.4
14		.03	0	273	41	24	9.3	2.8	.03	.03	.07	.50
15		0	0	130	30	22	48	3.0	.05	.01	.03	.20
16		0	0	554	25	20	21	2.6	.01	.01	.03	.96
17		0	1.6	78	21	19	13	2.4	.02	.01	.02	.04
18		0	4.1	36	18	17	12	2.2	.03	.16	.01	.03
19		0	.16	46	16	16	11	1.9	.02	1.6	.03	.01
20		.02	.05	15	13	15	9.8	1.9	.03	.75	.01	.01
21		.02	.29	11	12	28	8.8	1.8	.05	.02	0	.01
22		0	.65	9.1	11	169	7.9	1.8	.02	.02	.01	.01
23		.04	.58	7.7	8.9	50	7.3	1.7	.02	.01	0	.01
24		.04	.28	6.7	7.9	39	7.2	1.6	.04	.02	0	.01
25		.04	.42	5.9	7.6	34	10	1.5	.02	.02	0	.01
26		.06	4.5	5.2	7.2	30	7.0	1.5	.01	.01	0	.01
27		.09	63	4.5	8.3	28	6.3	1.4	.02	.01	0	.01
28		.07	216	4.1	61	26	5.7	1.3	.07	0	0	.01
29		0	5.8	3.6	---	28	5.4	1.0	.04	0	0	.01
30		0	.77	3.1	---	87	5.3	.63	.03	0	0	.01
31		---	.49	2.9	---	143	---	.82	---	0	0	---
TOTAL	0	1.76	299.29	1551.94	1997.1	2765	491.0	82.85	9.98	4.11	2.62	22.84
MEAN	0	.059	9.65	50.1	71.3	89.2	16.4	2.67	.33	.13	.085	.76
MAX	0	.49	216	554	516	943	48	5.1	1.6	1.6	1.8	12
MIN	0	0	0	0	2.2	15	5.3	.63	.01	0	0	0
AC-FT	0	3.5	594	3080	3960	5480	974	164	20	8.2	5.2	45
CAL YR 1977	TOTAL	606.01	MEAN	1.66	MAX	216	MIN	0	AC-FT	1200		
WTR YR 1978	TOTAL	7228.49	MEAN	19.8	MAX	943	MIN	0	AC-FT	14340		

ATASCADERO CREEK BASIN

11120000 ATASCADERO CREEK NEAR GOLETA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC						
18...	1010	4.5	850	7.5	8.0	--
JAN						
09...	1600	68	240	7.8	13.0	135
MAR						
22...	1340	149	500	8.6	16.0	308
APR						
10...	1345	12	900	8.3	20.0	622
MAY						
01...	1155	5.9	985	8.0	19.5	655
30...	1443	1.1	1260	8.2	28.5	929
JUN						
27...	1230	.02	2120	7.8	20.0	1670
AUG						
02...	1230	.03	2190	8.3	27.5	--
25...	1200	.01	2580	8.2	28.0	1880

11120000 ATASCADERO CREEK NEAR GOLETA, CA--Continued

WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 18...	1010	4.5	850	7.5	8.0	250	130	70
AUG 02...	1230	.03	2190	8.3	27.5	740	--	130

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
DEC 18...	18	68	36	1.9	9.1	150	0	120
AUG 02...	100	230	40	3.7	4.5	--	--	310

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 AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
DEC 18...	140	90	.3	9.0	489	2.3	--	--
AUG 02...	590	230	.2	4.0	--	2.9	.00	.00

11120500 SAN JOSE CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°27'33", long 119°48'29", in La Goleta Grant, Santa Barbara County, on right bank, 1.1 mi (1.8 km) downstream from unnamed tributary, and 1.7 mi (2.7 km) northeast of Goleta.

DRAINAGE AREA.--5.51 mi² (14.27 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1941 to current year.

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 95.61 ft (29.142 m) Santa Barbara County Road Department datum. Prior to Dec. 24, 1955, at datum 5.50 ft (1.676 m) higher. Dec. 24, 1955, to Jan. 10, 1960, at datum 1.5 ft (0.46 m) higher. Prior to Oct. 1, 1971, at site 75 ft (23 m) downstream at same datum.

REMARKS.--Records fair. No regulation above station. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 1.98 ft³/s (0.056 m³/s), 1,430 acre-ft/yr (1.76 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s (56.6 m³/s) Jan. 25, 1969, gage height, 10.10 ft (3.078 m), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurement at gage height 9.32 ft (2.841 m); maximum gage height, 12.74 ft (3.883 m), present datum, Jan. 21, 1943; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0645	160 4.53	5.06 1.542	Feb. 12	1830	393 11.1	5.20 1.585
Jan. 10	0615	192 5.44	5.09 1.551	Mar. 4	0500	1700 48.1	7.93 2.417
Jan. 16	1500	*1770 50.1	8.05 2.454	Mar. 22	0615	386 10.9	5.13 1.564
Feb. 9	2130	732 20.7	6.05 1.844				

Minimum daily discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	0	.02	.48	2.1	35	30	3.2	1.1	.68	.32	.93
2	.02	0	.02	.48	2.1	97	20	3.1	1.1	.61	.30	1.0
3	.01	0	.02	.42	2.1	40	7.0	3.0	1.1	.60	.31	1.1
4	0	.05	.02	.48	2.1	484	19	2.9	1.1	.59	.32	1.6
5	0	.04	.02	.48	3.6	87	6.0	2.8	1.1	.58	.32	1.8
6	0	.03	.02	7.9	5.0	41	11	2.7	1.0	.57	.31	1.7
7	0	.02	.02	1.5	24	26	8.0	2.6	1.0	.56	.27	1.5
8	0	.02	0	.84	87	20	7.0	2.5	1.0	.55	.31	1.3
9	0	.02	0	14	232	24	5.6	2.4	1.0	.54	.32	1.0
10	0	.02	0	57	149	20	5.8	2.3	.94	.53	.32	1.2
11	0	.02	0	5.5	34	15	6.2	2.2	.94	.52	.32	1.2
12	0	.02	0	2.0	80	14	6.0	2.1	.94	.51	.34	1.1
13	0	.02	0	1.3	45	12	5.6	2.1	.94	.50	.44	1.2
14	0	.02	0	206	21	11	6.4	2.0	.93	.49	.84	1.2
15	0	.02	0	95	14	9.6	20	2.0	.93	.48	.86	1.2
16	0	.02	0	256	11	9.1	10	1.9	.93	.48	.84	1.2
17	0	.02	.03	37	8.5	8.4	7.0	1.9	.93	.48	.89	1.2
18	0	.02	.18	13	7.1	7.7	5.0	1.8	.93	.46	.92	1.3
19	0	.02	.02	12	6.1	7.4	4.5	1.8	.93	.40	.93	1.2
20	0	.02	.02	8.0	5.4	7.3	4.0	1.7	.93	.42	.89	1.2
21	0	.02	.03	6.1	5.4	7.5	3.5	1.7	.84	.42	.91	1.2
22	0	.02	.03	5.0	5.1	41	3.1	1.6	.84	.41	.84	1.2
23	0	.02	.03	4.3	4.8	13	2.9	1.6	.84	.37	.88	1.2
24	0	.02	.03	3.8	4.0	11	2.7	1.5	.76	.37	.84	1.3
25	0	.02	.03	3.3	3.8	9.2	3.8	1.5	.68	.35	.84	1.2
26	0	.02	.15	3.2	3.6	8.1	4.0	1.4	.61	.35	.87	1.2
27	0	.02	12	3.0	3.3	7.7	3.8	1.4	.61	.35	.92	1.3
28	0	.02	56	2.9	18	7.4	3.6	1.3	.61	.32	.92	1.5
29	0	.02	2.3	2.5	---	7.7	3.4	1.3	.61	.32	.93	1.3
30	0	.02	.93	2.3	---	17	3.3	1.2	.61	.32	.93	1.3
31	0	---	.54	2.3	---	50	---	1.0	---	.30	.93	---
TOTAL	.05	.60	72.46	758.08	789.1	1155.1	228.2	62.5	26.78	14.43	20.18	37.83
MEAN	.002	.020	2.34	24.5	28.2	37.3	7.61	2.02	.89	.47	.65	1.26
MAX	.02	.05	56	256	232	484	30	3.2	1.1	.68	.93	1.8
MIN	0	0	0	.42	2.1	7.3	2.7	1.0	.61	.30	.27	.93
AC-FT	.10	1.2	144	1500	1570	2290	453	124	53	29	40	75

CAL YR 1977	TOTAL	208.03	MEAN	.57	MAX	56	MIN	0	AC-FT	413
WTR YR 1978	TOTAL	3165.31	MEAN	8.67	MAX	484	MIN	0	AC-FT	6280

11120500 SAN JOSE CREEK NEAR GOLETA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT						
03...	0910	.10	2000	8.1	15.5	1560
30...	1115	.10	--	--	--	--
NOV						
11...	1640	.02	2050	7.8	15.0	1550
DEC						
07...	1330	.02	2180	8.1	14.0	1610
JAN						
09...	1435	38	440	8.9	12.5	298
APR						
10...	1450	6.3	715	8.4	17.0	493
MAY						
01...	1038	3.1	945	8.0	14.5	628
11...	1030	2.2	1030	7.9	15.0	688
30...	1115	1.2	1130	7.7	20.0	795
JUN						
27...	0920	.63	1315	7.8	16.5	970
AUG						
02...	0943	.37	1380	8.0	18.0	--
25...	0935	.83	1275	7.9	16.0	920

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
AUG										
02...	0943	.37	1380	8.0	18.0	620	160	53	85	23

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
AUG										
02...	1.5	3.7	280	430	69	.4	16	.80	.01	.03

SAN JOSE CREEK BASIN

11120510 SAN JOSE CREEK AT GOLETA, CA

LOCATION.--Lat 34°25'49", long 119°49'16", in La Goleta Grant, Santa Barbara County, on right bank south of Hollister Avenue on Kellogg Avenue, 0.5 mi (0.8 km) southeast of Goleta.

DRAINAGE AREA.--9.42 mi² (24.40 km²).

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WDR CA-73-1: 1973(M).

GAGE.--Water-stage recorder and concrete channel. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records fair. No regulation above station. Diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--8 years, 3.12 ft³/s (0.088 m³/s), 2,260 acre-ft/yr (2.79 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) Mar. 4, 1978, gage height, 5.65 ft (1.722 m), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-conveyance computation of flow in concrete channel at gage height 8.00 ft (2.438 m); no flow for long periods in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0745	201 5.69	2.24 0.683	Feb. 12	1930	576 16.3	3.16 0.963
Jan. 10	0330	278 7.87	2.45 0.747	Mar. 4	0530	*2330 66.0	5.65 1.722
Jan. 16	1545	1930 54.7	5.20 1.585	Mar. 22	0630	734 20.8	3.47 1.058
Feb. 9	2145	907 25.7	3.77 1.149				

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.25	.61	49	81	3.1	1.0	.18	.07	.52
2	0	0	0	.17	.55	153	57	2.9	.96	.10	.14	.61
3	0	0	0	1.1	.52	53	10	2.8	1.0	.37	.05	.71
4	.08	0	0	1.2	.68	649	30	2.6	.99	.30	.05	6.7
5	0	.39	0	.46	5.5	157	9.0	2.5	.95	.30	0	6.2
6	0	0	0	12	7.5	95	18	2.4	.83	.30	0	2.0
7	0	0	0	1.9	42	43	12	2.3	.83	.37	0	.71
8	0	0	0	.83	145	25	9.8	2.2	.71	.37	0	.61
9	0	0	0	14	344	41	8.9	2.1	.71	.37	0	.52
10	0	0	0	60	206	28	9.8	2.0	.61	.37	0	.61
11	0	0	0	6.5	36	15	10	1.9	.61	.24	0	.52
12	0	0	0	2.9	130	11	9.4	1.8	.61	.30	0	.44
13	0	0	0	1.8	62	8.9	9.0	1.8	.61	.14	.10	.61
14	0	0	0	151	52	8.0	9.0	1.7	.37	.14	.18	.61
15	0	0	0	96	19	7.9	32	1.6	.30	.02	.24	.61
16	0	0	0	291	11	6.7	16	1.6	.24	0	.14	.44
17	0	0	.59	33	8.4	6.0	9.7	1.5	.30	.10	.14	.44
18	0	0	.05	12	7.4	5.7	7.8	1.5	.30	.07	.14	.44
19	0	0	0	13	6.2	5.5	6.7	1.4	.30	.02	.14	.30
20	0	0	0	7.2	5.3	5.2	5.7	1.4	.18	.02	.44	.30
21	0	0	.08	4.9	4.7	6.0	5.3	1.3	.18	.07	.14	.30
22	0	0	0	3.7	4.3	64	4.8	1.3	.14	.05	.24	.18
23	0	0	.06	2.1	3.8	25	4.5	1.2	.14	.02	.14	.14
24	0	0	0	1.5	3.6	16	4.2	1.2	.10	.10	.10	.10
25	0	0	.08	1.3	3.3	13	5.0	1.1	.07	.07	.44	.18
26	0	0	1.1	1.2	3.1	11	4.6	1.1	.10	.07	.52	.07
27	0	0	20	1.2	2.9	9.5	4.1	1.1	.14	.07	.44	.10
28	0	0	64	.87	20	9.0	3.7	1.0	.14	.02	.44	.14
29	0	0	3.1	.85	---	13	3.5	1.0	.14	0	.44	.18
30	0	0	.94	.76	---	20	3.3	1.0	.18	0	.52	.14
31	0	---	.43	.66	---	75	---	.88	---	.02	.52	---
TOTAL	.08	.39	90.43	725.35	1135.36	1634.4	403.8	53.28	13.74	4.57	5.77	25.43
MEAN	.003	.013	2.92	23.4	40.5	52.7	13.5	1.72	.46	.15	.19	.85
MAX	.08	.39	64	291	344	649	81	3.1	1.0	.37	.52	6.7
MIN	0	0	0	.17	.52	5.2	3.3	.88	.07	0	0	.07
AC-FT	.2	.8	179	1440	2250	3240	801	106	27	9.1	11	50
CAL YR 1977	TOTAL	228.96	MEAN	.63	MAX	64	MIN	0	AC-FT	454		
WTR YR 1978	TOTAL	4092.60	MEAN	11.2	MAX	649	MIN	0	AC-FT	8120		

11120550 GAVIOTA CREEK NEAR GAVIOTA, CA

LOCATION.--Lat 34°29'16", long 120°13'34", in Nuestra Senora Del Refugio Grant, Santa Barbara County, on left bank 1.3 mi (2.1 km) northwest of Gaviota, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--18.8 mi² (48.7 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 100 ft (30 m), from topographic map.

REMARKS.--Records good. No regulation. Small pumping for domestic use.

AVERAGE DISCHARGE.--12 years, 6.15 ft³/s (0.174 m³/s), 4,460 acre-ft/yr (5.50 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Jan. 24, 1967, gage height, 8.40 ft (2.560 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement of maximum flow; maximum gage height, 9.09 ft (2.771 m) Mar. 4, 1978; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) revised, and maximum (*), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 9	Unknown	643	18.2	5.46	1.664	Mar. 4	0415	*3470	98.3	9.09	2.771
Jan. 14	Unknown	1120	31.7	6.37	1.942	Mar. 22	0415	316	8.95	4.22	1.286
Jan. 16	1430	1340	37.9	6.72	2.048	Mar. 31	0215	871	24.7	5.65	1.722
Feb. 9	1545	2440	69.1	8.13	2.478	Apr. 4	0800	403	11.4	4.50	1.372
Feb. 12	1715	1450	41.1	6.89	2.100	Apr. 15	1030	956	27.1	5.82	1.774
Feb. 28	1715	420	11.9	4.89	1.490						

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.15	1.9	46	45	17	5.2	3.8	2.3	1.3
2	0	0	0	.13	1.9	111	34	16	4.9	3.5	2.4	1.3
3	0	0	0	1.9	1.8	99	29	15	4.5	3.3	2.4	1.2
4	.02	.01	.04	.80	1.7	1210	72	15	4.2	3.3	2.2	9.1
5	.03	.15	.09	1.3	8.1	274	33	13	3.9	3.2	1.9	5.5
6	.01	.06	.09	4.1	12	122	45	13	3.7	3.1	1.6	2.3
7	0	.03	.14	2.0	103	80	44	12	3.3	3.1	1.5	1.7
8	0	.02	.19	.50	181	66	34	12	3.2	3.1	1.4	1.5
9	0	.03	.23	110	939	87	30	11	3.1	3.2	1.5	1.4
10	0	.03	.24	20	677	61	28	11	3.0	3.2	1.5	1.4
11	0	.03	.23	3.0	129	50	27	11	3.1	3.2	1.7	1.3
12	.04	.02	.20	2.3	344	45	27	11	3.3	3.2	1.8	1.3
13	.03	.03	.11	2.0	145	39	26	10	3.3	2.9	1.5	1.5
14	.03	.03	.12	150	69	36	23	9.5	3.1	2.6	1.6	1.5
15	.03	0	.14	50	46	32	167	9.1	3.1	2.4	1.7	1.5
16	.03	0	.08	250	35	29	60	8.7	3.1	2.5	1.6	1.5
17	.02	0	.51	58	29	27	43	7.9	3.0	2.4	1.5	1.5
18	.04	.03	.42	19	24	26	36	7.5	2.9	2.5	1.6	1.4
19	.06	.06	.13	18	21	24	32	7.2	2.9	2.6	1.6	1.2
20	.05	.03	.10	9.7	19	23	29	7.1	3.1	2.4	1.6	1.1
21	.05	.04	.15	6.8	17	26	27	7.2	2.7	2.4	1.6	1.1
22	.04	.06	.17	5.2	16	64	25	7.2	2.7	2.5	1.5	1.1
23	.03	.05	.45	4.2	14	29	24	6.8	2.6	2.5	1.5	1.0
24	.01	.01	.17	3.4	14	25	23	6.5	2.6	2.3	1.4	.97
25	.02	0	.13	3.1	13	23	26	6.3	2.6	2.2	1.4	.93
26	.02	0	.58	2.8	12	22	21	5.9	2.8	2.1	1.2	.88
27	.03	0	3.4	2.8	12	21	20	5.7	2.9	2.2	1.2	.99
28	.03	0	11	2.6	64	20	19	5.1	3.2	2.2	1.1	1.1
29	.05	0	.65	2.4	---	19	18	4.8	4.1	2.1	1.1	1.0
30	.03	0	.28	2.2	---	43	18	4.5	5.1	2.2	1.2	1.0
31	.01	---	.18	2.1	---	165	---	4.6	---	2.2	1.2	---
TOTAL	.71	.72	20.22	740.48	2950.4	2944	1085	288.6	101.2	84.4	49.3	50.57
MEAN	.023	.024	.65	23.9	105	95.0	36.2	9.31	3.37	2.72	1.59	1.69
MAX	.06	.15	11	250	939	1210	167	11	5.2	3.8	2.4	9.1
MIN	0	0	0	.13	1.7	19	18	4.5	2.6	2.1	1.1	.88
AC-FT	1.4	1.4	40	1470	5850	5840	2150	572	201	167	98	100
CAL YR 1977 TOTAL	128.69		MEAN .35	MAX 19	MIN 0	AC-FT 255						
WTR YR 1978 TOTAL	8315.60		MEAN 22.8	MAX 1210	MIN 0	AC-FT 16490						

JALAMA CREEK BASIN

11120600 JALAMA CREEK NEAR LOMPOC, CA

LOCATION.--Lat 34°30'50", long 120°29'02", in San Julian Grant, Santa Barbara County, on downstream side of right bridge pier on Jalama Road, 0.6 mi (1.0 km) downstream from Gasper Creek, 1.4 mi (2.3 km) upstream from mouth, and 8.9 mi (14.3 km) southwest of Lompoc.

DRAINAGE AREA.--20.5 mi² (53.1 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 80 ft (24 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station. Some pumping upstream from wells for irrigation of about 400 acres (1.62 km²).

AVERAGE DISCHARGE.--13 years, 3.76 ft³/s (0.106 m³/s), 2,720 acre-ft/yr (3.35 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft³/s (114 m³/s) Mar. 4, 1978, gage height, 11.34 ft (3.456 m), from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of slope-area measurement at gage height 8.05 ft (2.454 m); no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	1145	676 19.1	6.07 1.850	Mar. 4	0515	*4020 114	11.34 3.456
Jan. 16	1530	1390 39.4	7.64 2.329	Mar. 9	1145	183 5.18	4.39 1.338
Feb. 8	2300	1750 49.6	8.29 2.527	Mar. 22	0445	359 10.2	5.12 1.561
Feb. 12	1645	2440 69.1	9.36 2.853	Mar. 31	0300	316 8.95	4.96 1.512
Feb. 28	1815	568 16.1	5.78 1.762	Apr. 15	1045	492 13.9	5.56 1.695

Minimum daily discharge, no flow Oct. 1 to Dec. 27, Dec. 30 to Jan. 2.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	1.1	48	21	6.0	3.2	2.0	.74	.53
2			0	0	1.1	98	15	5.6	3.2	1.9	.70	.56
3			0	4.1	.95	100	13	5.4	3.0	1.9	.73	.54
4			0	4.1	.94	1040	35	5.2	3.0	1.7	.65	1.7
5			0	9.5	4.9	150	15	5.0	2.9	1.7	.63	2.4
6			0	6.3	30	56	29	4.8	2.9	1.7	.56	1.3
7			0	1.2	183	43	34	4.6	2.8	1.7	.54	.92
8			0	.47	283	34	25	4.5	2.7	1.6	.49	.82
9			0	98	512	76	17	4.4	2.8	1.6	.51	.73
10			0	28	200	61	15	4.3	2.8	1.6	.54	.77
11			0	7.0	70	42	13	4.1	2.6	1.4	.55	.77
12			0	2.2	483	55	13	4.0	2.6	1.3	.63	.67
13			0	1.4	260	30	12	3.9	2.6	1.3	.65	.64
14			0	139	120	25	12	3.8	2.6	1.0	.65	.68
15			0	95	40	23	101	3.8	2.6	.95	.65	.69
16			0	241	29	21	70	3.7	2.8	.84	.61	.65
17			0	70	22	21	38	3.6	2.8	.74	.59	.72
18			0	12	18	20	20	3.6	2.8	.65	.56	.70
19			0	15	15	20	15	3.5	2.8	.74	.58	.62
20			0	7.6	13	20	13	3.5	2.6	.74	.65	.56
21			0	5.0	11	19	12	3.5	2.6	.74	.65	.55
22			0	3.7	10	59	11	3.5	2.8	.74	.63	.52
23			0	2.8	9.2	19	10	3.4	2.8	.74	.57	.49
24			0	2.1	8.5	15	10	3.4	2.8	.74	.55	.46
25			0	1.9	7.7	13	12	3.3	2.6	.65	.53	.43
26			0	1.8	7.3	12	10	3.1	2.8	.65	.51	.39
27			0	1.6	7.3	11	9.0	3.1	2.8	.65	.49	.39
28			1.1	1.4	71	10	8.0	3.1	2.6	.65	.47	.43
29			.15	1.3	---	9.7	7.0	3.0	2.4	.65	.44	.42
30			0	1.3	---	15	6.5	3.0	2.2	.65	.49	.41
31		---	0	1.2	---	77	---	3.0	---	.74	.50	---
TOTAL	0	0	1.25	765.97	2418.99	2242.7	621.5	122.7	82.5	34.66	18.04	21.46
MEAN	0	0	.040	24.7	86.4	72.3	20.7	3.96	2.75	1.12	.58	.72
MAX	0	0	1.1	241	512	1040	101	6.0	3.2	2.0	.74	2.4
MIN	0	0	0	0	.94	9.7	6.5	3.0	2.2	.65	.44	.39
AC-FT	0	0	2.5	1520	4800	4450	1230	243	164	69	36	43

CAL YR 1977	TOTAL	42.14	MEAN	.12	MAX	7.5	MIN	0	AC-FT	84
WTR YR 1978	TOTAL	6329.77	MEAN	17.3	MAX	1040	MIN	0	AC-FT	12560

11121000 SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CA

LOCATION.--Lat 34°29'32", long 119°30'25", in SW¼NE¼NW¼ sec.28, T.5 N., R.25 W., Santa Barbara County, on upstream face of Juncal Dam, 6.5 mi (10.5 km) north of Carpinteria, and 8 mi (13 km) northeast of Montecito.

DRAINAGE AREA.--13.9 mi² (36.0 km²), excludes that of Alder Creek.

PERIOD OF RECORD.--December 1930 to current year. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.--Two water-stage recorders. Datum of lake gage is 2,021.6 ft (616.184 m) Bureau of Reclamation datum, or 2,000 ft (609.6 m) above arbitrary datum (called sea level) generally used for work in this vicinity. Supplementary gage and sharp-crested weir on outlet conduit of lake release, at different datum.

REMARKS.--Records of total inflow represent all water reaching Jameson Lake including precipitation on the lake. Total inflow computed on basis of records of storage, diversion (draft) to the city of Montecito, spill and release to river, and evaporation. Records of net inflow exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from Colorado land pan using coefficient that varies seasonably. Area table is based on survey made in 1961. Capacity table is based on survey made in 1969. Lake capacity at spillway level, gage height, 223.82 ft (68,220 m), 6,119 acre-ft (7.54 hm³). Dead storage, 18 acre-ft (22,200 m³), below lowest outlet at gage height 139.0 ft (42.37 m) included in these records. There is no regulation or diversion above station. At times flow of Alder Creek, which enters Santa Ynez River 2 mi (3 km) downstream from Juncal Dam, is diverted at elevation 2,250 ft (685.8 m) through a tunnel to Jameson Lake and is included in these records.

COOPERATION.--Reservoir-operation records and related data were furnished by Montecito County Water District.

AVERAGE DISCHARGE.--47 years (water years 1932-78), 6.82 ft³/s (0.193 m³/s), 4,940 acre-ft/yr (6.09 hm³/yr).

MONTHLY NET DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Gage height (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Spill and release (acre-feet)	Evapo-ration and seepage (acre-feet)	Total inflow (acre-feet)	Rain on reser-voir (acre-feet)	Net inflow (acre-feet)
Sept. 30.....	210.11	4380	--	--	--	--	--	--	--
Oct. 31.....	208.52	4190	-190	129	0	61†	0	0	0
Nov. 30.....	207.47	4080	-110	78	0	33†	1	1	0
Dec. 31.....	209.72	4330	+250	63	0	19	332	94	238
CAL YR 1977.....	--	--	-750	1239	0	387	876	256	620
Jan. 31.....	224.03	6150	+1820	33	549	6	2408	138	2270
Feb. 28.....	224.06	6150	0	1	7590	10	7601	212	7389
Mar. 31.....	224.27	6180	+30	0	10310	19	10359	246	10113
Apr. 30.....	224.03	6150	-30	5	2900	32	2907	39	2868
May 31.....	224.86	6260	+110	109	514	76	809	0	809
June 30.....	224.83	6260	0	96	104	86	286	0	286
July 31.....	224.56	6220	-40	123	17	96	196	0	196
Aug. 31.....	223.75	6110	-110	125	0	84	99	0	99
Sept. 30.....	223.05	6010	-100	119	0	50	69	19	50
WTR YR 1978.....	--	--	+1630	881	21984	572	25067	749	24318

^a Gage height at 0800.

† For months when inflow to the lake was small and other quantities were large, negative figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

11122000 SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'34", long 119°41'08", in SW¼NW¼SW¼ sec.11, T.5 N., R.27 W., Santa Barbara County, on upstream face of Gibraltar Dam, 7 mi (11 km) north of Santa Barbara.

DRAINAGE AREA.--216 mi² (559 km²).

PERIOD OF RECORD.--April 1920 to current year. November 1903 to November 1918 (fragmentary) at river station at damsite; records not equivalent because records since April 1920 are based on operation of Gibraltar Reservoir, and since December 1930, Jameson Lake. Prior to October 1945, published as "Santa Ynez River near Santa Barbara."

GAGE.--Two water-stage recorders. Reservoir gage is to National Geodetic Vertical Datum of 1929. Supplementary gage and sharp-crested weir on diversion from reservoir at different datum. See WSP 1735 for history of changes on both gages prior to Oct. 1, 1955. Spill and release measured by river gaging station below dam (station 11123000).

REMARKS.--Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage diversion (draft) to city of Santa Barbara, spill and release to river, and evaporation. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed using a coefficient that varies seasonally. Area and capacity tables are based on survey made in October 1973. Reservoir capacity at spillway level, elevation, 1,399.82 ft (426.665 m), 9,300 acre-ft (11.5 hm³). Silt level of reservoir at elevation 1,344 ft (409.6 m). Lowest outlet at elevation 1,335.86 ft (406.561 m). Flow regulated by Jameson Lake (station 11121000) since December 1930.

COOPERATION.--Reservoir-operation records and related data were furnished by city of Santa Barbara.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre- feet)	Draft (acre- feet)	Spill and release (acre- feet)	Evapo- ration and seepage (acre- feet)	Total inflow (acre- feet)	Rain on reservoir (acre- feet)	Net inflow (acre- feet)
Sept. 30.....	1377.93	4400	--	--	--	--	--	--	--
Oct. 31.....	1377.01	4230	-170	87	0	83†	0	0	0
Nov. 30.....	1376.71	4180	-50	0	0	52†	2	2	0
Dec. 31.....	1386.85	6160	+1980	0	0	27	2007	139	1868
CAL YR 1977.....	--	--	+2370	1633	106	843	4952	372	4580
Jan. 31.....	1400.14	9390	+3230	132	13980	21	17363	255	17108
Feb. 28.....	1400.14	9390	0	147	66430	31	66608	337	66271
Mar. 31.....	1400.54	9500	+110	121	84750	44	85025	431	84594
Apr. 30.....	1400.17	9400	-100	318	21440	53	21711	98	21613
May 31.....	1401.10	9660	+260	635	6630	129	7654	0	7654
June 30.....	1400.73	9550	-110	493	1600	144	2127	0	2127
July 31.....	1399.34	9170	-380	601	290	166	677	0	677
Aug. 31.....	1397.42	8660	-510	517	0	148	155	0	155
Sept. 30.....	1396.16	8330	-330	457	0	104	231	35	196
WTR YR 1978.....	--	--	+3930	3508	195120	1002	203560	1297	202263

^a Elevation at 0800.

† For months when inflow to the reservoir was small and other quantities were large, negative figures of inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to precise measurement. When this occurs, evaporation and seepage are adjusted to produce non-negative inflows.

11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'28", long 119°41'11", in NW¼SW¼SW¼ sec.11, T.5 N., R.27 W., Santa Barbara County, on left bank 700 ft (213 m) downstream from Gibraltar Dam, and 7 mi (11 km) north of Santa Barbara.

DRAINAGE AREA.--216 mi² (559 km²).

PERIOD OF RECORD.--April 1920 to current year (monthly discharge only prior to October 1941).

GAGE.--Two water-stage recorders. Datum of gage on main channel is 1,227 ft (374 m) National Geodetic Vertical Datum of 1929. Supplementary gage and sharp-crested weir on the release channel from Gibraltar Dam to river at different datum. See WSP 1735 for history of changes on both gages prior to May 20, 1958.

REMARKS.--Records poor. Flow regulated by Jameson Lake (station 11121000) and Gibraltar Reservoir (station 11122000). City of Santa Barbara diverted 3,510 acre-ft (4.33 hm³) during current year from Gibraltar Reservoir; Montecito County Water District diverted 881 acre-ft (1.09 hm³) during current year from Jameson Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft³/s (1,530 m³/s) Jan. 25, 1969, gage height, 25.8 ft (7.86 m), from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 ft (5.33 m) and 25.8 ft (7.86 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 17,000 ft³/s (481 m³/s), estimated, Mar. 4; no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	22	1490	573	206	56	19		
2				0	22	1440	425	195	56	19		
3				0	12	1250	375	191	57	19		
4				0	9.6	17000	401	153	59	19		
5				0	43	6000	346	165	57	19		
6				0	72	3000	352	149	55	14		
7				0	107	1900	396	153	50	11		
8				0	320	1400	343	311	43	11		
9				0	3100	1100	301	389	41	11		
10				0	13000	880	288	323	18	4.3		
11				0	5000	680	268	132	.04	0		
12				0	2000	580	252	48	2.9	0		
13				0	2400	480	238	0	14	0		
14				0	1600	410	233	0	17	0		
15				1180	1100	365	703	0	20	0		
16				2730	800	340	746	0	19	0		
17				1510	600	290	526	0	18	0		
18				435	493	263	450	6.0	17	0		
19				343	430	247	417	109	16	0		
20				163	304	232	370	114	15	0		
21				147	322	246	351	85	23	0		
22				115	290	439	324	50	22	0		
23				94	352	261	308	53	21	0		
24				60	185	217	301	58	15	0		
25				48	216	194	286	70	15	0		
26				53	201	184	301	78	15	0		
27				49	193	173	241	70	15	0		
28				43	297	159	240	63	15	0		
29				38	---	151	235	61	15	0		
30				19	---	187	221	56	18	0		
31		---		19	---	1170	---	56	---	0		---
TOTAL	0	0	0	7046	33490.6	42728	10811	3344.0	804.94	146.3	0	0
MEAN	0	0	0	227	1196	1378	360	108	26.8	4.72	0	0
MAX	0	0	0	2730	13000	17000	746	389	59	19	0	0
MIN	0	0	0	0	9.6	151	221	0	.04	0	0	0
AC-FT	0	0	0	13980	66430	84750	21440	6630	1600	290	0	0
CAL YR 1977	TOTAL	52.96	MEAN	.15	MAX	1.3	MIN	0	AC-FT	105		
WTR YR 1978	TOTAL	98370.84	MEAN	270	MAX	17000	MIN	0	AC-FT	195100		

SANTA YNEZ RIVER BASIN

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°32'37", long 119°51'50", in San Marcos Grant, Santa Barbara County, on left bank 0.3 mi (0.5 km) downstream from Los Laureles Canyon Creek, and 13.3 mi (21.4 km) east of Santa Ynez.

DRAINAGE AREA.--277 mi² (717 km²).

PERIOD OF RECORD.--April 1947 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.8 ft (240.12 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Jameson Lake and Gibraltar Reservoir (stations 11121000, 11122000). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,500 ft³/s (1,910 m³/s) Jan. 25, 1969, gage height, 18.88 ft (5.755 m), from rating curve extended above 11,600 ft³/s (329 m³/s) on basis of maximum flow for station below Gibraltar Dam plus tributary inflow; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Mar. 4, gage height, 15.50 ft (4.724 m); from rating curve extended above 7,690 ft³/s (218 m³/s) on the basis of flood routing studies; no flow Oct 1 to Dec. 27, Sept. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.41	60	1740	957	230	73	32	1.6	1.2
2			0	.29	61	1920	624	217	72	31	1.6	1.0
3			0	.26	58	1740	539	213	72	30	1.0	.94
4			0	.23	45	19300	592	199	68	29	.92	1.7
5			0	.21	60	7610	516	179	64	28	1.4	3.4
6			0	1.6	98	3760	477	181	58	27	.65	3.8
7			0	.71	131	2760	534	177	54	25	.43	2.9
8			0	.56	333	2240	478	242	52	20	.35	2.3
9			0	8.7	7760	2000	417	314	46	19	.29	2.1
10			0	176	14500	1740	388	313	45	18	.29	1.9
11			0	85	3320	1470	368	202	38	16	.62	1.6
12			0	36	2540	1280	340	150	30	7.5	1.2	1.5
13			0	23	3040	1050	337	51	27	3.7	1.2	1.4
14			0	236	1930	932	313	33	34	2.8	1.3	1.5
15			0	939	1480	824	733	28	39	3.1	.96	1.6
16			0	2280	1110	741	1080	27	41	2.8	1.4	1.4
17			0	2070	882	633	587	26	42	2.5	1.4	1.3
18			0	576	762	563	471	26	41	2.1	.89	1.2
19			0	373	651	517	438	66	39	2.0	1.0	1.1
20			0	248	478	475	399	129	35	1.9	.90	.94
21			0	164	465	473	372	117	35	1.7	.69	.67
22			0	145	394	882	346	90	42	1.7	.71	.77
23			0	120	414	593	329	83	42	1.7	.71	.69
24			0	140	269	447	317	87	38	1.0	1.5	.62
25			0	89	298	397	306	88	35	1.0	1.5	.17
26			0	94	297	369	311	101	34	1.2	1.4	0
27			0	92	310	341	274	95	38	1.5	1.5	0
28			42	87	424	324	252	90	33	1.6	1.4	0
29			21	79	---	306	250	82	32	1.6	1.3	.63
30			1.5	71	---	354	243	76	31	1.1	1.1	1.0
31		---	.59	55	---	1620	---	71	---	1.6	1.3	---
TOTAL	0	0	65.09	8190.97	42170	59401	13588	3983	1330	319.1	32.51	39.33
MEAN	0	0	2.10	264	1506	1916	453	128	44.3	10.3	1.05	1.31
MAX	0	0	42	2280	14500	19300	1080	314	73	32	1.6	3.8
MIN	0	0	0	.21	45	306	243	26	27	1.0	.29	0
AC-FT	0	0	129	16250	83640	117800	26950	7900	2640	633	64	78

CAL YR 1977 TOTAL 426.54 MEAN 1.17 MAX 42 MIN 0 AC-FT 846
WTR YR 1978 TOTAL 129119.00 MEAN 354 MAX 19300 MIN 0 AC-FT 256100

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°35'48", long 119°54'28", in San Marcos Grant, Santa Barbara County, on right bank 0.6 mi (1.0 km) downstream from Pine Canyon, and 9.9 mi (15.9 km) east of Santa Ynez.

DRAINAGE AREA.--74.0 mi² (191.7 km²).

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 783.38 ft (238.774 m) National Geodetic Vertical Datum of 1929. See WSP 1735 for history of changes prior to Sept. 27, 1952. Sept. 27, 1952, to June 24, 1969, at datum 3.25 ft (0.991 m) higher.

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

AVERAGE DISCHARGE.--37 years, 17.1 ft³/s (0.484 m³/s), 12,390 acre-ft/yr (15.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s (200 m³/s) Feb. 24, 1969, gage height, 14.45 ft (4.404 m), from floodmark, present datum, from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurement at gage height 14.16 ft (4.316 m); no flow at times since 1953.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1115	315 8.92	9.23 2.813	Mar. 4	0815	4500 127	12.14 3.700
Jan. 10	1145	125 3.54	8.54 2.603	Mar. 22	0745	160 4.53	8.44 2.573
Jan. 16	1815	1180 33.4	10.71 3.264	Mar. 31	0900	606 17.2	9.40 2.865
Feb. 9	1930	*5060 143	12.37 3.770	Apr. 15	2145	348 9.86	8.89 2.710
Feb. 12	Unknown	Unknown	Unknown				

Minimum daily discharge, no flow Oct. 1 to Dec. 27, Jan. 1-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	8.3	200	142	66	24	16	2.4	1.2
2			0	0	8.0	311	109	65	25	15	2.2	1.2
3			0	0	7.7	272	96	60	25	14	2.1	1.1
4			0	0	7.6	2290	112	57	25	13	2.1	2.0
5			0	0	9.9	769	96	56	24	13	2.0	4.7
6			0	9.1	9.6	470	103	54	23	12	1.8	4.4
7			0	6.7	38	454	112	52	22	11	1.7	3.3
8			0	1.2	99	380	98	51	21	10	1.7	2.8
9			0	.49	1870	298	94	48	21	9.7	1.7	2.5
10			0	67	1290	257	91	46	21	9.2	1.7	2.4
11			0	37	750	226	85	45	21	8.9	1.7	2.3
12			0	16	1300	202	82	43	21	8.6	1.7	2.0
13			0	8.9	450	173	81	41	20	8.2	1.7	1.5
14			0	39	220	157	80	40	20	7.4	1.7	1.4
15			0	241	180	142	132	39	20	6.7	1.7	1.3
16			0	185	162	130	157	38	20	6.2	1.7	1.2
17			0	53	152	119	107	38	19	6.0	1.7	1.2
18			0	32	149	112	95	36	18	5.5	1.7	1.1
19			0	44	158	105	89	35	18	5.2	1.7	.99
20			0	31	162	99	86	33	18	5.0	1.6	.94
21			0	23	155	98	83	32	17	4.8	1.6	.94
22			0	18	144	122	80	31	16	4.5	1.6	.94
23			0	16	136	98	76	31	16	4.4	1.6	.91
24			0	14	131	88	74	30	16	4.2	1.6	.92
25			0	13	126	81	77	30	16	3.8	1.6	.93
26			0	12	124	77	73	29	16	3.5	1.6	.94
27			0	11	120	74	70	28	17	3.2	1.6	.95
28			102	10	125	70	69	27	18	3.0	1.5	.97
29			20	9.3	---	67	67	26	18	2.9	1.4	.98
30			2.6	8.9	---	74	67	25	17	2.7	1.3	.99
31			---	.18	8.5	---	264	---	25	---	1.3	---
TOTAL	0	0	124.78	915.09	8092.1	8279	2783	1257	593	230.2	53.0	49.00
MEAN	0	0	4.03	29.5	289	267	92.8	40.5	19.8	7.43	1.71	1.63
MAX	0	0	102	241	1870	2290	157	66	25	16	2.4	4.7
MIN	0	0	0	0	7.6	67	67	25	16	2.6	1.3	.91
AC-FT	0	0	248	1820	16050	16420	5520	2490	1180	457	105	97
CAL YR 1977	TOTAL	420.47	MEAN	1.15	MAX	102	MIN	0	AC-FT	834		
WTR YR 1978	TOTAL	22376.17	MEAN	61.3	MAX	2290	MIN	0	AC-FT	44380		

11125500 LAKE CACHUMA NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°34'57", long 119°58'47", in Lomas de la Purification Grant, Santa Barbara County, at Bradbury Dam on Santa Ynez River, on upstream face near left end of dam, 6.1 mi (9.8 km) east of Santa Ynez.

DRAINAGE AREA.--417 mi² (1,080 km²).

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1960, published as "at Cachuma Reservoir near Santa Ynez."

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft (0.00 m) Bureau of Reclamation datum. Prior to Oct. 1, 1965, nonrecording gage.

REMARKS.--Reservoir is formed by earthfill dam. Storage began November 1952. Capacity table is based on surveys made in January 1953. Dead storage below outlet gage to river, elevation, 600 ft (182.9 m), 3,114 acre-ft (3.84 hm³), included in contents. Capacity below sill of inlet to Tecolote tunnel, elevation, 660 ft (201.2 m), 32,514 acre-ft (40.1 hm³), below spillway level, elevation, 720 ft (219.5 m), 125,292 acre-ft (154 hm³); below top of 4 radial gates, elevation, 750 ft (228.6 m), 204,874 acre-ft (253 hm³). Water is released from outlet to Santa Ynez River to satisfy downstream water rights. Water diverted to Tecolote tunnel for use by city of Santa Barbara, nearby communities, Santa Ynez River Water Conservation District, and to Cachuma recreation area.

COOPERATION.--Reservoir elevation, contents, and diversion figures were furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 221,100 acre-ft (273 hm³) Feb. 24, 1969, elevation, 755.11 ft (230.158 m); minimum since initial filling in April 1958, 105,300 acre-ft (130 hm³) Dec. 24, 25, 1977, elevation, 710.56 ft (216.579 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 211,100 acre-ft (260 hm³) Mar. 4, elevation, 751.98 ft (229.204 m); minimum, 105,300 acre-ft (130 hm³) Dec. 24, 25, elevation, 710.56 ft (216.579 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Total diversions (acre-feet)
Sept. 30.....	713.90	112100	--	--
Oct. 31.....	712.56	109300	-2800	2000
Nov. 30.....	711.32	106800	-2500	1950
Dec. 31.....	711.02	106200	-600	1380
CAL YR 1977.....	--	--	-33000	24890
Jan. 31.....	722.01	129900	+23700	474
Feb. 28.....	750.33	205900	+76000	554
Mar. 31.....	750.39	206100	+200	1090
Apr. 30.....	750.17	205400	-700	1070
May 31.....	750.63	206800	+1400	2860
June 30.....	750.21	205500	-1300	3330
July 31.....	748.77	201100	-4400	3590
Aug. 31.....	747.21	196400	-4700	3160
Sept. 30.....	746.22	193400	-3000	2380
WTR YR 1978.....	--	--	+81300	23840

11126500 SANTA AGUEDA CREEK NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°35'42", long 120°01'43", in Canada de los Pinos Grant, Santa Barbara County, on right bank 500 feet (150 m) upstream from bridge on Armour Ranch Road, 0.6 mi (1.0 km) upstream from mouth, and 3.5 mi (5.6 km) southeast of Santa Ynez.

DRAINAGE AREA.--55.8 mi² (144.5 km²).

PERIOD OF RECORD.--October 1940 to September 1971, October 1976 to January 1978 (destroyed by flood of Feb. 10, 1978). Monthly discharge only for January 1941 and yearly estimate for water year 1941 (incomplete), published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 530 ft (162 m), from topographic map. Prior to Oct. 1, 1976, at site 500 ft (150 m) downstream at different datum.

REMARKS.--Records poor. Diversions for irrigation and pumping from wells above station.

AVERAGE DISCHARGE.--32 years (water years 1941-71, 1977), 3.60 ft³/s (0.102 m³/s), 2,610 acre-ft/yr (3.22 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s (207 m³/s) Feb. 24, 1969, gage height, 6.65 ft (2.027 m) site and datum then in use; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*), from slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0815	427 12.1	4.30 1.311	Feb. 10†	Unknown	3630 103	Unknown
Jan. 16	1600	1960 55.5	8.28 2.524	Mar. 4†	Unknown	*3970 112	Unknown

Minimum daily discharge, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0								
2			0	0								
3			0	.03								
4			0	.18								
5			0	.01								
6			0	.22								
7			0	0								
8			0	0								
9			0	.02								
10			0	5.3								
11			0	0								
12			0	0								
13			0	0								
14			0	.18								
15			0	.47								
16			0	128								
17			0	35								
18			0	5.0								
19			0	5.6								
20			0	.02								
21			0	0								
22			0	0								
23			0	0								
24			0	0								
25			0	0								
26			0	0								
27			0	0								
28			46	0								
29			0	0								
30			0	0								
31		---	0	0								
TOTAL	0	0	46	244.38								
MEAN	0	0	1.48	7.88								
MAX	0	0	46	128								
MIN	0	0	0	0								
AC-FT	0	0	91	485								

CAL YR 1977 TOTAL 50.10 MEAN .14 MAX 46 MIN 0 AC-FT 99

† Peaks on Feb. 10 and Mar. 4 from slope-area measurement.

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA

LOCATION.--Lat 34°37'06", long 120°07'11", in SE¼NW¼ sec.11, T.6 N., R.31 W., Santa Barbara County, on right bank at downstream side of bridge on Alamo Pintado Road, 1.5 mi (2.4 km) northeast of Solvang.

DRAINAGE AREA.--29.4 mi² (76.1 km²).

PERIOD OF RECORD.--October 1970 to current year. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

GAGE.--Water-stage recorder. Datum of gage is 540.49 ft (164.741 m) Santa Barbara County datum.

REMARKS.--Records poor. No regulation above station. Pumping from wells along stream for irrigation.

AVERAGE DISCHARGE.--8 years, 0.45 ft³/s (0.013 m³/s), 326 acre-ft/yr (402,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 724 ft³/s (20.5 m³/s) Feb. 9, 1978, gage height, 6.80 ft (2.073 m), from floodmark, from rating curve extended above 3.0 ft³/s (0.085 m³/s) on basis of slope-area measurements at gage heights 6.00 ft (1.829 m) and 6.80 ft (2.073 m); no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 10.32 ft (3.146 m), from information by Santa Barbara County Flood Control District.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.28 m³/s) revised, and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 16	1730	206	5.83	5.25	1.600
Feb. 9	2245	*724	20.5	6.80	2.073
Mar. 4	1130	705	20.0	6.68	2.036

Minimum daily discharge, no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	.99	.13					
2			0	0	0	1.5	.10					
3			0	.01	0	.68	.11					
4			0	.01	0	316	.12					
5			0	0	0	160	.02					
6			0	.01	0	61	.06					
7			0	0	.07	27	.04					
8			0	0	.90	9.5	.03					
9			0	.02	149	5.1	.02					
10			0	.01	288	3.0	.02					
11			0	0	53	1.9	.02					
12			0	0	19	1.3	.02					
13			0	0	1.7	.90	.01					
14			0	.04	1.0	.65	.01					
15			0	1.1	.60	.50	.48					
16			0	8.8	.20	.36	.08					
17			0	.31	.10	.29	0					
18			0	.01	.04	.27	0					
19			0	0	.01	.24	0					
20			0	0	0	.24	0					
21			0	0	0	.24	0					
22			0	0	0	.26	0					
23			0	0	0	.13	0					
24			0	0	0	.12	0					
25			0	0	0	.11	0					
26			0	0	0	.11	0					
27			.01	0	0	.11	0					
28			.02	0	.03	.10	0					
29			0	0	---	.09	0					
30			0	0	---	.15	0					
31		---	0	0	---	.99	---		---			---
TOTAL	0	0	.03	10.32	513.65	593.83	1.27	0	0	0	0	0
MEAN	0	0	.001	.33	18.3	19.2	.042	0	0	0	0	0
MAX	0	0	.02	8.8	288	316	.48	0	0	0	0	0
MIN	0	0	0	0	0	.09	0	0	0	0	0	0
AC-FT	0	0	.06	20	1020	1180	2.5	0	0	0	0	0
CAL YR 1977	TOTAL	2.47	MEAN .007	MAX	.98	MIN 0	AC-FT	4				
WTR YR 1978	TOTAL	1119.10	MEAN 3.07	MAX	316	MIN 0	AC-FT	2220				

11128300 ALISAL RESERVOIR NEAR SOLVANG, CA

LOCATION.--Lat 34°32'56", long 120°07'45", in SE¼NE¼NW¼ sec.4, T.5 N., R.31 W., Santa Barbara County, in cove, on right bank 0.4 mi (0.6 km) upstream from reservoir spillway, and 3 mi (5 km) south of Solvang.

DRAINAGE AREA.--7.83 mi² (20.28 km²).

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

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

REMARKS.--Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft (2.79 hm³) between bottom of outlet gate at elevation 555.70 ft (169.377 m) and crest of spillway at elevation 599.88 ft (182.843 m). Dead storage, 110 acre-ft (136,000 m³). Inflow must total 150 acre-ft (185,000 m³) during any one month between November and June in order to store flows for that water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,770 acre-ft (3.42 hm³) Mar. 4, 1978, elevation, 604.31 ft (184.194 m); minimum, 748 acre-ft (922,000 m³) Nov. 8-10, 1972, elevation, 577.15 ft (175.915 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,770 acre-ft (3.42 hm³) Mar. 4, elevation, 604.31 ft (184.194 m); minimum, 2,110 acre-ft (2.60 hm³) Dec. 17, elevation, 597.00 ft (181.966 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 1800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	597.73	2180	--
Oct. 31.....	597.37	2140	-40
Nov. 30.....	597.15	2120	-20
Dec. 31.....	598.30	2230	+110
CAL YR 1977.....	--	--	0
Jan. 31.....	600.20	2400	+170
Feb. 28.....	600.30	2410	+10
Mar. 31.....	600.65	2440	+30
Apr. 30.....	600.08	2390	-50
May 31.....	599.98	2380	-10
June 30.....	599.93	2370	-10
July 31.....	599.75	2360	-10
Aug. 31.....	599.43	2330	-30
Sept. 30.....	599.75	2360	+30
WTR YR 1978.....	--	--	+180

SANTA YNEZ RIVER BASIN

11128500 SANTA YNEZ RIVER AT SOLVANG, CA

LOCATION.--Lat 34°35'06", long 120°08'37", in San Carlos de Jonata Grant, Santa Barbara County, near left bank on downstream end of pier of Alisal Road bridge, 25 ft (8 m) downstream from Alisal Creek, 0.8 mi (1.3 km) southwest of Solvang, and 10 mi (16 km) downstream from Lake Cachuma.

DRAINAGE AREA.--579 mi² (1,500 km²).

PERIOD OF RECORD.--October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 362.43 ft (110.469 m) National Geodetic Vertical Datum of 1929. Various datums used during period of record. July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft (230 m) upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (stations 11121000, 11122000, 11125500). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water for irrigation pumped from wells along banks of river in valley upstream.

EXTREMES FOR PERIOD OF RECORD (1928-36 AND SINCE 1946).--Maximum discharge, 82,000 ft³/s (2,320 m³/s), estimated, Jan. 25, 1969, gage height, 17.1 ft (5.21 m), from floodmark; no flow for several months in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,600 ft³/s (1,720 m³/s) Mar. 4, gage height, 11.90 ft (3.627 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	5.6	1170	1930	298	9.4	3.0	.70	.01
2			0	0	4.5	2840	1190	275	9.7	3.1	.56	0
3			0	0	3.8	4350	950	263	9.4	3.5	.45	0
4			0	0	3.5	36500	800	240	10	4.7	.24	.01
5			0	0	17	17000	720	250	9.8	4.5	.20	.07
6			0	0	21	6090	620	210	9.9	4.3	.14	1.2
7			0	0	37	3740	850	220	9.1	4.1	.09	1.7
8			0	0	100	2720	687	240	8.2	3.8	.07	1.5
9			0	1.4	8700	3290	562	293	8.4	3.6	.05	1.1
10			0	54	5500	2640	578	347	8.1	3.6	.05	1.1
11			0	19	609	1910	462	267	8.2	4.2	.03	2.1
12			0	8.2	2730	1660	407	112	9.0	3.7	.01	1.9
13			0	4.6	4810	1370	362	119	11	2.4	0	1.3
14			0	212	2690	1000	345	65	11	2.2	.01	1.4
15			0	640	1870	1020	831	57	11	1.8	0	2.1
16			0	774	1380	859	1830	55	11	1.8	.05	2.9
17			0	367	1140	794	1040	39	13	2.0	0	3.5
18			0	102	1040	619	751	38	13	2.8	0	4.2
19			0	58	893	591	724	40	13	3.1	0	5.4
20			0	47	835	619	615	32	12	2.6	.13	5.6
21			0	39	626	643	546	23	10	2.8	.01	5.2
22			0	35	608	1240	600	21	10	2.2	0	4.2
23			0	31	618	815	528	18	8.7	2.1	0	3.8
24			0	29	623	573	491	15	8.0	1.9	0	3.4
25			0	23	475	616	481	13	6.2	2.0	0	3.4
26			0	12	396	578	460	12	5.4	1.6	0	3.1
27			0	9.6	401	502	426	11	5.2	1.3	0	3.0
28			1.5	7.9	656	456	403	10	4.4	1.1	0	1.8
29			1.8	7.4	---	515	360	11	3.7	.88	0	1.5
30			0	6.9	---	594	336	11	3.2	.72	0	1.2
31		---	0	6.0	---	3610	---	9.7	---	.62	0	---
TOTAL	0	0	3.3	2494.0	36792.4	100924	20885	3614.7	269.0	82.02	2.79	67.69
MEAN	0	0	.11	80.5	1314	3256	696	117	8.97	2.65	.090	2.26
MAX	0	0	1.8	774	8700	36500	1930	347	13	4.7	.70	5.6
MIN	0	0	0	0	3.5	456	336	9.7	3.2	.62	0	0
AC-FT	0	0	6.5	4950	72980	200200	41430	7170	534	163	5.5	134
CAL YR 1977 TOTAL	183.01		MEAN	.50	MAX	17	MIN	0	AC-FT	363		
WTR YR 1978 TOTAL	165134.90		MEAN	452	MAX	36500	MIN	0	AC-FT	327500		

SANTA YNEZ RIVER BASIN

587

11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.--Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, on upstream end of center pier (revised) of bridge on frontage road, 0.9 mi (1.4 km) upstream from Dry Creek, 2.4 mi (3.9 km) north of Buellton, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--32.8 mi² (85.0 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 471.54 ft (143.725 m) National Geodetic Vertical Datum of 1929.

REMARKS.-- Records fair. Some pumping from wells along stream for irrigation above station.

AVERAGE DISCHARGE.--15 years, 1.10 ft³/s (0.031 m³/s), 797 acre-ft/yr (983,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) Feb. 24, 1969, gage height, 9.20 ft (2.804 m); maximum gage height, 9.66 ft (2.944 m) Mar. 4, 1978; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 16	1600	73 2.07	3.31 1.009	Feb. 12	1900	245 6.94	5.31 1.618
Feb. 9	2030	682 19.3	9.11 2.777	Mar. 4	0945	*743 21.0	9.66 2.944

Minimum daily discharge, no flow many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	.94	2.8	1.5	.17			
2			0	0	0	4.9	2.6	1.4	.17			
3			0	.01	0	2.0	2.4	1.3	.15			
4			0	.01	0	343	8.0	.94	.15			
5			0	0	0	119	3.7	.76	.13			
6			0	0	0	56	7.6	.55	.13			
7			0	0	3.3	32	8.7	.51	.02			
8			0	0	11	23	7.4	.47	0			
9			0	.01	216	23	6.1	.39	0			
10			0	.16	368	8.8	5.1	.35	0			
11			0	0	79	10	4.6	.35	0			
12			0	0	34	9.6	4.3	.32	0			
13			0	0	100	8.5	3.8	.32	0			
14			0	.56	49	8.1	3.7	.29	0			
15			0	1.8	29	7.9	12	.27	0			
16			0	7.6	18	7.6	7.6	.26	0			
17			0	1.0	9.0	7.0	6.4	.25	0			
18			0	.14	7.0	6.5	4.7	.23	0			
19			0	.75	4.7	6.0	3.9	.21	0			
20			0	.31	4.5	6.5	3.3	.23	0			
21			0	.22	4.3	7.4	2.9	.22	0			
22			0	.08	3.5	7.0	2.6	.22	0			
23			0	0	3.4	4.3	2.2	.21	0			
24			0	0	2.3	4.0	2.0	.21	0			
25			0	0	2.0	3.5	4.0	.19	0			
26			0	0	1.5	3.5	3.3	.19	0			
27			.01	0	1.4	3.3	2.7	.19	0			
28			.01	0	3.1	3.1	2.3	.17	0			
29			0	0	---	2.8	2.0	.17	0			
30			0	0	---	4.0	1.8	.15	0			
31		---	0	0	---	11	---	.15	---			---
TOTAL	0	0	.02	12.65	954.0	744.24	134.5	12.97	.92	0	0	0
MEAN	0	0	.0006	.41	34.1	24.0	4.48	.42	.031	0	0	0
MAX	0	0	.01	7.6	368	343	12	1.5	.17	0	0	0
MIN	0	0	0	0	0	.94	1.8	.15	0	0	0	0
AC-FT	0	0	.04	25	1890	1480	267	26	1.8	0	0	0

CAL YR 1977	TOTAL	5.18	MEAN .014	MAX	3.2	MIN 0	AC-FT	10
WTR YR 1978	TOTAL	1859.30	MEAN 5.09	MAX	368	MIN 0	AC-FT	3690

SANTA YNEZ RIVER BASIN

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA

LOCATION.--Lat 34°35'19", long 120°24'27", in W½ sec.24, T.6 N., R.34 W., Santa Barbara County, on right bank at bridge on Jalama Road, 0.4 mi (0.6 km) downstream from El Jaro Creek, and 4.4 mi (7.1 km) southeast of Lompoc.

DRAINAGE AREA.--47.1 mi² (122.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1941 to current year.

GAGE.--Water-stage recorder and concrete low-water control. Altitude of gage is 220 ft (67 m), from topographic map.

REMARKS.--Records good, except those below 5 ft³/s (0.1 m³/s), which are fair. No regulation above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 9.50 ft³/s (0.269 m³/s), 6,880 acre-ft/yr (8.48 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) Mar. 15, 1952, gage height, 20.8 ft (6.34 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	1230	2300 65.1	6.88 2.097	Mar. 10	0100	807 22.9	4.01 1.222
Jan. 16	1500	5690 161	12.54 3.822	Mar. 22	0415	1280 36.2	4.85 1.478
Feb. 9	2100	4750 135	11.08 3.377	Mar. 31	0400	835 23.6	4.06 1.237
Feb. 12	1700	5810 165	12.71 3.874	Apr. 4	0945	727 20.6	3.86 1.177
Feb. 28	1845	1360 38.5	4.98 1.518	Apr. 15	1130	1830 51.8	5.97 1.820
Mar. 4	0530	*7040 199	14.51 4.423				

Minimum daily discharge, 0.05 ft³/s (0.001 m³/s) Oct. 1-17, Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.06	.07	.21	4.5	157	47	24	10	4.3	3.6	4.1
2	.05	.06	.08	.33	4.1	360	37	22	9.8	4.3	3.6	4.4
3	.05	.08	.11	4.9	4.1	246	33	21	9.3	4.4	3.6	4.2
4	.05	.08	.07	12	3.8	2330	126	21	8.6	4.1	3.5	7.3
5	.05	.16	.08	13	12	343	44	20	8.2	4.7	3.3	9.8
6	.05	.16	.11	16	39	157	80	19	7.8	4.6	3.2	5.7
7	.05	.08	.11	3.4	426	109	120	18	7.1	4.9	3.1	3.9
8	.05	.07	.06	1.7	651	86	74	17	6.7	4.5	3.2	3.3
9	.05	.08	.06	379	1800	269	48	17	6.9	4.1	3.1	3.1
10	.05	.08	.06	80	1580	217	43	17	6.7	4.1	3.4	2.8
11	.05	.08	.06	15	401	114	40	16	6.8	4.1	3.6	2.8
12	.05	.08	.07	7.3	1160	117	38	15	6.9	4.1	4.0	2.7
13	.05	.10	.06	5.1	458	80	35	15	6.6	4.1	4.2	2.5
14	.05	.16	.09	515	146	75	33	14	6.3	4.1	4.1	2.5
15	.05	.09	.07	203	104	67	413	14	6.2	4.1	4.1	2.8
16	.05	.05	.06	744	81	63	104	14	6.2	4.1	4.0	2.5
17	.05	.06	.08	96	64	57	82	13	6.1	4.1	3.9	2.8
18	.06	.06	.08	33	53	53	65	13	5.7	4.1	3.8	2.9
19	.06	.06	.09	45	46	53	45	12	5.3	4.1	3.7	2.6
20	.06	.06	.07	21	40	51	41	12	5.2	4.1	3.6	2.7
21	.06	.06	.07	14	36	54	39	12	5.1	4.1	3.6	3.4
22	.06	.08	.08	11	33	145	38	12	4.9	4.1	3.8	2.8
23	.06	.08	.25	9.4	30	42	37	11	5.0	4.1	4.0	2.5
24	.06	.08	.19	7.8	28	36	37	11	5.2	4.1	4.0	2.5
25	.06	.08	.16	7.1	26	33	48	11	4.9	3.7	4.0	2.3
26	.06	.10	.23	6.7	25	31	32	11	5.2	3.7	3.8	2.2
27	.06	.08	.55	6.1	24	29	29	10	6.1	3.7	3.5	2.3
28	.06	.11	6.5	5.7	190	28	27	10	5.9	3.7	3.6	2.2
29	.06	.08	1.9	5.3	---	27	25	9.8	6.1	3.7	3.9	2.1
30	.06	.07	.79	4.9	---	43	24	9.7	5.5	3.8	3.9	1.8
31	.06	---	.38	4.7	---	189	---	9.5	---	3.9	4.2	---
TOTAL	1.69	2.53	12.64	2277.64	7469.5	5661	1884	451.0	196.3	127.6	114.9	99.5
MEAN	.055	.084	.41	73.5	267	183	62.8	14.5	6.54	4.12	3.71	3.32
MAX	.06	.16	6.5	744	1800	2330	413	24	10	4.9	4.2	9.8
MIN	.05	.05	.06	.21	3.8	27	24	9.5	4.9	3.7	3.1	1.8
AC-FT	3.4	5.0	25	4520	14820	11230	3740	895	389	253	228	197

CAL YR 1977 TOTAL 246.95 MEAN .68 MAX 19 MIN .02 AC-FT 490
WTR YR 1978 TOTAL 18298.30 MEAN 50.1 MAX 2330 MIN .05 AC-FT 36290

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA--Continued

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT						
03...	1245	.10	1850	7.9	21.5	1010
NOV						
23...	1030	.10	1700	8.0	10.5	978
DEC						
21...	0905	.08	1770	8.0	10.0	1000
MAR						
15...	1400	72	1210	8.3	17.5	829
MAY						
01...	0940	25	1320	8.1	13.5	844
JUN						
13...	0910	10	1350	8.1	18.0	848
JUL						
06...	0925	4.4	1280	7.8	16.5	849
AUG						
01...	0900	3.8	1280	8.0	17.5	--
SEP						
05...	1050	8.5	1350	7.8	17.5	913

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
AUG										
01...	0900	3.8	1280	8.0	17.5	470	110	47	110	34 2.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
AUG											
01...	2.8	290	240	120	.5	17	822	.62	.04	<10	20

SANTA YNEZ RIVER BASIN

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA

LOCATION.--Lat 34°38'16", long 120°25'32", in Canada de Salsipuedes Grant, Santa Barbara County, on left bank 0.5 mi (0.8 km) upstream from State Highway 246, 1.9 mi (3.1 km) east of Lompoc, 1.9 mi (3.1 km) downstream from Salsipuedes Creek, and 12.5 mi (20.1 km) downstream from Lake Cachuma.

DRAINAGE AREA.--789 mi² (2,040 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1947 to November 1951 (irrigation seasons only). May 1952 to September 1963, October 1964 to current year. Records equivalent, excepting low-flow periods, to those published as "near Lompoc" (station 11133500), November to December 1906, October 1907 to September 1918, May 1925 to September 1960.

GAGE.--Two water-stage recorders. Altitude of main gage is 90 ft (27.4 m), from topographic map. See WSP 1715 for history of changes prior to Oct. 1, 1961. Since Oct. 1, 1961, at various sites and datums within 0.1 mi (0.2 km) of present site. Supplementary gage, used for high-water periods, at site 0.5 mi (0.8 km) downstream at datum 79.25 ft (24.155 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period July 13 to Sept. 30, which are poor. Supplementary recorder used Jan. 29 to Sept. 30. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (stations 11121000, 11122000, 11125500). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

EXTREMES FOR PERIOD OF RECORD (1952-63 AND SINCE 1964).--Maximum discharge, 80,000 ft³/s (2,270 m³/s) Jan. 25, 1969, gage height, 24.20 ft (7.376 m), from supplementary gage; no flow at times in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 9, 1907, 120,000 ft³/s (3,400 m³/s), gage height, 22.0 ft (6.71 m) site and datum then in use, from mean-depth study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63,200 ft³/s (1,790 m³/s) Mar. 4, gage height, 16.80 ft (5.121 m); no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	14	736	1580	410	49	11	5.0	1.9
2				0	12	2450	1280	328	47	13	4.8	1.8
3				0	10	3880	1310	254	45	13	4.7	1.8
4				0	9.2	34700	1490	328	42	13	4.6	3.0
5				0	8.4	22400	1420	368	40	13	4.4	13
6				0	8.8	7500	1160	263	38	11	4.2	4.0
7				0	190	4350	1440	282	36	11	4.0	2.5
8				0	328	3000	1330	358	34	11	3.9	2.0
9				165	2770	2400	1130	319	31	9.8	3.8	1.8
10				82	12000	3000	1140	410	29	9.8	3.7	1.7
11				17	2730	2000	1080	478	27	9.8	3.6	1.6
12				8.7	3140	1600	985	291	25	9.8	3.5	1.5
13				7.1	7030	1410	896	219	23	9.6	3.4	1.4
14				284	3340	1340	824	211	20	9.4	3.3	1.3
15				403	2550	1130	1490	180	18	9.2	3.2	1.3
16				823	2070	925	2040	151	17	9.0	3.1	1.3
17				984	1400	743	1260	144	17	8.6	3.0	1.2
18				314	1200	628	1490	131	17	8.4	2.9	1.2
19				178	1140	568	1440	125	19	7.8	2.8	1.1
20				98	1050	678	1290	119	17	7.6	2.7	1.1
21				69	955	703	852	113	17	7.2	2.6	1.0
22				54	842	1700	824	107	17	7.0	2.5	.98
23				44	753	1290	925	102	15	6.6	2.4	.96
24				36	671	703	824	96	15	6.4	2.4	.92
25				33	640	716	910	90	15	6.2	2.3	.90
26				33	570	678	838	84	15	6.1	2.2	.88
27				28	506	604	743	78	15	6.0	2.1	.85
28				24	448	580	653	73	15	5.7	2.1	.82
29				22	---	580	534	67	13	5.5	2.0	.80
30				20	---	838	478	61	13	5.3	2.0	.78
31		---		17	---	2330	---	55	---	5.1	1.9	---
TOTAL	0	0	0	3743.8	46385.4	106160	33656	6295	741	271.9	99.1	55.39
MEAN	0	0	0	121	1657	3425	1122	203	24.7	8.77	3.20	1.85
MAX	0	0	0	984	12000	34700	2040	478	49	13	5.0	13
MIN	0	0	0	0	8.4	568	478	55	13	5.1	1.9	.78
AC-FT	0	0	0	7430	92010	210600	66760	12490	1470	539	197	110
CAL YR 1977	TOTAL	136.58	MEAN	.37	MAX	3.9	MIN	0	AC-FT	271		
WTR YR 1978	TOTAL	197407.59	MEAN	541	MAX	34700	MIN	0	AC-FT	391600		

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1978 to September 1978.

CHEMICAL ANALYSES: May 1978 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAY 01...	1140	413	875	7.6	17.5	590
JUN 15...	1140	18	1380	8.1	21.5	1020
JUL 06...	1030	12	1490	8.0	17.0	--
AUG 01...	1140	5.0	1550	7.6	27.5	--
SEP 05...	1325	15	1500	7.8	21.0	1010

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
AUG 01...	1140	5.0	1550	7.6	27.5	640	140	71	95	24	1.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
AUG 01...	5.1	280	410	120	.4	26	1040	.07	.04	<10	10

SANTA YNEZ RIVER BASIN

11134800 MIGUELITO CREEK AT LOMPOC, CA

LOCATION.--Lat 34°37'57", long 120°27'51", in Lompoc Grant, Santa Barbara County, on right bank at upstream end of debris dam, and 1,500 ft (460 m) south of Lompoc Union High School.

DRAINAGE AREA.--11.6 mi² (30.0 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 97.94 ft (29.852 m) Santa Barbara County Flood Control District datum.

REMARKS.--Records good except those for June through September, which are fair. No regulation or diversion above station; some pumping from wells along stream for irrigation.

AVERAGE DISCHARGE.--8 years, 1.49 ft³/s (0.042 m³/s), 1,080 acre-ft/yr (1.33 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 538 ft³/s (15.2 m³/s) Mar. 4, 1978, gage height, 5.17 ft (1.576 m), from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of slope-area measurement at gage height 4.34 ft (1.323 m); maximum gage height, 5.34 ft (1.628 m) Feb. 2, 1975; no flow many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 5.83 ft (1.777 m), from floodmark, discharge, 680 ft³/s (19.3 m³/s).

EXTREMES FOR CURRENT YEAR, --Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 9	1000	144	4.08	2.92	0.890	Mar. 4	0815	*538	15.2	5.17	1.576
Jan. 16	1430	375	10.6	4.34	1.323	Mar. 9	2330	147	4.16	2.94	0.896
Feb. 8	2245	409	11.6	4.52	1.378	Mar. 22	0430	225	6.37	3.47	1.058
Feb. 12	1645	422	12.0	4.59	1.399	Apr. 15	1030	135	3.82	2.86	0.872

Minimum daily discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.01	0	0	.30	9.6	5.7	3.7	2.0	1.5	1.1	.68
2	0	.01	0	.01	.25	35	5.0	3.6	2.0	1.6	1.3	.61
3	0	0	0	1.8	.23	19	4.6	3.5	1.8	1.6	1.3	.87
4	0	0	0	4.7	.23	183	11	3.3	1.9	1.4	1.1	3.3
5	.01	.02	0	.02	.51	60	6.3	3.2	1.9	1.6	1.0	1.2
6	0	0	0	2.1	.20	23	10	3.0	2.2	1.4	1.1	.76
7	.01	0	0	.08	27	12	17	3.0	1.5	1.3	1.1	.59
8	0	0	0	.01	54	10	11	2.9	1.6	1.2	1.1	.58
9	0	0	0	23	108	34	6.7	2.8	1.7	1.2	1.2	.49
10	0	0	0	6.5	90	34	7.1	2.8	1.8	1.3	1.1	.53
11	0	0	0	.68	20	15	7.0	2.9	1.9	1.3	1.1	.61
12	.01	0	0	.13	120	19	5.1	3.0	2.0	1.3	1.2	.58
13	0	0	0	.03	45	13	7.1	3.0	1.9	1.4	1.2	.64
14	0	0	0	49	18	11	4.4	3.0	1.5	1.3	1.3	.79
15	.01	0	.02	11	10	10	33	2.9	1.4	1.1	1.5	.87
16	.01	0	0	47	7.3	9.8	18	2.9	1.5	1.2	1.5	.72
17	.01	0	.48	18	5.8	8.9	9.7	2.8	1.6	1.3	1.2	.74
18	.01	0	.21	7.0	4.3	8.6	6.2	2.7	1.6	1.3	.84	.68
19	.01	0	.04	8.2	3.1	7.8	5.8	2.6	1.7	1.4	.89	.64
20	.01	0	.02	1.7	2.7	7.9	5.6	2.6	1.7	1.4	1.0	.63
21	.01	0	.07	.96	2.5	7.9	6.1	2.7	1.8	1.3	1.1	.54
22	.01	0	.05	1.1	2.4	27	6.4	2.6	2.0	1.3	1.1	.56
23	.01	0	1.7	.65	2.4	8.1	5.9	2.5	1.9	1.6	1.2	.64
24	.01	0	.05	.52	2.4	6.4	5.5	2.4	1.8	1.9	1.9	.64
25	.01	0	.05	.52	2.4	6.4	7.6	2.4	2.0	1.6	.64	.67
26	.01	0	.11	.65	1.6	5.7	4.8	2.2	2.2	1.6	.95	.48
27	.01	0	3.3	.52	2.5	5.3	4.2	2.0	2.2	1.4	.96	.39
28	.01	0	4.7	.52	18	5.1	4.1	2.0	2.1	1.1	.92	.43
29	.01	0	.27	.41	---	5.2	4.1	2.1	1.1	1.1	.75	.42
30	.01	0	.03	.32	---	6.1	3.9	2.2	1.4	1.1	.79	.42
31	.01	---	0	.32	---	12	---	1.9	---	1.1	.75	---
TOTAL	.20	.04	11.10	187.45	551.12	625.8	238.9	85.2	53.7	42.2	34.19	21.70
MEAN	.007	.001	.36	6.05	19.7	20.2	7.96	2.75	1.79	1.36	1.10	.72
MAX	.01	.02	4.7	49	120	183	33	3.7	2.2	1.9	1.9	3.3
MIN	0	0	0	0	.20	5.1	3.9	1.9	1.1	1.1	.64	.39
AC-FT	.4	.08	22	372	1090	1240	474	169	107	84	68	43
CAL YR 1977	TOTAL	62.38	MEAN	.17	MAX	6.5	MIN	0	AC-FT	124		
WTR YR 1978	TOTAL	1851.60	MEAN	5.07	MAX	183	MIN	0	AC-FT	3670		

11135000 SANTA YNEZ RIVER AT PINE CANYON, NEAR LOMPOC, CA

LOCATION.--Lat 34°40'20", long 120°29'30", in Lompoc Grant, Santa Barbara County, on right bank at Floradale Avenue bridge, 2.1 mi (3.4 km) upstream from Santa Lucia Creek, 3 mi (5 km) northwest of Lompoc, and 7 mi (11 km) upstream from mouth at Pacific Ocean.

DRAINAGE AREA.--844 mi² (2,186 km²).

PERIOD OF RECORD.--May 1941 to October 1946, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 40.78 ft (12.430 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 24, 1964, at different datum. Aug. 24, 1964, to Aug. 20, 1970, at datum 0.91 ft (0.277 m) lower.

REMARKS.--Records poor. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (stations 11121000, 11122000, 11125500). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along bank for irrigation in valley upstream. Effluent from city of Lompoc contributes to low flow most months.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,000 ft³/s (2,210 m³/s), estimated, Jan. 25, 1969, gage height, 24.91 ft (7.593 m), present datum, from floodmark; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63,200 ft³/s (1,790 m³/s), estimated, Mar. 4, gage height, 20.54 ft (6.261 m); minimum daily, 0.81 ft³/s (0.023 m³/s) Dec. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.3	.85	1.6	2.6	1000	1920	410	41	2.9	1.2	1.1
2	1.1	1.2	.98	1.4	2.5	1900	1130	328	38	2.7	1.2	1.1
3	1.2	1.2	.85	31	2.4	3360	1420	254	35	2.6	1.2	1.1
4	1.7	1.0	.84	37	2.4	33500	1860	328	33	2.5	1.2	4.5
5	1.1	1.5	.81	6.2	6.7	24000	1730	363	30	2.4	1.2	14
6	1.6	1.7	.84	7.5	3.8	7470	1410	263	28	2.3	1.2	3.0
7	1.4	1.2	.87	1.4	294	4070	1510	282	26	2.2	1.2	1.8
8	1.2	1.2	.96	1.0	274	3000	1080	358	24	2.1	1.2	1.3
9	1.0	1.1	1.1	186	2280	2400	1100	319	22	2.0	1.2	1.2
10	1.3	1.0	1.2	78	13800	3000	1190	410	21	1.9	1.2	1.1
11	1.3	1.1	.99	9.6	2470	2500	1130	478	19	1.8	1.2	1.1
12	1.1	1.1	.92	2.9	4090	2100	982	291	18	1.8	1.2	1.1
13	1.3	1.1	.88	2.5	6980	1750	891	219	17	1.7	1.2	1.1
14	1.6	1.2	.96	96	3540	1640	870	211	14	1.7	1.2	1.1
15	2.0	1.1	1.0	466	2310	1200	1700	180	12	1.6	1.2	1.1
16	1.5	1.1	1.1	815	1800	1020	1990	140	11	1.6	1.2	1.1
17	1.3	1.1	1.7	1060	1400	763	1260	123	9.4	1.5	1.2	1.1
18	1.1	1.1	8.4	291	1150	630	1490	118	8.3	1.5	1.2	1.1
19	1.1	.99	1.0	199	1140	570	1440	111	7.5	1.5	1.1	1.1
20	1.0	.90	1.3	80	1050	680	1290	101	6.7	1.4	1.1	1.1
21	1.2	.92	1.5	38	955	710	852	91	6.2	1.4	1.1	2.0
22	1.3	.90	1.9	22	842	1630	824	87	5.6	1.4	1.1	1.2
23	1.1	.90	19	15	753	1210	925	80	5.1	1.3	1.1	1.1
24	1.2	.90	1.6	10	671	686	824	74	4.7	1.3	1.1	1.0
25	1.5	.89	1.2	7.5	640	783	910	70	4.4	1.3	1.1	1.0
26	1.6	.89	2.2	6.2	570	760	838	65	4.0	1.3	1.1	1.0
27	1.2	.88	14	4.7	506	673	743	60	3.8	1.3	1.1	1.0
28	1.1	.88	28	3.2	450	690	653	55	3.5	1.2	1.1	1.0
29	1.1	.88	2.4	2.9	---	680	534	51	3.3	1.2	1.1	1.0
30	1.1	.87	2.4	2.8	---	923	478	47	3.1	1.2	1.1	1.0
31	1.3	---	1.7	2.6	---	2300	---	44	---	1.2	1.1	---
TOTAL	39.6	32.10	103.45	3488.0	47985.4	107598	34974	6011	464.6	53.8	35.9	52.5
MEAN	1.28	1.07	3.34	113	1714	3471	1166	194	15.5	1.74	1.16	1.75
MAX	2.0	1.7	28	1060	13800	33500	1990	478	41	2.9	1.2	14
MIN	1.0	.87	.81	1.0	2.4	570	478	44	3.1	1.2	1.1	1.0
AC-FT	79	64	205	6920	95180	213400	69370	11920	922	107	71	104

CAL YR 1977 TOTAL 641.67 MEAN 1.76 MAX 29 MIN 0 AC-FT 1270
WTR YR 1978 TOTAL 200838.35 MEAN 550 MAX 33500 MIN .81 AC-FT 398400

SANTA YNEZ RIVER BASIN

11135000 SANTA YNEZ RIVER AT PINE CANYON, NEAR LONPOC, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
AUG 02...	0940	1.2	1900	7.8	20.0	350	79	37	280	62	6.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
AUG 02...	13	190	390	270	.6	24	1220	8.9	3.0	<10	50

11135800 SAN ANTONIO CREEK AT LOS ALAMOS, CA

LOCATION.--Lat 34°44'36", long 120°16'12", in Los Alamos Grant, Santa Barbara County, on left bank 100 ft (30 m) upstream from bridge on northbound lane of Highway 101 at Los Alamos.

DRAINAGE AREA.--34.9 mi² (90.4 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 580 ft (177 m), from topographic map.

REMARKS.--Records poor. No regulation above station. Pumping for irrigation of about 1,000 acres (4.05 km²) above station.

AVERAGE DISCHARGE.--8 years, 1.20 ft³/s (0.034 m³/s), 869 acre-ft/yr (1.07 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft³/s (36.0 m³/s) Feb. 10, 1978, gage height, 9.58 ft (2.920 m), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of slope-area measurement of peak flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) from rating curve extended as explained above, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 16	1415	36 1.02	2.06 0.628	Mar. 4	1030	1220 34.6	9.31 2.838
Feb. 10	0400	*1270 36.0	9.58 2.920	Mar. 9	1115	81 2.29	2.67 0.814
Feb. 12	2015	706 20.0	6.56 1.999	Mar. 31	0515	40 1.13	2.06 0.628
Mar. 1	1545	42 1.19	2.03 0.619	Apr. 7	1745	57 1.61	2.27 0.692

Minimum daily discharge, no flow several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	6.4	.66	.12	.02			
2			0	0	0	11	.15	.10	.07			
3			0	.15	0	7.9	.10	.10	.08			
4			0	.63	0	565	3.8	.08	0			
5			0	0	0	280	.25	.08	.01			
6			0	.18	0	140	3.4	.08	0			
7			0	0	2.0	52	13	.06	0			
8			0	0	3.1	28	5.0	.06	0			
9			0	.83	220	30	.26	.06	0			
10			0	.70	688	9.2	.14	.06	0			
11			0	0	131	11	.12	.05	0			
12			0	0	120	10	.11	.04	0			
13			0	0	235	7.0	.09	.04	0			
14			0	1.8	110	6.4	.09	.02	0			
15			0	.53	50	5.7	3.4	.03	0			
16			0	3.8	30	4.9	4.0	.04	0			
17			0	.20	16	3.0	1.2	.01	0			
18			0	.09	9.0	1.4	.34	.02	0			
19			0	.16	5.7	.30	.09	.02	0			
20			0	.02	4.6	.21	.07	.02	0			
21			0	0	2.9	.14	.06	.04	0			
22			0	0	1.7	5.0	.06	.04	0			
23			0	0	.87	1.1	.11	.05	0			
24			0	0	.31	.31	.09	.04	0			
25			0	0	.18	.22	.23	.04	0			
26			0	0	.08	.15	.14	.04	0			
27			1.4	0	.09	.15	.10	.04	0			
28			.86	0	2.8	.15	.08	.02	0			
29			.67	0	---	.20	.08	.01	0			
30			0	0	---	.42	.09	.01	0			
31		---	0	0	---	12	---	.03	---			---
TOTAL	0	0	2.93	9.09	1633.33	1199.25	37.31	1.45	.18	0	0	0
MEAN	0	0	.095	.29	58.3	38.7	1.24	.047	.006	0	0	0
MAX	0	0	1.4	3.8	688	565	13	.12	.08	0	0	0
MIN	0	0	0	0	0	.14	.06	.01	0	0	0	0
AC-FT	0	0	5.8	18	3240	2380	74	2.9	.4	0	0	0
CAL YR 1977 TOTAL	3.24		MEAN .009	MAX	1.4	MIN 0	AC-FT	6				
WTR YR 1978 TOTAL	2883.54		MEAN 7.90	MAX	688	MIN 0	AC-FT	5720				

SAN ANTONIO CREEK BASIN

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.--Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, on Vandenberg Military Reservation on downstream side of center pile bent of San Antonio Road bridge, 0.7 mi (1.1 km) east of junction of San Antonio Road and Lompoc-Casmalia Road; and 3.8 mi (6.1 km) south of Casmalia.

DRAINAGE AREA.--135 mi² (350 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Concrete control since August 1970. Altitude of gage is 160 ft (49 m), from topographic map. Prior to June 27, 1958, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. No regulation above station. Flow affected by pumping from wells along stream for irrigation above station.

AVERAGE DISCHARGE.--23 years, 5.70 ft³/s (0.161 m³/s), 4,130 acre-ft/yr (5.09 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,440 ft³/s (97.4 m³/s) Mar. 4, 1978, gage height, 13.22 ft (4.029 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurement at gage height 12.93 ft (3.941 m); minimum daily, 0.10 ft³/s (0.003 m³/s) June 19, 20, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	0530	228 6.46	6.72 2.048	Mar. 9	1530	270 7.65	6.97 2.124
Jan. 16	2015	587 16.6	8.18 2.493	Mar. 22	1030	156 4.42	6.29 1.917
Feb. 10	0715	3200 90.6	12.93 3.941	Apr. 8	0045	126 3.57	6.08 1.853
Feb. 13	0015	1140 32.3	9.64 2.938	Apr. 15	2300	128 3.62	6.10 1.859
Mar. 4	1315	*3440 97.4	13.22 4.029				

Minimum daily discharge, 0.19 ft³/s (0.005 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.31	.32	1.3	1.8	28	11	1.9	1.7	.92	.71	.62
2	.19	.28	.30	1.1	1.8	43	5.3	1.8	3.2	.90	.73	.60
3	.24	.27	.31	9.2	1.8	42	4.3	1.8	2.6	.89	.72	.64
4	.27	.31	.33	14	1.8	1540	7.1	1.7	2.3	.87	.70	1.1
5	.27	.35	.32	18	1.9	483	7.3	1.7	1.9	.90	.68	1.5
6	.26	.33	.30	9.6	2.0	152	8.4	1.5	1.9	.94	.70	1.2
7	.25	.33	.35	5.2	56	68	29	1.5	2.1	.95	.65	.70
8	.24	.32	.34	2.4	65	47	43	1.5	2.3	.96	.76	.61
9	.22	.29	.35	17	626	143	15	1.4	2.0	.94	.59	.59
10	.23	.29	.37	34	1820	85	8.0	1.6	1.6	.96	.62	.65
11	.23	.30	.37	9.6	404	51	6.0	1.5	1.5	.96	.64	.65
12	.25	.32	.37	3.4	312	51	5.0	1.6	1.3	.93	.64	.61
13	.24	.34	.36	2.3	541	30	4.5	1.8	1.1	.92	.65	.63
14	.22	.31	.35	12	140	20	4.0	2.3	1.3	.91	.61	.68
15	.23	.28	.43	89	70	15	25	1.8	2.4	.86	.60	.70
16	.32	.28	.46	154	40	12	54	1.3	2.5	.82	.60	.75
17	.45	.28	.50	89	22	9.9	20	1.3	1.8	.81	.61	.74
18	.54	.31	1.4	17	13	6.2	10	1.4	.98	.81	.63	.66
19	.33	.32	1.1	16	11	4.9	6.0	1.3	1.0	.77	.61	.68
20	.33	.29	.69	11	10	4.3	4.2	1.4	1.3	.79	.63	.67
21	.34	.31	.54	6.5	8.7	4.1	3.5	1.6	.97	.81	.62	.65
22	.42	.34	.52	6.0	7.3	49	3.1	1.4	1.0	1.0	.67	.69
23	.42	.37	1.9	4.8	6.3	19	2.8	1.3	1.2	.76	.62	.52
24	.43	.32	2.0	3.0	5.2	7.4	2.6	1.2	1.6	.76	.54	.49
25	.43	.30	1.1	2.5	4.6	6.4	5.0	1.3	1.6	.72	.54	.47
26	.49	.32	.89	2.4	4.3	5.5	2.4	1.6	1.1	.71	.55	.47
27	.50	.33	1.0	2.2	4.5	4.5	2.3	1.5	1.0	.69	.54	.53
28	.42	.31	.42	2.1	9.3	4.9	2.1	1.4	.97	.64	.54	.57
29	.43	.30	7.6	2.0	---	5.5	2.0	1.6	1.2	.66	.56	.62
30	.37	.31	2.5	2.0	---	5.2	1.9	1.3	1.0	.70	.60	.61
31	.35	---	1.6	1.9	---	26	---	1.3	---	.70	.58	---
TOTAL	10.13	9.32	70.97	550.5	4191.3	2972.8	304.8	47.6	48.42	25.96	19.44	20.60
MEAN	.33	.31	2.29	17.8	150	95.9	10.2	1.54	1.61	.84	.63	.69
MAX	.54	.37	.42	154	1820	1540	54	2.3	3.2	1.0	.76	1.5
MIN	.19	.27	.30	1.1	1.8	4.1	1.9	1.2	.97	.64	.54	.47
AC-FT	20	18	141	1090	8310	5900	605	94	96	51	39	41
CAL YR 1977 TOTAL	387.99			MEAN 1.06	MAX 42	MIN .16	AC-FT 770					
WTR YR 1978 TOTAL	8271.84			MEAN 22.7	MAX 1820	MIN .19	AC-FT 16410					

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT						
04...	1000	.28	3050	8.3	14.5	1940
NOV						
02...	0845	.29	3250	8.0	11.5	2020
DEC						
02...	0845	.33	2950	7.9	9.5	1680
30...	1200	2.7	2420	7.5	12.5	1650
FEB						
02...	1130	1.8	2620	8.1	12.0	1880
MAR						
01...	0725	28	1230	8.2	9.0	819
30...	0700	5.6	2320	8.0	8.0	1770
MAY						
03...	0820	1.8	3450	7.9	10.0	2330
03...	1500	1.8	3450	8.2	24.5	--
24...	1005	1.2	3980	8.0	15.5	2540
JUN						
27...	1115	1.0	3550	8.3	15.0	3210
AUG						
03...	1000	.69	3600	8.0	18.5	--
25...	0905	.52	4100	7.9	14.0	2490

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
MAY											
03...	1500	1.8	3450	8.2	24.5	870	220	79	470	53	6.9
AUG											
03...	1000	.69	3600	8.0	18.5	860	220	76	540	57	8.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAY											
03...	23	460	520	630	.4	38	2280	4.9	--	130	--
AUG											
03...	26	600	390	760	.3	37	2410	5.0	1.8	30	400

11136400 WAGON ROAD CREEK NEAR STAUFFER, CA

LOCATION.--Lat 34°42'32", long 119°12'25", in SE4SE4SE4 sec.9, T.7 N., R.22 W., Ventura County, on left bank 50 ft (15 m) downstream from Park Canyon Creek, 9.3 mi (15.0 km) southwest of Stauffer, and 10 mi (16 km) east of Ozena Guard Station.

DRAINAGE AREA.--17.9 mi² (46.4 km²).

PERIOD OF RECORD.--July 1972 to Sept. 30, 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,500 ft (1,372 m), from topographic map.

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

AVERAGE DISCHARGE.--6 years, 3.24 ft³/s (0.092 m³/s), 2,350 acre-ft/yr (2.90 hm³/yr).

COOPERATION.--Twelve discharge measurements were furnished by Ventura County Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s (32.9 m³/s) Feb. 9, 1978, gage height, 6.28 ft (1.914 m), from rating curve extended above 44 ft³/s (1.25 m³/s) on basis of slope-area measurements at gage heights 4.76 ft (1.451 m) and 5.88 ft (1.792 m); no flow many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) revised, and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1000	360 10.2	4.39 1.338	Mar. 31	0030	403 11.4	4.21 1.283
Jan. 16	1645	260 7.36	3.68 1.122	Apr. 15	1215	200 5.66	3.44 1.049
Feb. 5	0615	479 13.6	4.46 1.359	Aug. 5	2015	237 6.71	3.59 1.094
Feb. 9	2330	*1160 32.9	6.28 1.914	Aug. 9	1730	287 8.13	3.79 1.155
Mar. 1	0400	460 13.0	4.40 1.341	Sept. 5	Unknown	257 7.28	3.67 1.119
Mar. 4	0430	1150 32.6	6.24 1.902				

Minimum daily discharge, no flow Oct. 1 to Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.10	1.0	114	30	16	1.8	.89	.56	.24
2			0	.10	.77	47	20	10	1.5	.89	.48	.24
3			0	.30	.66	67	17	8.5	1.5	.89	.48	.24
4			0	4.5	.56	445	16	7.5	1.5	.77	.48	.25
5			0	.15	111	68	15	6.6	1.5	.77	17	20
6			0	.15	17	50	19	6.0	1.5	.77	1.0	1.1
7			0	.07	17	47	29	5.5	1.5	.66	.33	.42
8			0	.07	40	42	14	5.1	1.5	.66	.32	.26
9			0	1.5	380	50	12	4.8	1.5	.66	23	.28
10			0	33	167	44	11	4.3	1.5	.66	1.2	.28
11			0	4.3	100	42	11	3.5	1.5	.56	.30	.23
12			0	1.4	78	47	10	3.5	1.5	.56	.27	.23
13			0	1.0	63	33	10	3.2	1.5	.56	.25	.23
14			0	48	52	23	10	3.2	1.4	.56	.24	.23
15			0	58	44	17	48	3.2	1.2	.56	.23	.28
16			0	89	39	11	20	3.2	1.2	.56	.23	.28
17			0	10	33	12	14	3.2	1.2	.56	.23	.28
18			0	7.0	31	10	11	3.2	1.2	.56	.23	.28
19			0	7.7	27	7.7	10	2.8	1.2	.56	.23	.28
20			0	3.2	25	6.4	9.2	2.8	1.0	.56	.23	.34
21			0	2.8	19	11	8.5	2.5	1.0	.56	.23	.34
22			0	2.5	17	36	7.8	2.5	1.0	.56	.23	.34
23			0	2.2	14	12	7.3	2.5	1.0	.48	.23	.34
24			0	1.5	11	10	6.8	2.5	1.0	.56	.23	.34
25			0	1.5	9.2	8.4	6.5	2.5	1.0	.66	.23	.34
26			.01	1.4	7.0	7.7	6.2	2.2	1.0	.66	.23	.34
27			38	1.2	6.4	6.4	5.8	2.0	1.0	.66	.23	.40
28			77	1.4	60	7.0	5.3	2.0	1.0	.56	.23	.40
29			.12	1.2	---	8.4	5.3	1.8	1.0	.56	.23	.40
30			.07	1.2	---	58	11	1.8	.89	.56	.23	.40
31		---	.10	1.2	---	104	---	1.8	---	.56	.24	---
TOTAL	0	0	115.30	287.64	1370.59	1452.0	406.7	130.2	38.09	19.60	49.83	29.61
MEAN	0	0	3.72	9.28	48.9	46.8	13.6	4.20	1.27	.63	1.61	.99
MAX	0	0	77	89	380	445	48	16	1.8	.89	23	20
MIN	0	0	0	.07	.56	6.4	5.3	1.8	.89	.48	.23	.23
AC-FT	0	0	229	571	2720	2880	807	258	76	39	99	59
CAL YR 1977	TOTAL	321.31	MEAN	.88	MAX	77	MIN	0	AC-FT	637		
WTR YR 1978	TOTAL	3899.56	MEAN	10.7	MAX	445	MIN	0	AC-FT	7730		

11136480 REYES CREEK NEAR VENTUCOPA, CA

LOCATION.--Lat 34°41'39", long 119°19'02", in SW¼NE¼SE¼ sec.21, T.7 N., R.23 W., Ventura County, on left bank 800 ft (240 m) from Lockwood Ozena Road, 1,900 ft (580 m) upstream from mouth, 3 mi (5 km) east of Ozena Guard Station, and 13 mi (21 km) southeast of Ventucopa.

DRAINAGE AREA.--4.62 mi² (11.97 km²).

PERIOD OF RECORD.--July 1972 to September 1978 (discontinued).

GAGE.--Water-stage recorder with concrete control. Altitude of gage is 3,690 ft (1,120 m), from topographic map.

REMARKS.--Records good. Small diversion upstream for domestic use.

COOPERATION.--Thirteen discharge measurements were furnished by Ventura County Flood Control District.

AVERAGE DISCHARGE.--6 years, 3.26 ft³/s (0.092 m³/s), 2,360 acre-ft/yr (2.91 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft³/s (58.1 m³/s) Mar. 4, 1978, gage height, 6.4 ft (1.95 m), from floodmark; from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurement at gage height 5.60 ft (1.707 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	Unknown	87 2.46	2.80 0.853	Mar. 4	Unknown	*2050 58.1	6.4 1.95
Jan. 16	1830	53 1.50	2.50 0.762	Mar. 22	1530	29 0.82	2.16 0.658
Feb. 10	Unknown	1300 36.8	5.60 1.707	Mar. 31	0100	101 2.86	2.90 0.884
Feb. 28	2000	112 3.17	3.02 0.920	Apr. 15	1600	48 1.36	2.35 0.716

Minimum daily discharge, no flow Oct. 1-31, Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.01	.40	1.9	2.7	90	35	11	4.8	2.7	1.5	1.1
2		.01	.40	1.6	2.6	32	30	9.9	4.8	2.7	1.5	1.0
3		0	.40	1.7	2.6	170	26	9.6	4.6	2.6	1.5	1.0
4		.01	.40	2.7	2.5	650	22	9.3	4.6	2.5	1.4	1.3
5		.02	.40	2.5	7.4	250	20	9.0	4.3	2.5	1.4	2.9
6		.16	.40	2.5	6.1	90	19	8.7	4.3	2.4	1.4	3.0
7		.16	.40	2.2	6.5	39	17	8.5	3.9	2.3	1.5	2.0
8		.16	.40	2.0	10	28	17	8.2	3.9	2.2	1.5	1.7
9		.16	.40	5.0	212	24	16	7.7	3.9	2.1	1.5	1.6
10		.13	.40	9.9	418	19	16	7.7	3.9	2.0	1.5	1.7
11		.10	.37	5.5	80	17	16	7.2	4.3	2.0	1.4	1.8
12		.08	.32	3.9	20	16	15	7.0	4.1	2.0	1.2	1.8
13		.11	.32	3.2	17	15	15	6.8	4.1	1.9	1.2	1.7
14		.16	.32	13	16	14	14	6.8	3.9	1.8	1.3	1.7
15		.18	.32	28	15	13	24	6.8	3.9	1.7	1.2	1.6
16		.28	.32	25	14	12	20	7.2	3.9	1.8	1.2	1.6
17		.37	.32	24	13	12	18	7.0	3.9	1.8	1.2	1.5
18		.37	.53	13	12	11	18	7.0	3.9	1.6	1.2	1.5
19		.37	.40	9.9	12	11	17	6.5	3.9	1.6	1.2	1.5
20		.37	.32	8.0	11	11	16	6.5	3.9	1.6	1.2	1.5
21		.37	.37	6.8	10	11	16	6.1	3.6	1.6	1.2	1.5
22		.40	.46	6.1	10	27	14	5.9	3.4	1.5	1.2	1.5
23		.43	.43	5.5	9.2	19	14	5.7	3.2	1.6	1.2	1.4
24		.43	.43	4.8	8.8	17	13	5.7	3.1	1.6	1.2	1.4
25		.43	.43	4.3	8.4	15	13	5.7	3.1	1.6	1.2	1.3
26		.43	.43	3.8	7.9	15	12	5.7	3.1	1.6	1.2	1.2
27		.43	4.0	3.6	7.2	13	12	5.3	3.0	1.7	1.2	1.2
28		.43	30	3.4	32	13	11	4.9	3.0	1.7	1.2	1.2
29		.43	6.5	3.2	---	12	11	4.8	3.0	1.6	1.1	1.2
30		.40	3.4	3.0	---	22	11	4.8	2.8	1.5	1.1	1.2
31		---	2.4	3.0	---	60	---	4.8	---	1.5	1.2	---
TOTAL	0	7.39	56.39	213.0	973.9	1748	518	217.8	114.1	59.3	40.0	46.6
MEAN	0	.25	1.82	6.87	34.8	56.4	17.3	7.03	3.80	1.91	1.29	1.55
MAX	0	.43	30	28	418	650	35	11	4.8	2.7	1.5	3.0
MIN	0	0	.32	1.6	2.5	11	11	4.8	2.8	1.5	1.1	1.0
AC-FT	0	15	112	422	1930	3470	1030	432	226	118	79	92
CAL YR 1977	TOTAL	334.81	MEAN	.92	MAX	30	MIN	0	AC-FT	664		
WTR YR 1978	TOTAL	3994.48	MEAN	10.9	MAX	650	MIN	0	AC-FT	7920		

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA

LOCATION.--Lat 35°01'19", long 120°13'39", in SW¼ sec.14, T.11 N., R.32 W., San Luis Obispo-Santa Barbara County line, on downstream side of bridge on State Highway 166, 0.7 mi (1.1 km) downstream from Buckhorn Canyon, and 13 mi (21 km) northeast of Santa Maria.

DRAINAGE AREA.--886 mi² (2,290 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to December 1905 (published as Santa Maria River near Santa Maria); October 1959 to current year. Monthly discharge only for October 1903 and July 1904 and yearly estimate for water year 1941 (incomplete), published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 760 ft (232 m), from topographic map. Prior to October 1959, nonrecording gage at different site and datum.

REVISED RECORDS.--WDR-CA-77-1: 1976.

REMARKS.--Records fair. No regulation above station. Pumping from wells along stream for irrigation of several thousand acres in Upper Cuyama Valley.

AVERAGE DISCHARGE.--21 years (water years 1904, 1905, 1960-78) 22.3 ft³/s (0.632 m³/s), 16,160 acre-ft/yr (19.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft³/s (504 m³/s) Feb. 25, 1969, gage height, 13.70 ft (4.176 m), from rating curve extended above 4,900 ft³/s (139 m³/s) on basis of slope-area measurement at gage height 10.85 ft (3.307 m); maximum gage height, 14.74 ft (4.493 m) Mar. 4, 1978; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*), from rating curve extended above 760 ft³/s (21.5 m³/s) on basis of slope-area measurements at gage heights 14.22 ft (4.334 m) and 14.74 ft (4.493 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 29	0800	570 16.1	8.44 2.573	Feb. 13	1115	1590 45.0	8.49 2.588
Jan. 17	1430	1040 29.5	8.67 2.643	Mar. 4	1400	*15700 445	14.74 4.493
Feb. 10	1015	13800 391	14.22 4.334	Mar. 31	2130	264 7.48	7.11 2.167

Minimum daily discharge, no flow Oct 1 to Dec. 26, Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.06	.70	33	115	22	8.1	4.0	2.2	1.4
2			0	0	.64	132	62	21	8.2	3.9	2.1	1.3
3			0	4.9	.60	179	53	19	8.2	4.0	2.1	1.2
4			0	8.9	.61	6270	62	18	8.0	4.0	2.1	4.8
5			0	9.1	.96	2440	56	16	8.0	3.9	2.1	16
6			0	9.1	6.3	1860	59	15	7.7	3.9	1.9	6.3
7			0	2.5	63	850	64	15	7.5	3.8	1.9	2.6
8			0	.46	132	700	60	14	7.3	3.7	1.9	1.7
9			0	.73	1540	550	56	14	7.3	3.6	1.9	1.5
10			0	1.4	6640	445	54	14	7.3	3.5	1.9	1.4
11			0	37	470	320	51	13	7.3	3.5	1.9	1.3
12			0	9.8	320	230	48	13	7.4	3.4	1.9	1.1
13			0	1.6	1080	160	48	13	7.1	3.2	1.9	1.1
14			0	8.8	582	110	47	13	7.0	3.0	1.9	1.1
15			0	129	401	108	69	13	7.0	2.9	1.9	1.1
16			0	174	240	118	84	13	7.0	2.9	1.8	1.1
17			0	317	150	103	52	12	6.9	2.8	1.8	1.1
18			0	34	85	94	47	11	6.7	2.8	1.8	1.0
19			0	9.8	63	87	41	11	6.6	2.8	1.7	.89
20			0	6.3	50	83	34	10	6.4	2.8	1.7	.80
21			0	4.8	41	81	30	10	6.3	2.7	1.7	.78
22			0	3.8	38	96	28	9.8	5.8	2.7	1.7	.76
23			0	3.0	35	92	28	9.7	5.3	2.6	1.7	.74
24			0	2.7	30	69	28	9.6	4.9	2.6	1.6	.73
25			0	2.1	28	61	34	9.4	4.9	2.5	1.6	.74
26			0	1.8	26	56	33	9.0	4.9	2.4	1.6	.70
27			.02	1.6	26	49	30	8.7	4.7	2.3	1.5	.65
28			112	1.3	31	42	28	8.6	4.6	2.3	1.4	.64
29			147	1.1	---	39	26	8.2	4.6	2.2	1.4	.62
30			8.4	.98	---	42	24	8.1	4.3	2.3	1.4	.60
31		---	.64	.82	---	80	---	8.0	---	2.2	1.5	---
TOTAL	0	0	268.06	788.45	12080.81	15579	1451	389.1	197.3	95.2	55.5	55.75
MEAN	0	0	8.65	25.4	431	503	48.4	12.6	6.58	3.07	1.79	1.86
MAX	0	0	147	317	6640	6270	115	22	8.2	4.0	2.2	1.6
MIN	0	0	0	0	.60	33	24	8.0	4.3	2.2	1.4	.60
AC-FT	0	0	532	1560	23960	30900	2880	772	391	189	110	111
CAL YR 1977	TOTAL	442.41	MEAN	1.21	MAX	147	MIN	0	AC-FT	878		
WTR YR 1978	TOTAL	30960.17	MEAN	84.8	MAX	6640	MIN	0	AC-FT	61410		

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 28...	1230	87	650	7.7	16.0	--
FEB 01...	1200	.68	2060	8.3	11.0	1570
27...	1610	27	2040	8.0	11.5	1620
MAR 29...	1100	38	2020	8.2	12.5	1600
MAY 02...	1500	20	1780	7.8	15.0	1480
30...	1420	7.6	1960	8.1	21.5	1670
JUL 05...	1110	3.9	1650	7.8	17.0	1300
AUG 02...	1020	2.0	1500	7.9	20.5	--
24...	1200	1.8	1690	8.2	17.5	1160

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
DEC 28...	1230	87	650	7.7	16.0	270	83	16	32	20	.8
AUG 02...	1020	2.0	1500	7.9	20.5	670	150	71	100	24	1.7

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 28...	4.7	57	200	20	.4	6.1	411	3.4	--	70	--
AUG 02...	4.7	240	560	67	.6	14	1110	.08	.01	<10	10

11137900 HUASNA RIVER NEAR ARROYO GRANDE, CA

LOCATION.--Lat 35°04'40", long 120°22'15", in Huasna Grant, San Luis Obispo County, on right bank 300 ft (91 m) downstream from Huasna Creek, and 12 mi (19 km) southeast of Arroyo Grande.

DRAINAGE AREA.--103 mi² (267 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (195 m), from topographic map.

REMARKS.--Records fair. No regulation above station. Some diversion above station into cattle ponds by two ranches upstream and one ranch at station. Extensive diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--19 years, 18.3 ft³/s (0.518 m³/s), 13,260 acre-ft/yr (16.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s (595 m³/s) Jan. 25, 1969, gage height, 15.90 ft (4.846 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 16	1800	3590	102	8.52	2.597
Feb. 9	2345	*5420	153	9.77	2.978
Mar. 4	0845	5400	153	9.76	2.975

Minimum daily discharge, no flow Oct. 1 to Dec. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.06	6.7	68	55	29	3.7	1.2	.69	.48
2			0	.05	6.3	75	46	28	3.7	1.7	.55	.82
3			0	.05	5.5	98	49	28	3.4	1.7	.48	.82
4			0	.05	5.1	2050	56	26	4.4	1.6	.48	.82
5			0	.05	5.1	550	60	25	4.7	1.3	.54	5.0
6			0	9.8	5.5	274	61	22	4.0	1.1	.54	3.0
7			0	1.2	292	187	44	20	2.3	1.1	.54	2.3
8			0	.33	641	155	43	20	2.1	1.1	.44	2.1
9			0	.20	2500	163	42	19	1.9	1.1	.41	2.0
10			0	8.2	2690	141	41	18	1.9	.96	.41	1.9
11			0	6.4	672	136	40	17	1.9	.96	.48	1.8
12			0	.85	716	138	39	18	1.9	.82	.48	1.8
13			0	.33	814	131	38	17	1.9	.82	.44	1.8
14			0	7.1	400	128	37	13	1.9	.82	.48	1.8
15			0	275	260	122	50	12	1.7	.96	.51	1.7
16			0	960	185	115	41	12	1.5	.69	.51	1.7
17			0	709	150	105	36	12	1.3	.46	.51	1.6
18			0	222	123	98	34	11	1.1	.57	.54	1.6
19			0	170	107	89	34	11	1.3	.46	.61	1.6
20			0	93	90	84	33	11	2.3	.57	.48	1.6
21			0	52	78	84	33	11	2.4	.57	.61	1.5
22			0	28	70	104	32	10	2.3	.69	.54	1.5
23			0	20	64	72	32	9.6	1.6	.69	.51	1.5
24			0	16	56	60	31	9.6	1.7	.69	.54	1.5
25			0	13	51	58	35	9.6	1.3	.69	.61	1.5
26			0	12	48	55	32	9.2	.96	.57	.58	1.4
27			0	10	44	51	31	9.2	.96	.82	.61	1.4
28			8.9	9.4	60	46	30	8.6	.99	1.1	.66	1.4
29			.33	8.4	---	50	30	8.6	1.0	.82	.61	1.4
30			.13	7.8	---	52	29	8.6	1.1	.82	.48	1.4
31		---	.08	7.2	---	71	---	5.0	---	.82	.54	---
TOTAL	0	0	9.44	2647.47	10145.2	5610	1194	468.0	63.21	28.27	16.41	50.74
MEAN	0	0	.30	85.4	362	181	39.8	15.1	2.11	.91	.53	1.69
MAX	0	0	8.9	960	2690	2050	61	29	4.7	1.7	.69	5.0
MIN	0	0	0	.05	5.1	46	29	5.0	.96	.46	.41	.48
AC-FT	0	0	19	5250	20120	11130	2370	928	125	56	33	101
CAL YR 1977	TOTAL	24.04	MEAN	.066	MAX	8.9	MIN	0	AC-FT	48		
WTR YR 1978	TOTAL	20232.74	MEAN	55.4	MAX	2690	MIN	0	AC-FT	40130		

11138100 CUYAMA RIVER BELOW TWITCHELL DAM, CA

LOCATION.--Lat 34°56'40", long 120°17'30", in Suey Grant, Santa Barbara County, on left bank 3.5 mi (5.6 km) upstream from mouth, 4 mi (6 km) northeast of Garey, and 4.4 mi (7.1 km) downstream from Twitchell Dam.

DRAINAGE AREA.--1,132 mi² (2,932 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 401.94 ft (122.511 m) Bureau of Reclamation datum.

REMARKS.--Records good. Flow regulated since February 1959 by Twitchell Reservoir, capacity 240,000 acre-ft (296 hm³). Controlled releases are for ground-water recharge in Santa Maria Valley. Some pumping from wells along stream for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft³/s (258 m³/s) June 13, 1973, gage height, 8.22 ft (2.505 m), result of sluicing at dam; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 348 ft³/s (9.86 m³/s) June 9, gage height, 4.27 ft (1.301 m); no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	4.3	4.8	6.1	265	302	329	287
2					0	4.0	4.3	6.6	264	303	325	287
3					0	4.6	4.3	12	269	301	323	286
4					0	20	5.3	101	274	305	318	291
5					0	11	5.0	92	283	305	318	282
6					0	7.8	5.6	91	289	306	319	277
7					.01	6.6	6.5	91	295	308	318	275
8					.06	5.8	5.6	91	298	307	314	275
9					1.1	6.9	5.0	91	309	308	313	273
10					32	6.0	4.8	91	330	308	313	273
11					9.8	5.8	5.0	91	321	305	312	274
12					8.4	5.8	5.0	93	317	307	311	276
13					15	5.0	5.0	91	315	306	307	278
14					8.7	4.8	5.0	93	311	307	307	279
15					6.6	4.5	5.6	102	308	311	308	280
16					5.4	4.5	6.5	132	306	310	310	282
17					4.6	4.3	5.6	134	307	311	310	284
18					4.0	4.3	5.6	145	310	314	310	283
19					3.7	4.1	5.9	201	309	315	311	276
20					3.4	4.2	6.2	201	309	317	311	274
21					3.2	4.3	6.5	201	311	315	309	276
22					3.1	5.2	6.8	201	312	313	305	277
23					3.0	4.5	6.8	201	309	316	302	277
24					2.9	4.2	7.2	204	307	317	300	278
25					2.8	4.1	8.2	219	309	317	300	280
26					2.8	4.1	8.2	240	305	321	300	281
27					2.9	4.1	7.8	244	301	322	297	280
28					3.7	4.1	7.8	250	301	324	295	279
29					---	4.3	7.2	257	302	326	295	283
30					---	4.7	6.6	260	300	326	291	283
31		---			---	6.0	---	263	---	329	290	---
TOTAL	0	0	0	0	127.17	173.9	179.7	4495.7	9046	9682	9571	8386
MEAN	0	0	0	0	4.54	5.61	5.99	145	302	312	309	280
MAX	0	0	0	0	32	20	8.2	263	330	329	329	291
MIN	0	0	0	0	0	4.0	4.3	6.1	264	301	290	273
AC-FT	0	0	0	0	252	345	356	8920	17940	19200	18980	16630
CAL YR 1977	TOTAL	0.00	MEAN	.00	MAX	.00	MIN	0	AC-FT	0		
WTR YR 1978	TOTAL	41661.47	MEAN	114	MAX	330	MIN	0	AC-FT	82640		

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-71, 1973-75, October 1977 to September 1978.

CHEMICAL ANALYSES: Water years 1967-71, 1973-75, October 1977 to September 1978.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
MAY 01...	1215	5.9	2100	8.3	21.0	0	14.0	940	700
JUL 21...	1655	200	1720	8.4	18.0	4	13.4	960	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
MAY 01...	190	110	160	27	2.0	6.0	290	0
JUL 21...	280	62	90	17	1.3	7.0	--	--

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
MAY 01...	2.3	890	100	.6	1710	1600	.38	1.7
JUL 21...	--	920	40	1.1	1600	--	.18	.80

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY 12...	1905	9.7	19.5	0	0	10	160	0	.0	10

11138500 SISQUOC RIVER NEAR SISQUOC, CA

LOCATION.--Lat 34°50'23", long 120°10'02", in Sisquoc Grant, Santa Barbara County, on left bank 2.6 mi (4.2 km) upstream from La Brea Creek, and 7 mi (11 km) east of Sisquoc.

DRAINAGE AREA.--281 mi² (728 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year. October 1929 to September 1933, at site 0.2 mi (0.3 km) downstream; low-flow records not equivalent owing to diversion immediately upstream. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 624.30 ft (190.287 m) Corps of Engineers datum. See WSP 1735 for history of changes prior to Aug. 24, 1951.

REMARKS.--Records poor. No gage-height record Feb. 10 to May 16. No regulation or diversion above station.

AVERAGE DISCHARGE.--35 years, 43.1 ft³/s (1.221 m³/s), 31,230 acre-ft/yr (38.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft³/s (657 m³/s) Dec. 6, 1966, gage height, 15.75 ft (4.801 m), from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of slope-area measurements at gage heights 10.08 ft (3.072 m) and 15.75 ft (4.801 m); no flow Nov. 11-18, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, 11,000 ft³/s (312 m³/s), gage height, 8.1 ft (2.47 m), from high-water mark in gage well, at site in use 1929-33, from rating curve extended above 2,800 ft³/s (79.3 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*), from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of slope-area measurement at gage height 15.75 ft (4.801 m):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	1800	700 19.8	5.46 1.664	Feb. 10	0100	15900 450	*12.90 3.932
Jan. 10	2000	465 13.2	3.65 1.113	Mar. 4	Unknown	*Unknown	11.08 3.377
Jan. 16	2200	2470 70.0	6.85 2.088				

Minimum daily discharge, 0.25 ft³/s (0.007 m³/s) Oct. 31 to Nov. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.25	.47	7.0	22	400	450	270	53	23	8.3	4.0
2	.33	.25	.47	5.8	21	600	350	265	54	22	7.8	4.0
3	.33	.25	.47	5.0	20	830	280	254	50	21	7.3	3.7
4	.33	.25	.47	6.6	19	4900	390	235	47	20	6.8	21
5	.33	.26	.47	4.0	20	1500	380	215	44	19	6.4	47
6	.33	.26	.47	6.0	43	1400	370	200	42	18	6.4	49
7	.33	.26	.47	45	37	1300	500	185	40	17	5.9	38
8	.33	.27	.47	17	287	1200	450	175	37	15	5.9	30
9	.33	.27	.48	12	2080	1100	400	165	35	13	5.9	25
10	.33	.28	.48	163	3600	1000	350	155	35	13	5.9	22
11	.33	.28	.48	205	1400	900	320	145	35	13	5.9	19
12	.32	.29	.48	69	1100	1000	290	138	35	13	5.9	16
13	.32	.30	.48	40	1800	900	270	130	35	13	5.9	14
14	.32	.31	.49	28	1700	850	250	125	34	11	5.9	13
15	.32	.32	.49	746	1500	800	350	115	34	9.4	5.9	12
16	.31	.33	.49	475	1300	720	700	110	34	9.4	5.9	11
17	.31	.34	.49	600	1100	660	580	107	34	9.4	5.9	11
18	.31	.36	.60	256	900	600	520	97	34	8.8	5.9	11
19	.30	.38	.53	133	750	540	460	87	33	8.8	5.9	10
20	.30	.39	.51	100	650	500	410	80	32	8.8	5.9	8.8
21	.29	.41	.50	82	540	450	370	75	30	8.3	5.9	7.8
22	.29	.42	.50	78	470	410	330	73	29	8.3	5.9	7.3
23	.28	.43	3.3	57	410	390	300	73	28	8.3	5.9	6.8
24	.28	.44	10	52	350	350	280	71	27	8.3	5.9	5.9
25	.27	.45	11	44	300	320	400	71	26	8.3	5.9	5.5
26	.27	.46	12	38	270	280	380	69	26	8.3	5.5	5.5
27	.27	.47	28	33	250	260	360	65	26	8.3	5.1	5.5
28	.26	.47	215	29	276	240	330	61	26	8.3	5.1	5.5
29	.26	.47	179	27	---	220	315	58	25	8.3	4.7	4.7
30	.26	.47	38	25	---	210	290	54	24	8.3	4.4	4.4
31	.25	---	13	23	---	660	---	52	---	8.3	4.4	---
TOTAL	9.42	10.39	520.06	3411.4	21215	25490	11425	3975	1044	376.9	184.3	428.4
MEAN	.30	.35	16.8	110	758	822	381	128	34.8	12.2	5.95	14.3
MAX	.33	.47	215	746	3600	4900	700	270	54	23	8.3	49
MIN	.25	.25	.47	4.0	19	210	250	52	24	8.3	4.4	3.7
AC-FT	19	21	1030	6770	42080	50560	22660	7880	2070	748	366	850
CAL YR 1977	TOTAL	1258.45	MEAN	3.45	MAX	215	MIN	.25	AC-FT	2500		
WTR YR 1978	TOTAL	68089.87	MEAN	187	MAX	4900	MIN	.25	AC-FT	135100		

SANTA MARIA RIVER BASIN

11138500 SISQUOC RIVER NEAR SISQUOC, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

CHEMICAL ANALYSES: October 1977 to September 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 03...	1225	.33	1160	7.6	17.5	889
NOV 01...	1140	.25	1180	7.8	18.0	848
DEC 01...	1305	.52	1240	7.5	14.5	840
JAN 05...	1230	3.9	1160	7.5	11.5	857
FEB 01...	1030	22	1130	8.3	9.5	774
28...	0805	276	1070	8.4	9.0	753
MAR 29...	0750	223	1080	8.3	9.5	781
MAY 03...	0705	241	1050	7.9	9.5	760
17...	0930	240	1050	8.0	14.5	793
JUN 27...	0655	26	1040	8.0	12.5	800
AUG 02...	0725	7.8	1110	7.9	17.5	--
24...	0745	6.0	1210	8.0	15.0	842

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
AUG 02...	0725	7.8	1110	7.9	17.5	480	92	60	53	19	1.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
AUG 02...	2.9	200	380	21	.3	13	743	.63	.01	<10	10

11139500 TEPUSQUET CREEK NEAR SISQUOC, CA

LOCATION.--Lat 34°52'21", long 120°14'37", in NE¼ sec.9, T.9 N., R.32 W., Santa Barbara County, on downstream wingwall of right bridge abutment on Tepusquet Road, 1.1 mi (1.8 km) upstream from mouth, and 3 mi (5 km) east of Sisquoc.

DRAINAGE AREA.--28.7 mi² (74.3 km²).

PERIOD OF RECORD.--October 1943 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 500 ft (152 m), from topographic map. Prior to Dec. 9, 1948, at datum 0.9 ft (0.27 m) higher.

REMARKS.--Records fair. No regulation above station. Some diversion by pumping from wells along stream to irrigate about 100 acres (405,000 m²) above gage.

AVERAGE DISCHARGE.--35 years, 1.53 ft³/s (0.043 m³/s), 1,110 acre-ft/yr (1.37 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 788 ft³/s (22.3 m³/s) Dec. 6, 1966, gage height, 5.48 ft (1.670 m), from rating curve extended above 220 ft³/s (6.23 m³/s) on basis of computation of maximum flow at contracted opening; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 10	0430	*604	17.1	5.12	1.561
Feb. 13	0730	70	1.98	3.87	1.180
Mar. 4	1215	385	10.9	4.76	1.451

Minimum daily discharge, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.18	5.3	7.1	1.9	.69	.71	.24	.15
2			0	0	.20	6.0	6.1	1.7	.67	.48	.31	.13
3			0	.03	.20	8.5	6.1	1.6	.72	.56	.35	.12
4			0	.04	.18	144	7.6	1.8	.76	.54	.24	.71
5			0	0	.18	65	6.4	1.7	.83	.45	.20	.48
6			0	.03	.20	33	7.9	1.7	.85	.41	.15	.20
7			0	0	1.2	25	9.1	1.5	.59	.43	.12	.16
8			0	0	.71	16	7.0	1.4	.62	.43	.11	.15
9			0	.03	51	14	5.8	1.4	.66	.42	.14	.15
10			0	.04	260	9.7	4.8	1.5	.66	.44	.16	.16
11			0	0	20	10	4.4	1.4	.66	.43	.18	.11
12			0	0	21	9.1	4.2	1.3	.63	.44	.21	.10
13			0	0	50	9.1	3.8	1.1	.66	.41	.18	.11
14			0	.10	28	9.7	3.6	1.1	.69	.42	.16	.14
15			0	.13	18	9.1	5.3	1.1	.74	.49	.19	.14
16			0	.93	12	8.4	6.7	1.1	1.0	.56	.18	.12
17			0	.71	8.6	7.6	5.3	1.1	.78	.47	.17	.13
18			0	.37	6.4	7.2	4.3	1.0	.69	.45	.13	.14
19			0	.33	4.9	6.6	3.9	.93	.72	.55	.14	.10
20			0	.26	4.5	6.6	3.4	1.1	.69	.54	.12	.07
21			0	.23	3.5	6.6	3.0	1.1	.71	.49	.13	.06
22			0	.22	3.4	8.3	2.8	1.1	.74	.47	.21	.07
23			0	.21	2.8	6.9	2.7	.98	.76	.41	.24	.06
24			0	.20	2.7	6.9	2.5	.94	.65	.45	.20	.05
25			0	.20	2.6	6.7	2.9	1.0	.58	.45	.15	.08
26			0	.20	2.5	7.1	2.4	1.8	.61	.47	.15	.10
27			0	.19	2.6	7.0	2.3	1.2	.63	.51	.13	.12
28			.01	.19	4.0	7.3	2.0	.95	.54	.40	.11	.12
29			0	.18	---	7.3	1.9	.75	.46	.38	.10	.08
30			0	.18	---	6.5	1.9	.68	.73	.29	.14	.09
31		---	0	.17	---	9.3	---	.71	---	.20	.16	---
TOTAL	0	0	.01	5.17	511.55	489.8	137.2	38.64	20.72	14.15	5.40	4.40
MEAN	0	0	.0003	.17	18.3	15.8	4.57	1.25	.69	.46	.17	.15
MAX	0	0	.01	.93	260	144	9.1	1.9	1.0	.71	.35	.71
MIN	0	0	0	0	.18	5.3	1.9	.68	.46	.20	.10	.05
AC-FT	0	0	.02	10	1010	972	272	77	41	28	11	8.7
CAL YR 1977	TOTAL	43.62	MEAN	.12	MAX	1.1	MIN	0	AC-FT	87		
WTR YR 1978	TOTAL	1227.04	MEAN	3.36	MAX	260	MIN	0	AC-FT	2430		

11140000 SISQUOC RIVER NEAR GAREY, CA

LOCATION.--Lat 34°53'38", long 120°18'20", in SW¼ sec.36, T.10 N., R.33 W., Santa Barbara County, on downstream side of Santa Maria Mesa Road bridge near left bank (revised), 0.6 mi (1.0 km) northeast of Garey, and 3.7 mi (6.0 km) downstream from Tepusquet Creek.

DRAINAGE AREA.--471 mi² (1,220 km²).

PERIOD OF RECORD.--October 1940 to current year. Records for water year 1941 incomplete, yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

GAGE.--Two water-stage recorders. Datum of main gage is 354.8 ft (108.14 m) Santa Barbara County datum. See WSP 1735 for history of changes of main gage prior to Oct. 1, 1959. Oct. 1, 1959, to Dec. 30, 1965, at datum 6.00 ft (1.829 m) higher. Since Oct. 1, 1959, supplementary gage on downstream side of bridge near right bank at same datum.

REMARKS.--Records fair. No regulation above station. Pumping from wells along stream for irrigation of about 7,000 acres (28.3 km²) above station.

AVERAGE DISCHARGE.--38 years, 40.4 ft³/s (1.144 m³/s), 29,270 acre-ft/yr (36.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s (694 m³/s) Jan. 25, 1969, gage height, 13.00 ft (3.962 m); maximum gage height, 13.50 ft (4.115 m) Dec. 6, 1966; no flow for several months in each year.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 28	2400	638 18.1	5.38 1.640	Feb. 13	0200	3200 90.6	6.08 1.853
Jan. 11	0100	279 7.90	4.46 1.359	Mar. 4	1330	*22200 628	10.67 3.252
Jan. 17	0100	4440 126	7.89 2.405	Mar. 31	1600	410 11.6	6.35 1.935
Feb. 10	0045	16800 475	*11.80 3.597	Apr. 16	0315	427 12.1	6.38 1.945

Minimum daily discharge, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	231	146	75				
2			0	0	0	393	97	56				
3			0	2.0	0	635	92	60				
4			0	2.4	0	9210	121	56				
5			0	.08	0	3170	111	50				
6			0	2.0	21	1400	110	44				
7			0	2.9	90	1120	155	39				
8			0	8.9	329	882	137	36				
9			0	1.9	4210	754	118	33				
10			0	26	7060	571	105	29				
11			0	188	2120	520	96	24				
12			0	59	1110	571	86	19				
13			0	21	2390	520	80	12				
14			0	16	1430	520	70	6.0				
15			0	756	960	483	100	5.1				
16			0	250	616	407	211	8.2				
17			0	1080	413	369	200	3.7				
18			0	222	291	331	194	2.1				
19			0	176	228	302	166	2.0				
20			0	174	200	269	145	.97				
21			0	111	185	259	125	.43				
22			0	70	170	258	108	1.8				
23			0	47	153	224	96	1.6				
24			0	35	130	196	80	2.5				
25			0	23	106	176	120	2.1				
26			0	12	85	152	110	.07				
27			0	3.3	72	112	98	0				
28			52	0	85	97	92	0				
29			176	0	---	73	84	0				
30			15	0	---	65	79	0				
31		---	2.2	0	---	208	---	0	---			---
TOTAL	0	0	245.2	3289.48	22454	24478	3532	569.57	0	0	0	0
MEAN	0	0	7.91	106	802	790	118	18.4	0	0	0	0
MAX	0	0	176	1080	7060	9210	211	75	0	0	0	0
MIN	0	0	0	0	0	65	70	0	0	0	0	0
AC-FT	0	0	486	6520	44540	48550	7010	1130	0	0	0	0
CAL YR 1977	TOTAL	272.62	MEAN	.75	MAX	176	MIN	0	AC-FT	541		
WTR YR 1978	TOTAL	54568.25	MEAN	150	MAX	9210	MIN	0	AC-FT	108200		

CAL YR 1977	TOTAL	238.81	MEAN	.65	MAX	54	MIN	0	AC-FT	474
WTR YR 1978	TOTAL	1211.18	MEAN	3.32	MAX	191	MIN	0	AC-FT	2400

SANTA MARIA RIVER BASIN

11141000 SANTA MARIA RIVER AT GUADALUPE, CA

LOCATION.--Lat 34°58'35", long 120°34'15", in Guadalupe Grant, Santa Barbara County, on downstream side of bridge on State Highway 1, 0.5 mi (0.8 km) north of Guadalupe, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--1,741 mi² (4,509 km²).

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only October 1940 to January 1941, published in WSP 1315-B.

GAGE.--Three water-stage recorders. Datum of main gage (left channel) is 64.92 ft (19.788 m) National Geodetic Vertical Datum of 1929. Two supplementary gages started in 1956; one on center channel at datum 0.47 ft (0.143 m) higher than main gage, and one on right channel at datum 2.22 ft (0.677 m) higher than main gage. Prior to Aug. 11, 1955, main gage at site 100 ft (30 m) upstream at same datum NGVD.

REMARKS.--Records poor. Cuyama River regulated since February 1959 by Twitchell Reservoir, capacity, 240,000 acre-ft (296 hm³). Several small surface diversions and extensive pumping from wells for irrigation along stream above station. AVERAGE DISCHARGE represents flow to ocean, regardless of upstream development.

AVERAGE DISCHARGE.--38 years, 30.3 ft³/s (0.858 m³/s), 21,950 acre-ft/yr (27.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,800 ft³/s (929 m³/s) Jan. 16, 1952, gage height, 8.18 ft (2.493 m); maximum gage height, 10.00 ft (3.048 m) Feb. 26, 1969; no flow for all or parts of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,200 ft³/s (629 m³/s) estimated, Mar. 4; maximum gage height, 9.06 ft (2.761 m) Feb. 10; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	0	0						
2			0	0	0	0						
3			0	0	0	20						
4			0	0	0	5820						
5			0	0	0	6600						
6			0	0	0	3200						
7			0	0	0	700						
8			0	0	.14	480						
9			0	0	690	260						
10			0	0	3280	195						
11			0	8.4	900	130						
12			0	12	500	65						
13			0	0	1000	0						
14			0	0	600	0						
15			0	87	90	0						
16			0	130	10	0						
17			0	347	1.0	0						
18			0	3.6	0	0						
19			0	2.5	0	0						
20			0	0	0	0						
21			0	0	0	0						
22			0	0	0	0						
23			0	0	0	0						
24			0	0	0	0						
25			0	0	0	0						
26			0	0	0	0						
27			0	0	0	0						
28			0	0	0	0						
29			9.6	0	---	0						
30			2.5	0	---	0						
31		---	0	0	---	0	---		---			---
TOTAL	0	0	12.1	590.5	7071.14	17470	0	0	0	0	0	0
MEAN	0	0	.39	19.0	253	564	0	0	0	0	0	0
MAX	0	0	9.6	347	3280	6600	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	24	1170	14030	34650	0	0	0	0	0	0
CAL YR 1977 TOTAL	12.10		MEAN .033	MAX 9.6	MIN 0	AC-FT 24						
WTR YR 1978 TOTAL	25143.74		MEAN 68.9	MAX 6600	MIN 0	AC-FT 49870						

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1978

					Annual maximum		
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
Bristol Lake basin							
10253000	Gourd Creek near Ludlow, CA	Lat 34°40'35", long 116°01'20", in SW¼ sec.23, T.7 N., R.9 E., at culvert on U.S. Highway 66, 8.5 mi (13.7 km) southeast of Ludlow.	0.30	1959-74 1976-78	--	--	0
Dale Lake basin							
10253320	Quail Wash near Joshua Tree, CA	Lat 34°07'04", long 116°18'27", SW¼NW¼NE¼ sec.1, T.1 S., R.6 E., on right bank 0.2 mi (0.3 km) downstream from Coyote Hole Spring and 1.1 mi (1.8 km) south of Joshua Tree.	100	1964-71† 1972-78	1-10-78	3.33	930
10253350	Fortynine Palms Creek near Twentynine Palms, CA	Lat 34°07'12", long 116°05'43" (unsurveyed), San Bernardino County, in Joshua Tree National Monument, on left bank 50 ft (15 m) upstream from North Monument boundary, 1.1 mi (1.8 km) downstream from Fortynine Palms Oasis, and 2.6 mi (4.2 km) southwest of Twentynine Palms.	8.55	1962-71† 1972-78	1-10-78	3.50	570
Salton Sea basin							
10257800	Long Creek near Desert Hot Springs, CA	Lat 33°57'53", long 116°26'35", in NW¼SE¼SE¼ sec.27, T.2 S., R.4 E., Riverside County, on left bank 0.4 mi (0.6 km) downstream from Metropolitan Water District aqueduct, and 3.3 mi (5.3 km) east of Desert Hot Springs.	19.4	1963-71† 1972-78	3-4-78	5.80	3700
Emerson Lake basin							
10260200	Pipes Creek near Yucca Valley, CA	Lat 34°10'19", long 116°32'45", in NE¼SE¼NE¼ sec.15, T.1 N., R.4 E., San Bernardino County, on left bank 2.8 mi (4.5 km) upstream from Antelope Wash and 6.8 mi (10.9 km) northwest of Yucca Valley.	15.1	1958-71† 1972-78	3-4-78	3.57	640*
Mojave River basin							
10261800	Beacon Creek at Helendale, CA	Lat 34°45'00", long 117°18'53", in SE¼ sec.29 T.8 N., R.4 W., at culvert on county road (formerly U.S. Highway 66 and 91), 0.6 mi (1.0 km) northeast of Helendale.	0.72	1959-60 1961-67† 1968-69 1976-78	2-10-78	11.39	6.5
10262600	Boom Creek near Barstow, CA	Lat 34°54'20", long 116°56'57", NE¼NW¼NE¼ sec.2, T.9 N., R.1 W., San Bernardino County, at culvert on U.S. Highway I-15, 4.3 mi (6.9 km) east of Barstow.	0.24	1959-66 1967-73† 1976-78	2-10-78	10.04	31
Antelope Valley							
10263900	Buckhorn Creek near Valyermo, CA	Lat 34°20'35", long 117°55'13", in SW¼ sec.15, T.3 N., R.10 W., at culvert on State Highway 2, Angeles National Forest, 8.1 mi (13.0 km) southwest of Valyermo.	0.48	1961-66† 1967-69 1971-73 1977-78	3-4-78	4.47	104

‡ Operated as a continuous-record gaging station.

* Estimated

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

					Annual maximum		
Station No.	Station name	Location	Drain- age area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
Antelope Valley							
10264530	Pine Creek near Palmdale, CA	Lat 34°36'09", long 118°14'48", in SW¼ sec.15, T.6 N., R.13 W., at culvert on Pine Canyon Road, 7.5 mi (12.1 km) northwest of Palmdale.	1.37	1959-73 1977-78	2-10-78	14.13	44
10264560	Spencer Canyon Creek near Fairmont, CA	Lat 34°46'33", long 118°34'08", in SE¼SW¼ sec.15, T.8 N., R.16 W., at culvert on county road, 8.5 mi (13.7 km) northwest of Fairmont.	3.60	1959-64 1965-73 1974 1978	2-10-78	13.54	430
Indian Wells Valley Basin							
10264780	El Paso Wash near Inyokern, CA	Lat 33°36'00", long 117°45'19", in NW¼SW¼ sec.11, T.27 S., R.39 E., Kern County, at culvert on U.S. Highway 395, 4.5 mi (7.2 km) southeast of Inyokern.	34.6	1976-78a	2-10-78	10.77	287
10264785	El Paso Wash tributary No. 5 near Inyokern, CA	Lat 35°35'49", long 117°45'10", in SE¼SW¼ sec.11, T.27 S., R.39 E., Kern County at culvert on U.S. Highway 395, 4.8 mi (7.7 km) southeast of Inyokern.	.25	1976-78a	3-4-78	3.68	64
10264790	El Paso Wash tributary No. 3 near Inyokern, CA	Lat 35°36'40", long 117°45'54", in NW¼SE¼ sec.3, T.27 S., R.39 E., Kern County, at culvert on U.S. Highway 395, 3.6 mi (5.8 km) southeast of Inyokern.	1.67	1976-78a	3-4-78	6.30	13
10264795	El Paso Wash tributary No. 4 near Inyokern, CA	Lat 35°36'27", long 117°45'39", in NE¼NE¼ sec.10, T.27 S., R.39 E., Kern County, at culvert on U.S. Highway 395, 4.0 mi (6.4 km) southeast of Inyokern.	.37	1976-78a	2-10-78	4.50	2.3
10264800	El Paso Wash tributary No. 2 near Inyokern, CA	Lat 35°37'05", long 117°46'16", in SE¼NW¼ sec.3, T.27 S., R.39 E., Kern County, at culvert on U.S. Highway 395, 3.0 mi (4.8 km) southeast of Inyokern.	.42	1976-78a	2-10-78	8.70	24
10264810	El Paso Wash tributary No. 1 near Inyokern, CA	Lat 35°37'16", long 117°46'27", in NW¼NW¼ sec.3, T.27 S., R.39 E., Kern County at culvert on U.S. Highway 395, 2.7 mi (4.3 km) southeast of Inyokern.	.48	1976-78a	2-10-78	2.73	1.4
10264820	Little Dixie Wash near Inyokern, CA	Lat 35°38'04", long 117°47'06", in NE¼NW¼ sec.33, T.26 S., R.39 E., Kern County at culvert on U.S. Highway 395, 1.7 mi (2.7 km) southeast of Inyokern.	213	1976-78a	2-10-78	12.32	775
Santa Monica Creek basin							
11119540	Santa Monica Creek at Carpinteria, CA	Lat 34°25'06", long 119°31'34", in Pueblo Lands of Santa Barbara, Santa Barbara County on left bank, 0.3 mi (0.5 km) north of Foothill Road (Hwy 192), 1.0 mi (1.6 km) northwest of Carpinteria.	3.64	1969 1972-78	2-9-78	2.89	550

a Discontinued.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

					Annual maximum		
Station No.	Station name	Location	Drain- age area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
San Ysidro Creek basin							
11119660	San Ysidro Creek at Montecito, CA	Lat 34°27'00", long 119°37'19', in Pueblo Lands of Santa Barbara, Santa Barbara County, on left bank 0.8 mi (1.3 km) north northeast of intersection of San Ysidro and East Valley Roads, Montecito.	3.07	1969 1972-78	2-9-78	29.10	300
Sycamore Creek basin							
11119700	Sycamore Creek at Santa Barbara, CA	Lat 34°25'45", long 119°40'35", in Pueblo Lands of Santa Barbara, Santa Barbara County, on left bank at intersection of Sycamore Canyon Road and Alameda Padre Serra in Santa Barbara.	3.41	1971-72† 1973-78	2-9-78	4.65	1120
Mission Creek basin							
11119740	Mission Creek at Santa Barbara, CA	Lat 34°27'09", long 119°42'30", in Pueblo Lands of Santa Barbara, Santa Barbara County, on left bank 0.4 mi (0.6 km) north of intersection of Foothill Road (Hwy 192) and Mission Canyon Road, 0.8 mi (1.3 km) north of Santa Barbara.	2.78	1972-78	2-9-78	19.05	890*
Atascadero Creek basin							
11119900	Atascadero Creek at Puente Road, near Goleta, CA	Lat 34°25'56", long 119°47'00", in Pueblo Lands of Santa Barbara, Santa Barbara County, on right bank of Puente Drive bridge, 0.4 mi (0.6 km) south of Hollister Avenue, and 2.4 mi (3.9 km) east of Goleta.	3.86	1971-72† 1973-78	1-16-78	3.80	820
Santa Ynez River basin							
11128700	Thumbelina Creek at Buellton CA	Lat 34°36'37", long 120°11'02", in San Carlos De Jonata Grant, Santa Barbara County, on concrete trapezoidal channel, 100 ft (30 m) upstream of State Highway 246, 0.6 mi (1.0 km) east of Buellton.	3.07	1972-78	2-9-78	26.30	600
11131700	Santa Rita Creek near Lompoc, CA	Lat 34°38'41", long 120°22'09", in Santa Rita Grant, Santa Barbara County, on left bank 2.4 mi (3.9 km) upstream from mouth and 6.5 mi (10.5 km) east of Lompoc.	14.1	1976-78	3-4-78	9.06	450
11133700	Purisima Creek near Lompoc, CA	Lat 34°41'34", long 120°25'51", in Purisima Grant, Santa Barbara County, on right bank 1.1 mi (1.8 km) northeast of junction of Buener Road and Lompoc- Casmalia Road, and 4.0 mi (6.4 km) northeast of Lompoc.	4.75	1972-75† 1976-78	2-9-78	2.27	80
11135200	Rodeo-San Pasqual Creek near Lompoc, CA	Lat 34°38'42", long 120°30'57", in Lompoc Grant, Santa Barbara County, on left bank 0.1 mi (0.2 km) east of Dewolf Avenue at Highway 246, 3.3 mi (5.3 km) west of Lompoc.	7.80	1971-72† 1973-78	3-4-78	3.37	646

† Operated as a continuous-record gaging station.

* Estimated.

GROUND WATER
IMPERIAL COUNTY

WELL 015S011E32R01S

SITE NUMBER 324851115505901

ABOUT 1.5 MI NORTH OF PLASTER CITY. DRILLED UNUSED WATER-TABLE WELL. DIAM 1 3/8 IN, DEPTH 152 FT, PERFORATED 138-140 FT. 1974 WELL FILLED IN TO 145.8 FT. ALTITUDE OF LSD 65 FT. RECORDS AVAILABLE 1964, 1974, 1976 TO CURRENT YEAR.

HIGHEST WATER LEVEL 51.53 FEET BELOW LAND SURFACE DATUM SEP 12, 1979.

LOWEST WATER LEVEL 101.00 FEET BELOW LAND SURFACE DATUM MAR 19, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1977	51.95	APR 25, 1978	51.82				

WELL 016S009E24D01S

SITE NUMBER 324558115595201

ABOUT 2 MI NORTH OF OCOTILLO. BORED UNUSED WATER-TABLE WELL IN SAND AND CLAY OF QUATERNARY AGE. DIAM 2 IN, DEPTH 150 FT, CASED TO 145.5 FT, SAND POINT 145.5-149 FT. ALTITUDE OF LSD 382 FT. RECORDS AVAILABLE 1976 TO CURRENT YEAR.

HIGHEST WATER LEVEL 103.86 FEET BELOW LAND SURFACE DATUM APR 28, 1977.

LOWEST WATER LEVEL 131.00 FEET BELOW LAND SURFACE DATUM DEC 10, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 1977	103.93	APR 27, 1978	104.07				

WELL 016S009E24R01S

SITE NUMBER 324518115591501

ABOUT 1 MI NORTH OF OCOTILLO. BORED UNUSED WATER-TABLE WELL IN SAND AND CLAY OF QUATERNARY AGE. DIAM 2 IN, DEPTH 105 FT, CASED TO 101.5 FT, SAND POINT 98-101.5 FT. ALTITUDE OF LSD 335 FT. RECORDS AVAILABLE 1976 TO CURRENT YEAR.

HIGHEST WATER LEVEL 58.00 FEET BELOW LAND SURFACE DATUM NOV 17, 1976.

LOWEST WATER LEVEL 79.70 FEET BELOW LAND SURFACE DATUM NOV 10, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 1977	58.54	APR 26, 1978	58.19				

GROUND WATER
IMPERIAL COUNTY--Continued

615

WELL 016S011E23B01S

SITE NUMBER 324603115480501

ABOUT 3.5 MI SOUTHEAST OF PLASTER CITY. AUGERED UNUSED WATER-TABLE WELL. DIAM 1 1/4 IN, DEPTH 127 FT, PERFORATED 121-123 FT, 1974 WELL FILLED IN TO 114.7 FT. ALTITUDE OF LSD 30 FT. RECORDS AVAILABLE 1964, 1974, 1976 TO CURRENT YEAR.

HIGHEST WATER LEVEL 39.34 FEET BELOW LAND SURFACE DATUM APR 25, 1978.

LOWEST WATER LEVEL 101.17 FEET BELOW LAND SURFACE DATUM MAR 19, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1977	39.38	APR 25, 1978	39.34				

INYO COUNTY

WELL 027N001E24E01S

SITE NUMBER 362711116494401

EAST OF FURNACE CREEK INN. DRILLED UNUSED WATER-TABLE WELL IN LACUSTRINE OF PLEISTOCENE AGE. DIAM 14 IN, DEPTH 250 FT. ALTITUDE OF LSD 480 FT. RECORDS AVAILABLE 1958-59, 1962, 1964, 1966-67, 1971-72, 1976, 1978 TO CURRENT YEAR.

HIGHEST WATER LEVEL 74.51 FEET BELOW LAND SURFACE DATUM NOV 20, 1958.

LOWEST WATER LEVEL 76.09 FEET BELOW LAND SURFACE DATUM MAY 09, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 17, 1978	75.22	SEP 20, 1978	75.93				

WELL 015S044E36M01M

SITE NUMBER 363621117091801

ABOUT 0.5 MI WEST OF STOVEPIPE WELLS HOTEL. DRILLED UNUSED WATER-TABLE WELL IN SAND AND GRAVEL OF QUATERNARY AGE. DIAM 2 IN, DEPTH 50 FT, CASED TO 45.27 FT, SAND POINT 43.27-45.27 FT. ALTITUDE OF LSD -3 FT. RECORDS AVAILABLE 1973 TO CURRENT YEAR.

HIGHEST WATER LEVEL 27.70 FEET BELOW LAND SURFACE DATUM APR 09, 1974.

LOWEST WATER LEVEL 28.10 FEET BELOW LAND SURFACE DATUM NOV 03, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 18, 1978	27.91	MAY 10, 1978	27.84	SEP 21, 1978	28.04		

GROUND WATER
 INYO COUNTY--Continued

WELL 024S039E33N01H

SITE NUMBER 354758117464001

ABOUT 11 MI NORTH OF RIDGECREST. DUG UNUSED WATER-TABLE WELL. DIAM 10 IN, DEPTH 170 FT. 1946 WELL FILLED IN TO 163 FT, 1972 WELL FILLED IN TO 161.4 FT. ALTITUDE OF LSD 2254.5 FT. RECORDS AVAILABLE 1920, 1946, 1952-54, 1959, 1961-66, 1968 TO CURRENT YEAR.

HIGHEST WATER LEVEL 58.86 FEET BELOW LAND SURFACE DATUM MAR 16, 1954.

LOWEST WATER LEVEL 61.74 FEET BELOW LAND SURFACE DATUM DEC 02, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 01, 1977	61.57						

KERN COUNTY

WELL 010N009W04D01S

SITE NUMBER 345951117503501

NORTHEAST OF ROSAMOND BLVD AND LAKE SHORE DRIVE, AT NORTH END OF ROGERS LAKE. DRILLED UNUSED WATER-TABLE WELL IN LAKESHORE DEPOSITS. DIAM 12 IN, DEPTH 502 FT, CASED TO 500 FT, PERFORATED 144-195, 200-433 FT. ALTITUDE OF LSD 2280 FT. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 94.21 FEET BELOW LAND SURFACE DATUM JUL 08, 1959.

LOWEST WATER LEVEL 116.32 FEET BELOW LAND SURFACE DATUM OCT 17, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1977	115.86	MAR 30, 1978	114.60				

WELL 011N011W09A01S

SITE NUMBER 350411118023601

NORTHEAST OF MOJAVE. DRILLED UNUSED WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE. DIAM 14 IN, DEPTH 422 FT, CASED TO 422 FT, PERFORATED 262-295, 352-362 FT. ALTITUDE OF LSD 2549.6 FT. RECORDS AVAILABLE 1956-58, 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 124.59 FEET BELOW LAND SURFACE DATUM OCT 17, 1956.

LOWEST WATER LEVEL 129.67 FEET BELOW LAND SURFACE DATUM FEB 14, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1977	129.17	MAR 30, 1978	129.35				

WELL 011N013W29M01S

SITE NUMBER 350055118172601

WEST OF MOJAVE. DRILLED UNUSED WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE. DIAM 16 IN, DEPTH 749 FT, CASSED TO 744 FT, PERFORATED 520-724 FT. ALTITUDE OF LSD 3350 FT. RECORDS AVAILABLE 1954-56, 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 300.00 FEET BELOW LAND SURFACE DATUM FEB 04, 1954.

LOWEST WATER LEVEL 336.19 FEET BELOW LAND SURFACE DATUM OCT 17, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12, 1977	333.96	MAR 30, 1978	335.02				

WELL 026S039E19Q01M

SITE NUMBER 354408117485801

AT INYOKERN. DRILLED UNUSED WATER-TABLE WELL IN GRAVEL OF QUATERNARY AGE. DIAM 16 IN, DEPTH 371 FT, CASSED TO 256 FT. ALTITUDE OF LSD 2418.3 FT. RECORDS AVAILABLE 1945, 1952-64, 1966-73, 1975 TO CURRENT YEAR.

HIGHEST WATER LEVEL 207.50 FEET BELOW LAND SURFACE DATUM SEP 07, 1945.

LOWEST WATER LEVEL 225.60 FEET BELOW LAND SURFACE DATUM NOV 09, 1960.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15, 1977	223.37						

WELL 026S040E22P01M

SITE NUMBER 353908117395201

AT CHINA LAKE. DRILLED UNUSED WATER-TABLE WELL IN SAND OF QUATERNARY AGE. DIAM 8 IN, DEPTH 1358 FT, PERFORATED 530-830 FT. ALTITUDE OF LSD 2258.7 FT. RECORDS AVAILABLE 1954 TO CURRENT YEAR.

HIGHEST WATER LEVEL 64.28 FEET BELOW LAND SURFACE DATUM MAY 13, 1954.

LOWEST WATER LEVEL 90.19 FEET BELOW LAND SURFACE DATUM NOV 29, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30, 1977	87.18	JUN 22, 1978	87.1				

GROUND WATER
KERN COUNTY--Continued

WELL 027S040E02J01M

SITE NUMBER 353644117380601

SOUTHEAST OF RIDGECREST, DRILLED IRRIGATION WATER-TABLE WELL. DIAM 10 IN, DEPTH 220 FT. ALTITUDE OF LSD 2300 FT. RECORDS AVAILABLE 1958, 1960-62, 1964-66, 1968, 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 106.36 FEET BELOW LAND SURFACE DATUM JAN 21, 1960.

LOWEST WATER LEVEL 124.87 FEET BELOW LAND SURFACE DATUM SEP 08, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16, 1977	117.71						

LOS ANGELES COUNTY

WELL 005N011W01M01S

SITE NUMBER 343259117593101

NORTHWEST OF 80TH STREET EAST AND AVENUE T INTERSECTION. UNUSED WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE. DIAM 14 IN, DEPTH 414 FT, CASED TO 392 FT, PERFORATED 100-364 FT. ALTITUDE OF LSD 2738.5 FT. 1967 WELL FILLED IN TO 396.29 FT. RECORDS AVAILABLE 1955, 1963, 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 74.26 FEET BELOW LAND SURFACE DATUM MAR 17, 1970.

LOWEST WATER LEVEL 111.37 FEET BELOW LAND SURFACE DATUM OCT 11, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11, 1977	111.37	MAR 27, 1978	109.72				

WELL 005N013W36L01S

SITE NUMBER 342818118114501

IN ACTON, NEAR INTERSECTION OF CROWN VALLEY ROAD AND SYRACUSE AVENUE. DRILLED INSTITUTION WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE. DIAM 12 IN, DEPTH 122 FT. ALTITUDE OF LSD 2700 FT. RECORDS AVAILABLE 1956, 1965, 1974 TO CURRENT YEAR.

HIGHEST WATER LEVEL 47.50 FEET BELOW LAND SURFACE DATUM FEB 26, 1979.

LOWEST WATER LEVEL 88.56 FEET BELOW LAND SURFACE DATUM OCT 07, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 28, 1978	60.33						

GROUND WATER
LOS ANGELES' COUNTY--Continued

619

WELL 007N012W13H02S

SITE NUMBER 344150118055401

WEST OF 20TH STREET EAST AND NORTH OF LANCASTER BLVD. DOMESTIC WATER-TABLE WELL. DIAM 8 IN, DEPTH 218 FT. ALTITUDE OF LSD 2385 FT. RECORDS AVAILABLE 1963, 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 113.95 FEET BELOW LAND SURFACE DATUM SEP 25, 1963.

LOWEST WATER LEVEL 141.86 FEET BELOW LAND SURFACE DATUM FEB 13, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1977	139.01	MAR 30, 1978	138.85				

WELL 008N016W03F01S

SITE NUMBER 344841118335001

NORTH OF AVENUE D AND WEST OF 240TH STREET WEST. DRILLED UNUSED WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE. DIAM 1 1/2-2 IN, DEPTH 326 FT, 1 1/2-IN CSG 0-295.5 FT, 2-IN CSG 295.5-326 FT, PERFORATED 317-326 FT. ALTITUDE OF LSD 2835 FT. RECORDS AVAILABLE 1965, 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 191.64 FEET BELOW LAND SURFACE DATUM APR 13, 1965.

LOWEST WATER LEVEL 219.54 FEET BELOW LAND SURFACE DATUM NOV 07, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1977	218.16	MAR 29, 1978	217.68				

WELL 001S010W07R02S

SITE NUMBER 340535117573501

NEAR INTERSECTION OF LOS ANGELES AND MAINE STREETS IN BALDWIN PARK. DRILLED OBSERVATION WATER-TABLE WELL IN SAND AND GRAVEL OF QUATERNARY AGE. DIAM 16 IN, DEPTH 200 FT, PERFORATED 74-174, 181-196 FT. ALTITUDE OF LSD 387 FT. RECORDS AVAILABLE 1903, 1916, 1945-50, 1961 TO CURRENT YEAR.

HIGHEST WATER LEVEL 56.00 FEET BELOW LAND SURFACE DATUM MAY 19, 1916.

LOWEST WATER LEVEL 183.79 FEET BELOW LAND SURFACE DATUM DEC 22, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1977	181.58	JAN 25, 1978	181.40	APR 26, 1978	133.66	JUL 21, 1978	118.68
NOV 21	182.88	FEB 21	161.21	MAY 24	126.92	AUG 24	124.45
DEC 22	183.79	MAR 24	146.93	JUN 26	117.19	SEP 22	127.35

GROUND WATER
LOS ANGELES COUNTY--Continued

WELL 004S013W23B02S

SITE NUMBER 334905118124601

PREVIOUSLY PUBLISHED AS 4S/13W-2302. IN LONG BEACH, NEAR INTERSECTION OF 32ND AND DELTA STREETS. DRILLED UNUSED ARTESIAN WELL IN GRAVEL IN UPPERMOST PART OF SILVERADO WATER-BEARING ZONE OF PLEISTOCENE AGE, DIAM 26 TO 16 IN, DEPTH 1074 FT, 26-IN CSG 0-288 FT, 16-IN CSG 288-1068 FT, PERFORATED 650-900 FT. ALTITUDE OF LSD 24.1 FT. MEASUREMENTS FURNISHED BY CITY OF LONG BEACH. RECORDS AVAILABLE 1932 TO CURRENT YEAR.

HIGHEST WATER LEVEL 52.93 FEET BELOW LAND SURFACE DATUM FEB 06, 1939.

LOWEST WATER LEVEL 131.75 FEET BELOW LAND SURFACE DATUM JAN 20, 1953.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1977	122.28	FEB 22, 1978	112.38	MAY 17, 1978	115.48	AUG 23, 1978	118.18
DEC 28	117.58	MAR 22	114.08	JUN 21	115.78	SEP 20	115.28
JAN 18, 1978	116.48	APR 26	115.08	JUL 19	117.18		

RIVERSIDE COUNTY

WELL 008S002W28R01S

SITE NUMBER 332653117050301

SOUTHEAST OF TEMECULA ON PECHANGA INDIAN RESERVATION. DRILLED UNUSED WATER-TABLE WELL IN SAND AND GRAVEL OF QUATERNARY AGE. DIAM 12 1/4 IN, DEPTH 1002 FT, CASSED TO 1000 FT, PERFORATED 130-220, 250-350, 400-710, 750-780, 830-870, 930-940, 975-1000 FT. ALTITUDE OF LSD 1190 FT. RECORDS AVAILABLE 1973 TO CURRENT YEAR.

HIGHEST WATER LEVEL 69.98 FEET BELOW LAND SURFACE DATUM FEB 06, 1979.

LOWEST WATER LEVEL 133.50 FEET BELOW LAND SURFACE DATUM DEC 18, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 22, 1977	87.36	JAN 26, 1978	86.92	MAR 08, 1978	79.17	SEP 08, 1978	93.34 P
DEC 21	87.42	FEB 17	84.42	AUG 03	108.65 P		

WELL 008S002W29G01S

SITE NUMBER 332719117061501

SOUTHEAST OF TEMECULA ON PECHANGA INDIAN RESERVATION. DRILLED UNUSED WATER-TABLE WELL. DIAM 12 IN, DEPTH 176 FT. 1972 WELL FILLED IN TO 159.1 FT. ALTITUDE OF LSD 1091.1 FT. RECORDS AVAILABLE 1925-28, 1934-37, 1940, 1951-54, 1956, 1958-68, 1971 TO CURRENT YEAR.

HIGHEST WATER LEVEL 23.75 FEET BELOW LAND SURFACE DATUM MAY 09, 1979.

LOWEST WATER LEVEL 55.40 FEET BELOW LAND SURFACE DATUM SEP 03, 1951.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1977	51.26	DEC 21, 1977	51.46	JUL 20, 1978	31.23	SEP 01, 1978	30.26
NOV 22	51.36	MAR 16, 1978	44.97	AUG 04	30.79	08	30.04

P Pumping.

GROUND WATER
RIVERSIDE COUNTY--Continued

621

WELL 003S004E29F01S

SITE NUMBER 335304116353001

NEAR HWY 111 NORTHWEST OF PALM SPRINGS. DRILLED UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 3 IN. DEPTH 575 FT. CASED TO 575 FT. PERFORATED 555-575 FT. ALTITUDE OF LSD 865 FT. RECORDS AVAILABLE 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 467.75 FEET BELOW LAND SURFACE DATUM APR 19, 1979.

LOWEST WATER LEVEL 547.00 FEET BELOW LAND SURFACE DATUM DEC 21, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 21, 1977	547.00	MAR 14, 1978	520.00	JUL 18, 1978	514.30		

WELL 003S004E29R01S

SITE NUMBER 335231116345401

NEAR HWY 111 NORTHWEST OF PALM SPRINGS. DRILLED UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN. DEPTH 551 FT. CASED TO 551 FT. PERFORATED 431-551 FT. ALTITUDE OF LSD 777 FT. RECORDS AVAILABLE 1971 TO CURRENT YEAR.

HIGHEST WATER LEVEL 471.79 FEET BELOW LAND SURFACE DATUM SEP 19, 1979.

LOWEST WATER LEVEL 516.39 FEET BELOW LAND SURFACE DATUM MAR 14, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 1977	502.34	MAR 14, 1978	516.39	JUL 18, 1978	507.49		

WELL 004S011E27Q01S

SITE NUMBER 334712115485601

ABOUT 3.5 MI NORTH OF COTTONWOOD SPRING, IN SMOKETREE WASH. DIAM 12 TO 10 IN. DEPTH 403 FT. 12-IN CSG 0-232, 10-IN CSG 209-403 FT. PERFORATED 212-228, 209-398 FT. ALTITUDE OF LSD 2975 FT. RECORDS AVAILABLE 1958-61, 1963 TO CURRENT YEAR.

HIGHEST WATER LEVEL 170.29 FEET BELOW LAND SURFACE DATUM MAR 12, 1959.

LOWEST WATER LEVEL 194.40 FEET BELOW LAND SURFACE DATUM APR 11, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1977	186.97	MAY 13, 1978	189.80				

GROUND WATER
SAN DIEGO COUNTY

WELL 010S001W16H01S

SITE NUMBER 331826116585201

NORTH OF PAUMA VALLEY. DRILLED IRRIGATION WATER-TABLE WELL IN SAND AND GRAVEL OF QUATERNARY AGE. DIAM UNKNOWN TO 245 FT, 10 IN 245-365 FT, 8 IN 364-419 FT, DEPTH 419 FT, PERFORATED 270-360, 364-419 FT. ALTITUDE OF LSD 885 FT. RECORDS AVAILABLE 1961, 1967, 1971-73, 1975 TO CURRENT YEAR.

HIGHEST WATER LEVEL 123.08 FEET BELOW LAND SURFACE DATUM APR 10, 1979.

LOWEST WATER LEVEL 223.50 FEET BELOW LAND SURFACE DATUM MAR 21, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 1977	214.75	JAN 26, 1978	204.38	JUL 25, 1978	175.24 P		
DEC 20	211.80	MAR 16	192.31	SEP 07	163.85		

SANTA BARBARA COUNTY

WELL 004N025W21R01S

SITE NUMBER 342427119294601

NORTHEAST OF CARPINTERIA. DRILLED UNUSED WATER-TABLE WELL. DIAM 12 IN, DEPTH 468 FT, CASED TO 434 FT, PERFORATED 82-90, 120-150, 170-176, 239-240, 289-304, 314-318, 340-341, 356-386, 412-416 FT. ALTITUDE OF LSD 127 FT. MEASUREMENTS BEGINNING 2/15/78 COLLECTED BY U.S. GEOLOGICAL SURVEY AND CARPINTERIA COUNTY WATER DISTRICT. RECORDS AVAILABLE 1941 TO CURRENT YEAR.

HIGHEST WATER LEVEL 41.39 FEET BELOW LAND SURFACE DATUM JUN 15, 1979.

LOWEST WATER LEVEL 126.08 FEET BELOW LAND SURFACE DATUM NOV 26, 1951.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 15, 1978	64.90	APR 24, 1978	49.76	JUL 18, 1978	55.73		
MAR 16	58.68	MAY 17	48.42	AUG 17	58.95		
APR 17	51.00	JUN 16	49.20	SEP 15	56.76		

WELL 004N027W21R01S

SITE NUMBER 342506119423801

NEAR WILSON SCHOOL IN SANTA BARBARA. UNUSED WATER-TABLE WELL. DIAM 16 IN, DEPTH 454 FT, CASED TO 454 FT, PERFORATED 145-350 FT. ALTITUDE OF LSD 68 FT. MEASUREMENTS BEGINNING 5/11/76 FURNISHED BY CITY OF SANTA BARBARA. RECORDS AVAILABLE 1931, 1948-50, 1956 TO CURRENT YEAR.

HIGHEST WATER LEVEL 37.00 FEET BELOW LAND SURFACE DATUM JAN 23, 1948.

LOWEST WATER LEVEL 122.00 FEET BELOW LAND SURFACE DATUM OCT 21, 1931.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1977	71.08	JAN 05, 1978	65.51	APR 07, 1978	53.50	JUL 06, 1978	41.13
NOV 02	62.72	FEB 02	57.91	MAY 11	44.30	AUG 01	41.68
DEC 08	71.49	MAR 03	48.19	JUN 01	42.50	SEP 08	41.89

P Pumping.

GROUND WATER
SANTA BARBARA COUNTY--Continued

623

WELL 007N034W34801S

SITE NUMBER 343911120264001

IN LOMPOC. DRILLED PUBLIC SUPPLY WATER-TABLE WELL. DIAM 14 IN, DEPTH 195 FT, CASED TO 192 FT, PERFORATED 96-192 FT. ALTITUDE OF LSD 102 FT. RECORDS BEGINNING IN 1972 FURNISHED BY U.S. BUREAU OF RECLAMATION. RECORDS AVAILABLE 1965, 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 40.70 FEET BELOW LAND SURFACE DATUM APR 23, 1975.

LOWEST WATER LEVEL 68.70 FEET BELOW LAND SURFACE DATUM JUL 27, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1977	64.70	DEC 26, 1977	63.70	FEB 18, 1978	56.70	APR 25, 1978	46.70
NOV 21	68.70	JAN 09, 1978	63.70	MAR 26	48.70		

WELL 007N035W36J03S

SITE NUMBER 343840120304801

ABOUT 3 MI WEST OF LOMPOC. DRILLED UNUSED WATER-TABLE WELL. DIAM 16 IN, DEPTH 102 FT, PERFORATED 71-95 FT. ALTITUDE OF LSD 58.76 FT. RECORDS 1930-42 FURNISHED BY CITY OF SANTA BARBARA. RECORDS AVAILABLE 1929-42, 1944, 1952, 1961 TO CURRENT YEAR.

HIGHEST WATER LEVEL 4.60 FEET BELOW LAND SURFACE DATUM APR 16, 1941.

LOWEST WATER LEVEL 81.00 FEET BELOW LAND SURFACE DATUM JUL 18, 1933.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19, 1977	27.08	JAN 30, 1978	23.02	APR 25, 1978	17.60	JUL 27, 1978	25.48
NOV 23	25.91	FEB 21	21.56	MAY 25	19.54	AUG 25	23.38
DEC 21	25.42	MAR 27	17.88	JUN 26	21.02	SEP 22	22.23

WELL 008N032W30H07S

SITE NUMBER 344443120164501

IN LOS ALAMOS. DRILLED PUBLIC SUPPLY WATER-TABLE WELL. DIAM 12 IN, DEPTH 310 FT, CASED TO 310 FT, PERFORATED 124-310 FT. ALTITUDE OF LSD 563 FT. RECORDS AVAILABLE 1964 TO CURRENT YEAR.

HIGHEST WATER LEVEL 24.10 FEET BELOW LAND SURFACE DATUM MAR 25, 1966.

LOWEST WATER LEVEL 36.96 FEET BELOW LAND SURFACE DATUM AUG 31, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 18, 1978	34.21	JAN 20, 1978	31.32	MAY 01, 1978	25.32		

WELL 010N025W29K02S

SITE NUMBER 345500119343201

ABOUT 6.5 MI EAST OF NEW CUYAMA. IRRIGATION WATER-TABLE WELL. DIAM 14 IN, DEPTH 296 FT, CASED TO 296 FT, PERFORATED 120-296 FT. ALTITUDE OF LSD 2357 FT. RECORDS AVAILABLE 1966, 1968, 1977 TO CURRENT YEAR.

HIGHEST WATER LEVEL 121.20 FEET BELOW LAND SURFACE DATUM DEC 11, 1968.

LOWEST WATER LEVEL 334.30 FEET BELOW LAND SURFACE DATUM AUG 25, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19, 1977	319.60	JAN 30, 1978	307.03	JUN 27, 1978	315.05		
NOV 22	320.26	MAY 01	299.70	AUG 01	314.39		

WELL 010N034W24K01S

SITE NUMBER 345548120242202

EAST OF HWY 101 AND SOUTH OF BATTLES ROAD. DRIVEN UNUSED WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE. DIAM 16 IN, DEPTH 714 FT, PERFORATED 650-657, 692-710 FT. ALTITUDE OF LSD 254 FT. MEASUREMENTS FURNISHED BY SANTA MARIA VALLEY WATER CONSERVATION DISTRICT. RECORDS AVAILABLE 1941, 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 75.32 FEET BELOW LAND SURFACE DATUM DEC 30, 1941.

LOWEST WATER LEVEL 215.50 FEET BELOW LAND SURFACE DATUM JUL 01, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04, 1978	169.30	APR 05, 1978	168.10	JUL 10, 1978	182.30		

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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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