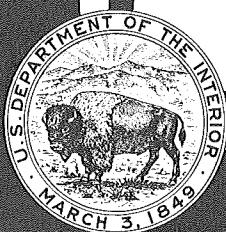


1969

Water Resources Data for California

Part 2. Water Quality Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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

CALENDAR FOR WATER YEAR 1969

OCTOBER 1968

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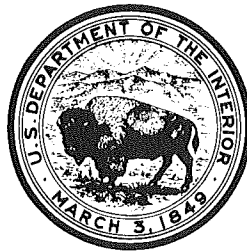
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1969

**Water Resources Data
for
California**

Part 2. Water Quality Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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

Water-resources records, 1969, for California are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for California
Part 1: Surface Water Records
Volume 1: Colorado River Basin, Southern Great Basin, and Pacific Slope Basins excluding Central Valley
2. Water Resources Data for California
Part 1: Surface Water Records
Volume 2: Northern Great Basin and Central Valley
3. Water Resources Data for California
Part 2: Water Quality Records

Copies of these reports may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
855 Oak Grove Avenue
Menlo Park, California 94025

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WATER RESOURCES DATA FOR CALIFORNIA, 1969

Part 2. Water Quality Records

INTRODUCTION

Water-resources investigations of the U.S. Geological Survey include the collection of water-quality data on the chemical and physical characteristics of surface- and ground-water supplies of the Nation. These data for the 1969 water year for the quality of surface water in California are presented in this report. Data for a few water-quality stations in bordering States are also included. The data were collected by the Water Resources Division of the Geological Survey under the direction of R. Stanley Lord, district chief, Menlo Park, Calif.

The Geological Survey has published the annual series of water-supply papers, "Quality of Surface Waters of the United States," from 1941 through 1967 which contained the chemical-quality, temperature, and suspended-sediment data of the water; each volume included data for an area whose boundaries coincided with those of certain natural drainage areas. The series will be continued through the 1967 water year. The records for California are contained in Parts 9-11 of the water-supply-paper series. (See table 3.) These publications are available in most public libraries. Beginning with the 1964 water year, water-quality records of surface water obtained by the Geological Survey were published in a new series of annual releases on a State-boundary basis. This report, one of that series, is primarily for local and immediate use, and its distribution is limited. These records will be published later in Geological Survey water-supply papers.

Chemical-quality analyses at most stations in this report were analyzed and furnished by the California Department of Water Resources.

COOPERATION

In California the work was done under cooperative agreements with:

California Department of Water Resources
California Regional Water Quality Control Board, Central
Valley Region
California Department of Fish and Game
Imperial Irrigation District
Marin County
Monterey County Flood Control and Water Conservation District
Orange County Water District
San Diego County
San Bernardino Valley Municipal Water District
San Luis Obispo County Flood Control and Water Conservation
District
San Mateo County
Santa Clara County Flood Control and Water District
United Water Conservation District
University of California
Ventura County Flood Control District

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

Agencies furnishing assistance were:

Alameda County Water District
Kings River Water Association
Metropolitan Water District of Southern California
Pacific Gas and Electric Company
Santa Cruz County Flood Control and Water Conservation
District
Sierra Pacific Power Company
Southern California Edison Company
Yuba County Water Agency

DEFINITION OF TERMS AND ABBREVIATIONS

The terms and abbreviations of water-quality and hydrologic data, as used in the text and tabular data of this report, are defined as follows:

Acre-foot (ac-ft) is a quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or 325,851 gallons. The term is commonly used in measuring volumes of water.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It equals 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons. A cfs-day represents a runoff of 0.0372 inch from 1 square mile.

Cubic foot per second (cfs, CFS) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

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

Daily mean discharge is the mean discharge for 1 day.

Mean daily discharge is the arithmetic mean discharge for the same day during a specific period of years.

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

Instantaneous discharge (at time of sampling). If the discharge at the time of sampling is reported instead of the daily mean, the heading of the discharge column is "Discharge (cfs)."

Dissolved solids is the residue on evaporation after drying at 180°C for 1 hour. For some water samples, particularly those containing moderately large quantities of soluble salts, the value reported is calculated from the quantities of the various determined constituents using the carbonate equivalent of the reported bicarbonate. The calculated sum of the constituents may be given instead of or in addition to the residue.

Drainage area of a stream at a specified location is that area, measured in horizontal plane, enclosed by a topographic divide.

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.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is the property of water attributable to the presence of alkaline earths and is expressed as equivalent calcium carbonate (CaCO_3). Hardness is a physical-chemical characteristic, not a substance.

Milligrams per liter (mg/l) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of the dissolved constituent per unit volume of water. Concentration of suspended sediment expressed in milligrams per liter is based on the weight of sediment in a liter of water-sediment mixture. Sediment concentrations that are expressed in parts per million may be converted to milligrams per liter by using the factors in table 1.

Partial-record station is a particular site where limited 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 sieve or sedimentation methods.

TABLE 1.--Factors for conversion of sediment concentration in parts per million to milligrams per liter*
(All values calculated to three significant figures)

Range of concentration (ppm)	Multi- ply by	Range of concentration (ppm)	Multi- ply by
0 - 15,900	1.00	322,000 - 341,000	1.26
16,000 - 46,800	1.02	342,000 - 361,000	1.28
46,900 - 76,500	1.04	362,000 - 380,000	1.30
76,600 - 105,000	1.06	381,000 - 399,000	1.32
106,000 - 133,000	1.08	400,000 - 416,000	1.34
134,000 - 159,000	1.10	417,000 - 434,000	1.36
160,000 - 185,000	1.12	435,000 - 451,000	1.38
186,000 - 210,000	1.14	452,000 - 467,000	1.40
211,000 - 233,000	1.16	468,000 - 483,000	1.42
234,000 - 256,000	1.18	484,000 - 498,000	1.44
257,000 - 279,000	1.20	499,000 - 514,000	1.46
280,000 - 300,000	1.22	515,000 - 528,000	1.48
301,000 - 321,000	1.24	529,000 - 542,000	1.50

*Based on water density of 1.000 g/ml and sediment density of 2.65 g/cc.

Particle-size classification agrees closely with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology (Lane and others, 1947, p. 937). Their classification is as follows:

Clay: Smaller than 0.004 mm.
Silt: Between 0.004 and 0.062 mm.
Sand: Between 0.062 and 2.0 mm.
Gravel: Between 2.0 and 64.0 mm.

The particle-size distributions given in this report do not include organic material, most of which was removed prior to analysis.

Sediment is fragmental material that originates from the disintegration of rocks and is transported by, suspended in, or deposited by, water or air, or is accumulated in beds by other natural agencies (Colby, 1963, p. vi). (See also Langbein and Iseri, 1960, p. 17.) 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.

Sediment discharge 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 is discharged in a given time.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reaction with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of 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 may vary in the same source with changes in the composition of the water.

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 the term "runoff," which is that part of precipitation that appears in surface streams. Therefore, streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

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.

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 location of the thermograph or a digital mechanism that automatically records water temperatures on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of

days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

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 is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total sediment discharge or total sediment load is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time (Colby and Hembree, 1955).

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1969, is called the "1969 water year."

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before the station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. The indention in the

listing of stations in the table of contents of this report indicates the rank of any tributary on which a gaging station or water-quality station is situated and the stream to which it is immediately tributary; each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each station is situated.

As an added means of identification, each station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial- and continuous-record stations, so that the number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in 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 11-3035.00 includes the part number "11" plus a 6-digit number. In this report, the nonessential zeros are not shown. For example, the complete number 11-3035.00 would appear as 11-3035. just to the left of the station name. In this report, the records are listed in downstream order by parts. 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.

SPECIAL NETWORKS

Some of the stations for which data are published in this report are included in special networks. These stations are identified by the network title, set in parentheses, under the station name. These networks are as follows:

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimes 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 bench-mark basin.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the continental United States, IHD River Stations provide indices of runoff and of the general distribution of water in the principal river basins.

Irrigation network stations are water-quality stations located at or near certain streamflow-gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface water used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to the 1966 water year, chemical-quality data for irrigation was published in the annual water-supply-paper series, "Quality of Surface Water for Irrigation, Western States."

Pesticide program is a network of a regularly sampled water-quality stations where additional monthly 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 potential contamination could result from the application of the commonly used insecticides and herbicides.

COLLECTION AND EXAMINATION OF SAMPLES

Water samples for analysis usually are collected at or near points on streams where gaging stations are maintained for measurement of water discharge. Discharge records for streams in California have been released in the report "Water Resources Data for California, 1969, Part 1. Surface Water Records." Most of these records are used in conjunction with the computations of the chemical constituents and sediment loads in this report.

Data on the quality of surface water were collected daily at some sites and less frequently at other sites. The distribution and number of stations in each river or drainage basin are shown in figure 1.

Water-quality information is presented for chemical quality, fluvial sediment, and water temperatures. The chemical-quality information includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium-adsorption ratio, specific conductance, and pH. Fluvial-sediment

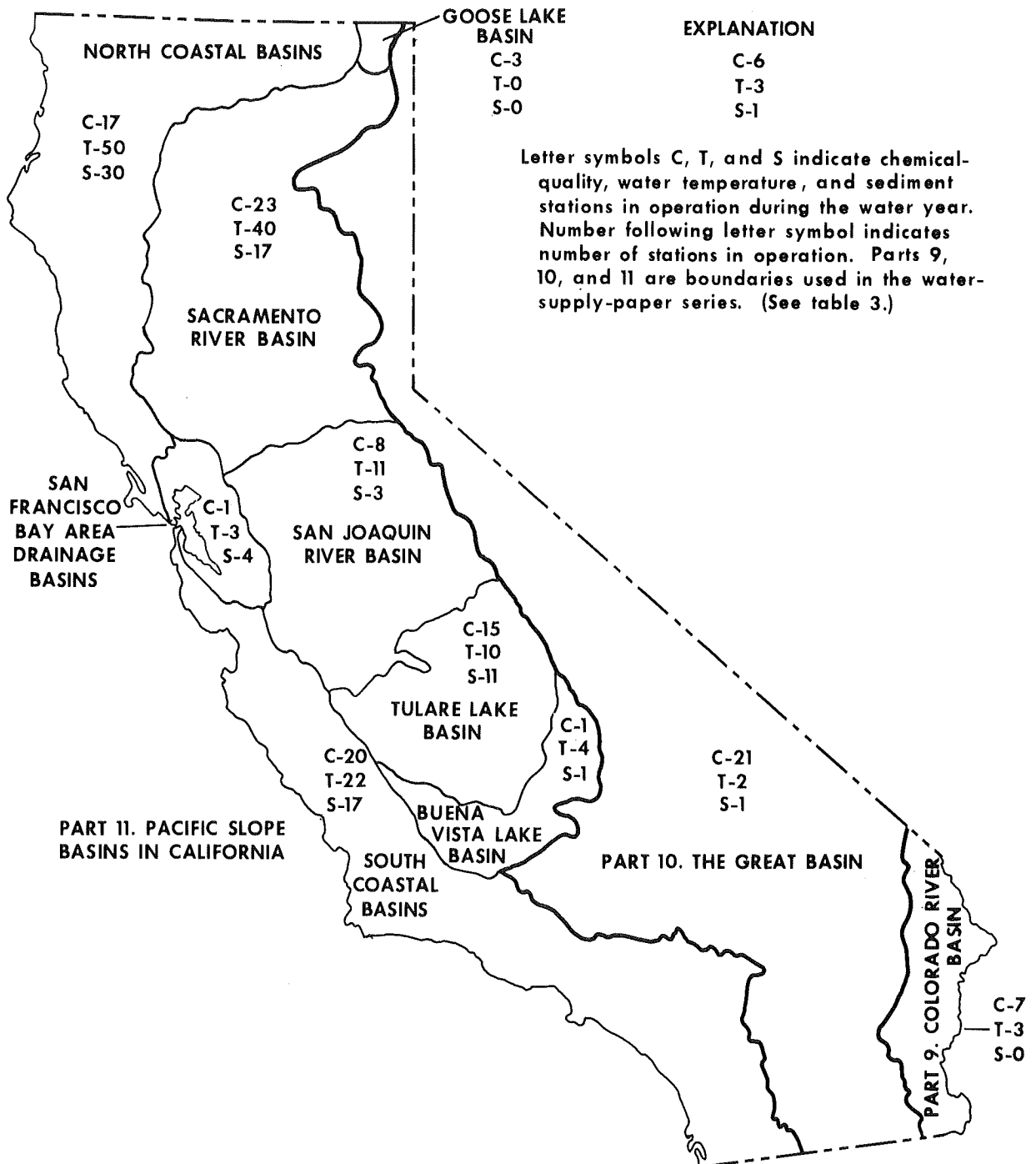


FIGURE 1.--Drainage-basin boundaries and number and distribution of water-quality stations.

information includes suspended-sediment discharges and concentrations and the particle-size distribution of suspended sediment and bed material. Water-temperature data represent once-daily observations except for stations where a continuous record of temperature is obtained. Daily minimums and maximums are reported for the continuous temperature stations.

Prior to the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit ($^{\circ}\text{F}$). In October 1967 the Geological Survey began to report data for chemical constituents and concentrations of suspended sediment in milligrams per liter (mg/l) and water temperatures in degrees Celsius (centigrade, $^{\circ}\text{C}$).

Dissolved solids

Data for daily chemical-quality sites include the average chemical characteristics of water for "composite periods" of about a month or less. The methods of collecting and compositing water samples for determination of the kinds and concentrations of material dissolved in water are described by Rainwater and Thatcher (1960). One sample can define adequately the water quality at a given time if the mixture of dissolved material throughout the stream cross section is homogeneous. However, the concentration 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 at several verticles across the channel to determine accurately the load of dissolved solids. The daily chemical-quality data in this report generally represent equal-volume composites for 2- to 31-day periods; the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

Samples collected at monthly and miscellaneous water-quality stations were analyzed individually.

Temperature

Water temperatures were measured at most of the water-quality stations. For daily stations, the water temperatures were taken at about the same time each day in order that the data would not reflect diurnal variations in water temperature. Most large streams have a small diurnal temperature change; small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature.

At stations where thermographs are located, the reported record consists of maximum and minimum temperatures for each day and the monthly averages.

To convert temperatures in degrees Fahrenheit to degrees Celsius, subtract 32° and divide by 1.8. The conversions shown by table 2 are to the nearest degree.

TABLE 2.--Temperature conversion table, degrees Fahrenheit ($^{\circ}$ F) to degrees Celsius ($^{\circ}$ C)

$^{\circ}$ F	$^{\circ}$ C	$^{\circ}$ F	$^{\circ}$ C	$^{\circ}$ F	$^{\circ}$ C	$^{\circ}$ F	$^{\circ}$ C	$^{\circ}$ F	$^{\circ}$ C	$^{\circ}$ F	$^{\circ}$ C	$^{\circ}$ F	$^{\circ}$ C
32	0	45	7	58	14	71	22	84	29	97	36	110	43
33	1	46	8	59	15	72	22	85	29	98	37	111	44
34	1	47	8	60	16	73	23	86	30	99	37	112	44
35	2	48	9	61	16	74	23	87	31	100	38	113	45
36	2	49	9	62	17	75	24	88	31	101	38	114	46
37	3	50	10	63	17	76	24	89	32	102	39	115	46
38	3	51	11	64	18	77	25	90	32	103	39	116	47
39	4	52	11	65	18	78	26	91	33	104	40	117	47
40	4	53	12	66	19	79	26	92	33	105	41	118	48
41	5	54	12	67	19	80	27	94	34	106	42	119	48
42	6	55	13	68	20	81	27	94	34	107	42	120	49
43	6	56	13	69	21	82	28	95	35	108	42	121	49
44	7	57	14	70	21	83	28	96	36	109	43	122	50

Sediment

At some stations, suspended-sediment samples were collected daily with depth-integrating cable-suspended samplers from a fixed sampling point at one vertical in the cross section. A hand sampler was used at many stations during periods of low flow. Depth-integrated samples were collected periodically at many verticals in the cross section to determine the ratio of the cross-sectional distribution of

the concentration of suspended sediment to the daily sampling verticals. During periods of high or rapidly changing flow, samples were taken twice or more often throughout the day at most stations. 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 with depth-integrating cable-suspended or hand samplers 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 the quantities of suspended sediment, records of periodic measurements of the particle-size distribution of the suspended sediment and the bed material are included.

Turbidity

At some stations in the Russian, Eel, and Mad river basins, samples for the determination of turbidity were collected at the same frequency as samples of suspended sediment. Turbidity, measured in milligrams of silica per liter, is shown in relation to the concentration of suspended sediment of the simultaneously collected sample.

WATER-SUPPLY PAPERS

Table 3 shows the numbers of the annual series of Geological Survey water-supply papers that give information on quality of surface waters in California. Data for the Colorado River basin are given in part 9, the Great Basin in part 10, and Pacific slope basins in California in part 11.

TABLE 3.--Water-supply papers containing records for
parts 9-11, water years 1941-67

Water year	Water-supply paper	Water year	Water-supply paper	Water year	Water-supply paper
1941	942	1950	1189	1959	1645
1942	950	1951	1200	1960	1745
1943	970	1952	1253	1961	1885
1944	1022	1953	1293	1962	1945
1945	1030	1954	1353	1963	1951
1946	1050	1955	1403	1964	1958
1947	1102	1956	1453	1965	1965
1948	1133	1957	1523	1966	A1995
1949	1163	1958	1574	1967	A2015

A In preparation.

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- Rainwater, F. H., and Thatcher, L. L., 1960, Methods for collection and analysis of water samples: U.S. Geol. Survey Water-Supply Paper 1454, 301 p.
- U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams:
- Report 11, 1957, The development and calibration of visual accumulation tube: Minneapolis, Minn., St. Anthony Falls Hydraulic Lab., 109 p.
- Report 12, 1957, Some fundamentals of particle-size analysis: Washington, U.S. Govt. Printing Office, 55 p.
- Report AA, 1959, Federal Inter-agency sedimentation instruments and reports: Minneapolis, Minn., St. Anthony Falls Hydraulic Lab., 41 p.
- Report 13, 1961, The single stage sampler for suspended sediment: Washington, U.S. Govt. Printing Office, 105 p.
- Report 14, 1963, Determinations of fluvial sediment discharge: Washington, U.S. Govt. Printing Office, 151 p.
- Report S, 1963, A summary of the work of the Interagency sedimentation project: Minneapolis, Minn., St. Anthony Falls Hydraulic Lab., 29 p.

WATER QUALITY RECORDS
PART 9. COLORADO RIVER BASIN
COLORADO RIVER MAIN STEM

9-4210. LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.

LOCATION.--Lat 36°00'58", long 114°44'13", in NE½SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, on state line between Mohave County, Ariz., and Clark County, Nev., at gaging station midway between Hoover Dam intake towers.

DRAINAGE AREA.--167,800 sq mi, approximately.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DEPTH (FT)	STAGE (FT ABOVE DATUM)	TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)
OCT.									
02...	0	1136.50	25	8.2	81	33	114	5.0	123
02...	5	1131.50	25	--	--	--	--	--	--
02...	25	1111.50	25	--	--	--	--	--	123
02...	75	1061.50	25	--	--	--	--	--	123
02...	125	1011.50	18	8.0	87	31	104	5.0	151
02...	175	961.00	15	9.0	87	30	105	5.0	154
02...	225	911.00	14	8.5	86	30	104	5.0	161
02...	275	861.00	13	8.2	86	30	103	5.0	160
02...	325	811.00	13	--	--	--	--	--	160
02...	375	761.00	12	9.4	86	30	103	5.0	162
02...	412	724.00	12	--	--	--	--	--	162
30...	0	1137.50	23	8.6	84	33	106	5.0	129
30...	5	1132.50	23	--	--	--	--	--	--
30...	25	1112.50	21	--	--	--	--	--	--
30...	75	1062.50	21	8.6	85	32	112	5.0	129
30...	125	1012.50	18	8.8	88	31	101	5.0	151
30...	175	962.00	15	--	--	--	--	--	--
30...	225	912.00	13	8.5	88	30	101	5.0	161
30...	275	862.00	13	8.6	88	29	98	5.0	161
30...	325	812.00	12	--	--	--	--	--	--
30...	375	762.00	12	8.9	86	30	102	5.0	161
30...	414	723.00	12	--	--	--	--	--	--
NOV.									
27...	0	1139.50	17	8.8	86	33	107	4.0	139
27...	10	1129.50	17	--	--	--	--	--	138
27...	25	1114.50	17	--	--	--	--	--	138
27...	75	1064.50	17	--	--	--	--	--	138
27...	125	1014.50	17	9.3	86	32	111	4.0	139
27...	175	964.00	14	9.1	86	32	102	4.0	156
27...	225	914.00	12	--	--	--	--	--	165
27...	238	901.00	--	9.5	85	31	103	4.0	165
27...	275	864.00	11	9.6	87	30	103	4.0	165
27...	325	814.00	11	--	--	--	--	--	165
27...	375	764.00	--	10	86	30	103	4.0	165
27...	415	724.00	--	--	--	--	--	--	--
DEC.									
30...	0	1140.50	13	8.0	88	32	106	5.0	146
30...	10	1130.50	13	--	--	--	--	--	--
30...	25	1115.50	13	--	--	--	--	--	--
30...	75	1065.50	13	--	--	--	--	--	--
30...	125	1015.50	13	--	--	--	--	--	--
30...	175	965.00	13	--	--	--	--	--	--
30...	225	915.00	13	8.5	88	32	105	5.0	155
30...	238	902.00	13	9.3	88	32	105	5.0	155
30...	275	865.00	13	9.0	89	30	102	5.0	163
30...	325	815.00	11	--	--	--	--	--	--
30...	375	765.00	11	9.6	88	30	102	5.0	163
30...	415	725.00	11	--	--	--	--	--	--
JAN.									
30...	0	1140.50	13	8.9	88	32	109	4.0	151
30...	10	1130.50	13	--	--	--	--	--	--
30...	25	1115.50	13	--	--	--	--	--	--
30...	75	1065.50	13	--	--	--	--	--	--
30...	125	1015.50	13	--	--	--	--	--	--
30...	175	965.00	13	8.5	88	32	109	4.0	151
30...	225	915.00	13	--	--	--	--	--	--
30...	238	902.00	12	8.5	88	31	105	4.0	151
30...	275	865.00	12	8.9	87	30	105	4.0	161
30...	325	815.00	12	--	--	--	--	--	--
30...	375	765.00	12	8.9	87	30	104	4.0	162
30...	416	724.00	12	--	--	--	--	--	--
FEB.									
27...	0	1141.50	12	8.4	89	32	104	4.0	153
27...	10	1131.50	12	--	--	--	--	--	153
27...	25	1116.50	12	--	--	--	--	--	153
27...	75	1066.50	12	--	--	--	--	--	150
27...	125	1016.50	12	--	--	--	--	--	153
27...	175	966.00	12	--	--	--	--	--	153
27...	225	916.00	12	--	--	--	--	--	154
27...	238	903.00	12	8.3	89	31	103	5.0	154
27...	275	866.00	12	8.4	89	31	103	4.0	153
27...	325	816.00	12	--	--	--	--	--	154
27...	375	766.00	12	8.2	89	31	103	4.0	154
27...	420	721.00	12	--	--	--	--	--	153

COLORADO RIVER MAIN STEM

17

9-4210. LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1940 to September 1969.
REMARKS.--Samples collected by Bureau of Reclamation and analyzed by the Metropolitan Water District of Southern California, LaVerne, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.									
02...	0	338	99	.4	740	338	237	1150	7.8
02...	--	--	100	--	--	337	--	1140	7.6
02...	0	--	99	--	--	--	--	1150	7.8
02...	0	--	98	--	--	--	--	1150	7.9
02...	0	305	93	1.5	710	345	221	1130	7.5
02...	0	312	92	1.5	719	343	217	1120	7.7
02...	0	296	90	1.9	702	340	208	1110	7.7
02...	0	295	89	1.9	698	338	207	1110	7.8
02...	0	--	89	--	--	--	--	1100	7.5
02...	0	294	90	1.7	701	340	207	1100	7.4
02...	0	--	90	--	--	--	--	1100	7.3
30...	0	317	100	1.1	719	346	240	1170	7.8
30...	--	--	100	--	--	--	--	1170	7.8
30...	--	--	100	--	--	--	--	1170	7.9
30...	0	333	100	.8	741	346	240	1170	8.0
30...	0	306	92	1.9	709	347	223	1120	7.6
30...	--	--	92	--	--	--	--	1110	8.0
30...	0	298	90	2.0	703	343	211	1110	8.0
30...	0	288	89	1.6	688	341	209	1100	8.3
30...	--	--	89	--	--	--	--	1100	7.9
30...	0	292	89	2.0	695	338	206	1100	8.1
30...	--	--	89	--	--	--	--	1100	7.7
NOV.									
27...	0	312	100	1.4	722	351	237	1185	7.3
27...	0	--	99	--	--	--	--	1185	7.8
27...	0	--	99	--	--	--	--	1185	8.1
27...	0	--	100	--	--	--	--	1185	7.3
27...	0	326	99	.8	734	348	235	1185	7.9
27...	0	300	92	1.4	705	346	218	1145	7.3
27...	0	--	90	--	--	--	--	1135	7.7
27...	0	292	90	1.7	699	340	205	1135	7.8
27...	0	290	90	1.8	698	345	208	1125	8.1
27...	0	--	90	--	--	--	--	1120	8.1
27...	0	292	90	1.4	699	338	203	1125	7.9
27...	--	--	90	--	--	--	--	1120	8.1
DEC.									
30...	0	327	96	.8	736	353	233	1160	7.4
30...	--	--	97	--	--	--	--	1160	7.3
30...	--	--	97	--	--	--	--	1160	7.4
30...	--	--	96	--	--	--	--	1160	7.5
30...	--	--	96	--	--	--	--	1160	7.4
30...	--	--	96	--	--	--	--	1160	7.4
30...	0	316	95	1.4	727	351	224	1160	7.4
30...	0	315	94	1.5	727	351	224	1160	7.6
30...	0	301	91	2.0	711	348	214	1130	7.5
30...	--	--	90	--	--	--	--	1130	7.5
30...	0	295	90	2.0	703	343	209	1120	7.4
30...	--	--	87	--	--	--	--	1120	7.3
JAN.									
30...	0	320	97	2.0	736	351	227	1170	7.8
30...	--	--	97	--	--	--	--	1170	8.1
30...	--	--	97	--	--	--	--	1160	7.8
30...	--	--	97	--	--	--	--	1160	8.1
30...	--	--	97	--	--	--	--	1160	8.2
30...	0	315	97	2.0	730	351	227	1160	8.2
30...	--	--	96	--	--	--	--	1160	8.2
30...	0	315	96	2.0	727	349	225	1160	8.2
30...	0	299	91	2.2	707	343	211	1120	7.7
30...	--	--	91	--	--	--	--	1120	7.9
30...	0	294	91	2.0	701	341	208	1120	7.7
30...	--	--	90	--	--	--	--	1120	8.0
FEB.									
27...	0	310	95	1.7	721	354	229	1155	7.5
27...	0	--	94	--	--	--	--	1160	7.6
27...	0	--	95	--	--	--	--	1155	8.3
27...	1	--	95	--	--	--	--	1160	8.3
27...	0	--	94	--	--	--	--	1155	8.1
27...	0	--	95	--	--	--	--	1155	8.1
27...	0	--	95	--	--	--	--	1165	7.6
27...	0	313	94	1.2	722	352	226	1165	7.6
27...	0	314	94	2.3	723	352	227	1155	8.2
27...	0	--	95	--	--	--	--	1150	8.3
27...	0	313	94	1.8	722	352	226	1155	8.3
27...	1	--	94	--	--	--	--	1155	8.4

COLORADO RIVER MAIN STEM

9-4210. LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DEPTH (FT)	STAGE (FT ABOVE DATUM)	TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)
MAR.									
27...	0	1140.50	15	9.2	89	32	105	5.0	154
27...	25	1115.50	13	--	--	--	--	--	153
27...	75	1065.50	12	--	--	--	--	--	154
27...	125	1015.50	12	--	--	--	--	--	154
27...	175	965.00	12	8.5	89	31	106	4.0	156
27...	225	915.00	12	--	--	--	--	--	159
27...	238	902.00	12	8.9	89	31	105	4.0	157
27...	275	865.00	12	--	--	--	--	--	159
27...	325	815.00	12	8.9	89	31	107	5.0	159
27...	375	765.00	12	--	--	--	--	--	159
27...	420	720.00	11	--	--	--	--	--	160
APR.									
30...	0	1141.50	17	8.2	88	32	107	5.0	153
30...	10	1131.50	16	--	--	--	--	--	153
30...	25	1116.50	15	--	--	--	--	--	153
30...	75	1066.50	13	--	--	--	--	--	154
30...	125	1016.50	12	--	--	--	--	--	155
30...	175	966.00	12	--	--	--	--	--	157
30...	225	916.00	11	8.2	90	31	104	5.0	157
30...	238	903.00	11	8.5	90	31	104	5.0	159
30...	275	866.00	11	8.0	90	31	103	5.0	160
30...	325	816.00	11	--	--	--	--	--	161
30...	375	766.00	11	8.5	90	31	103	5.0	162
30...	420	721.00	11	--	--	--	--	--	163
MAY									
29...	0	1142.50	22	9.0	89	32	111	4.0	154
29...	0	1132.50	21	--	--	--	--	--	154
29...	0	1117.50	20	--	--	--	--	--	153
29...	0	1067.50	15	--	--	--	--	--	153
29...	12	1017.50	13	--	--	--	--	--	155
29...	17	967.00	12	8.5	90	31	109	4.0	155
29...	225	917.00	12	9.0	90	31	104	4.0	159
29...	239	903.00	12	8.7	90	31	103	4.0	157
29...	275	867.00	12	--	--	--	--	--	161
29...	325	817.00	12	--	--	--	--	--	162
29...	375	767.00	12	8.5	90	31	105	4.0	162
29...	420	722.00	12	--	--	--	--	--	--
JUNE									
27...	0	1142.50	24	8.3	84	33	109	5.0	137
27...	10	1132.50	24	--	--	--	--	--	137
27...	25	1117.50	23	7.9	85	32	109	5.0	139
27...	75	1067.50	14	8.2	90	31	108	5.0	155
27...	125	1017.50	13	--	--	--	--	--	159
27...	175	967.00	12	--	--	--	--	--	159
27...	225	917.00	12	8.8	90	31	106	5.0	160
27...	239	903.00	12	8.2	89	31	106	5.0	161
27...	275	867.00	12	--	--	--	--	--	161
27...	325	817.00	12	8.5	90	31	105	5.0	162
27...	375	767.00	12	--	--	--	--	--	163
JULY									
30...	0	1143.50	30	8.8	80	33	113	5.0	122
30...	25	1118.50	28	--	--	--	--	--	122
30...	75	1068.50	17	8.8	90	32	108	5.0	154
30...	125	1018.50	14	--	--	--	--	--	154
30...	175	968.00	13	--	--	--	--	--	157
30...	225	918.00	12	8.8	90	31	108	5.0	160
30...	240	903.00	12	9.6	89	31	108	5.0	160
30...	275	868.00	12	9.0	89	31	108	5.0	160
30...	325	818.00	12	--	--	--	--	--	161
30...	375	768.00	12	9.4	89	31	108	5.0	163
30...	421	722.00	12	--	--	--	--	--	163
AUG.									
27...	0	1145.50	29	9.3	80	33	113	5.0	121
27...	10	1135.50	28	--	--	--	--	--	--
27...	25	1120.50	28	8.8	80	33	113	5.0	121
27...	75	1070.50	20	8.9	90	32	110	5.0	153
27...	125	1020.50	12	--	--	--	--	--	--
27...	175	970.00	13	--	--	--	--	--	--
27...	225	920.00	12	8.8	90	32	106	5.0	161
27...	240	905.00	12	9.8	90	32	106	5.0	162
27...	275	870.00	12	--	--	--	--	--	--
27...	325	820.00	12	--	--	--	--	--	--
27...	375	770.00	12	9.5	90	32	106	5.0	163
27...	422	723.00	12	--	--	--	--	--	--
SEPT.									
26...	0	1147.50	26	7.4	81	34	116	5.0	118
26...	10	1137.50	26	--	--	--	--	--	117
26...	25	1122.50	26	7.4	81	34	115	5.0	117
26...	75	1072.50	21	7.8	89	32	104	5.0	151
26...	125	1022.50	16	--	--	--	--	--	154
26...	175	972.00	13	--	--	--	--	--	156
26...	225	922.00	13	7.8	89	31	106	5.0	160
26...	241	906.00	12	7.8	90	31	106	5.0	160
26...	275	872.00	12	--	--	--	--	--	161
26...	325	822.00	12	--	--	--	--	--	161
26...	375	772.00	12	8.0	90	31	106	5.0	162
26...	422	725.00	12	--	--	--	--	--	162

COLORADO RIVER MAIN STEM

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9-4210. LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
MAR.									
27...	0	315	93	1.9	729	354	228	1170	7.8
27...	--	--	93	--	--	--	--	1170	7.9
27...	--	--	92	--	--	--	--	1160	8.2
27...	--	--	92	--	--	--	--	1160	7.8
27...	0	317	92	2.4	728	352	225	1160	7.9
27...	--	--	92	--	--	--	--	1160	8.1
27...	0	317	92	2.7	728	350	221	1160	8.0
27...	--	--	92	--	--	--	--	1160	8.2
27...	0	319	92	2.3	734	352	222	1160	8.2
27...	--	--	92	--	--	--	--	1160	8.0
27...	--	--	92	--	--	--	--	1160	7.8
APR.									
30...	0	317	93	1.4	728	351	226	1170	7.9
30...	0	--	94	--	--	--	--	1180	8.1
30...	0	--	94	--	--	--	--	1170	7.9
30...	0	--	93	--	--	--	--	1170	8.0
30...	0	--	95	--	--	--	--	1170	8.1
30...	0	--	94	--	--	--	--	1170	7.9
30...	0	313	92	2.0	728	354	225	1170	8.0
30...	0	309	92	2.0	721	352	222	1150	7.8
30...	0	309	92	1.8	720	352	221	1150	7.8
30...	0	--	91	--	--	--	--	1150	8.0
30...	0	306	91	2.2	718	352	219	1150	8.0
30...	0	--	90	--	--	--	--	1150	7.8
MAY									
29...	0	323	97	1.5	744	354	228	1210	8.1
29...	0	--	96	--	--	--	--	1200	7.8
29...	0	--	97	--	--	--	--	1200	7.8
29...	0	--	97	--	--	--	--	1200	7.8
29...	0	--	96	--	--	--	--	1200	7.8
29...	0	316	95	2.4	734	354	227	1200	7.8
29...	0	310	92	2.0	722	352	222	1190	7.8
29...	1	312	92	2.8	723	352	221	1190	8.3
29...	0	--	92	--	--	--	--	1190	8.1
29...	0	--	91	--	--	--	--	1190	7.7
29...	0	309	91	2.7	722	352	219	1190	8.0
29...	0	--	91	--	--	--	--	1200	7.9
JUNE									
27...	0	330	100	.6	739	348	236	1160	7.8
27...	0	--	100	--	--	--	--	1160	7.2
27...	0	328	98	1.6	737	346	232	1160	7.4
27...	0	321	97	.6	739	354	227	1155	7.5
27...	0	--	97	--	--	--	--	1155	7.8
27...	0	--	96	--	--	--	--	1150	7.3
27...	0	312	95	1.4	729	352	221	1145	7.5
27...	0	312	95	1.8	729	352	220	1140	7.3
27...	0	--	94	--	--	--	--	1140	7.6
27...	0	308	94	1.7	724	352	219	1135	7.6
27...	0	--	94	--	--	--	--	1135	7.8
JULY									
30...	0	337	99	.9	738	338	238	1150	8.1
30...	0	--	100	--	--	--	--	1150	8.0
30...	0	321	98	2.1	742	356	230	1160	7.7
30...	0	--	98	--	--	--	--	1160	7.7
30...	0	--	98	--	--	--	--	1160	7.7
30...	0	314	96	2.5	734	352	221	1150	7.9
30...	0	318	94	2.6	738	352	221	1150	7.8
30...	0	316	94	2.9	735	350	219	1150	8.8
30...	0	--	94	--	--	--	--	1150	7.8
30...	0	310	94	3.1	731	350	216	1150	7.8
30...	0	--	92	--	--	--	--	1150	7.8
AUG.									
27...	0	336	100	.6	738	338	239	1160	8.0
27...	--	--	100	--	--	--	--	1160	7.9
27...	0	338	100	.5	739	338	239	1160	7.8
27...	0	330	98	2.4	753	358	233	1160	7.7
27...	--	--	98	--	--	--	--	1160	7.7
27...	--	--	96	--	--	--	--	1150	7.8
27...	0	314	94	2.4	733	358	226	1150	7.8
27...	0	309	94	2.5	729	356	223	1150	7.8
27...	--	--	94	--	--	--	--	1150	7.8
27...	--	--	94	--	--	--	--	1150	7.9
27...	0	309	94	2.7	730	356	222	1150	7.8
27...	--	--	95	--	--	--	--	1150	7.7
SEPT.									
26...	0	346	102	.6	751	342	245	1190	7.7
26...	--	--	102	--	--	--	--	1190	7.7
26...	0	345	102	.6	749	342	244	1190	7.8
26...	0	315	94	2.6	725	356	231	1170	7.5
26...	--	--	94	--	--	--	--	1170	7.7
26...	--	--	94	--	--	--	--	1160	7.5
26...	0	313	92	2.8	727	352	221	1160	7.7
26...	0	315	90	2.8	728	352	221	1160	7.8
26...	--	--	90	--	--	--	--	1150	7.9
26...	--	--	90	--	--	--	--	1150	8.0
26...	0	312	90	2.7	726	352	219	1150	7.7
26...	--	--	90	--	--	--	--	1150	7.6

COLORADO RIVER MAIN STEM

9-4215. COLORADO RIVER BELOW HOOVER DAM, ARIZ.-NEV.
(Irrigation network station)

LOCATION.--Lat 36°00'55", long 114°44'16", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, on state line between Mohave County, Ariz., and Clark County, Nev., downstream from gaging station in Hoover Dam powerhouse.

DRAINAGE AREA.--167,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1939 to September 1969.

Water temperatures: October 1941 to September 1965.

REMARKS.--Samples are taken on or about the fifth, fifteenth, and twenty-fifth of each month and composited for analysis. Records of specific conductance and temperature of individual samples available in district office at Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SODIUM PLUS PO- TAS- SIUM (NA+K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
OCT. 01-31	7908	9.1	20	92	28	104	4.7	--	174	301	94	.4
NOV. 01-30	7676	8.9	--	92	27	--	--	115	170	304	94	--
DEC. 01-31	8987	9.1	--	92	28	--	--	115	167	312	94	--
JAN. 01-31	8927	9.4	--	92	30	--	--	116	162	322	97	--
FEB. 01-28	9934	9.0	--	94	28	--	--	118	160	326	95	--
MAR. 01-31	13410	8.6	--	92	30	--	--	117	160	327	94	--
APR. 01-30	15030	8.7	10	92	30	106	5.3	--	159	322	104	.4
MAY 01-31	13570	9.0	--	92	31	--	--	110	162	316	94	--
JUNE 01-30	12660	9.7	--	89	32	--	--	116	166	320	97	--
JULY 01-31	12560	9.4	10	92	36	107	5.7	--	164	318	92	.4
AUG. 01-31	11270	9.6	--	92	33	--	--	112	174	320	95	--
SEPT. 01-30	10390	9.5	--	93	29	--	--	114	170	311	94	--

DATE	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 01-31	2.2	210	740	722	1.01	15800	344	202	2.4	1110	7.7
NOV. 01-30	4.1	--	--	729	.99	15100	342	202	2.7	1120	7.6
DEC. 01-31	2.4	--	--	734	1.00	17800	346	209	2.7	1130	7.6
JAN. 01-31	2.2	--	--	749	1.02	18100	354	221	2.7	1150	8.0
FEB. 01-28	1.8	--	--	751	1.02	20100	350	219	2.7	1140	7.8
MAR. 01-31	2.1	--	--	750	1.02	27200	352	221	2.7	1150	7.8
APR. 01-30	2.0	180	763	749	1.04	31000	352	222	2.5	1140	8.0
MAY 01-31	2.8	--	--	735	1.00	26900	358	225	2.5	1140	7.8
JUNE 01-30	1.2	--	--	747	1.02	25500	354	218	2.7	1150	7.7
JULY 01-31	1.7	170	786	743	1.07	26700	376	242	2.4	1150	7.7
AUG. 01-31	1.2	--	--	749	1.02	22800	366	224	2.6	1150	7.8
SEPT. 01-30	2.5	--	--	737	1.00	20700	350	210	2.7	1150	7.8

9-4241.5. COLORADO RIVER AQUEDUCT NEAR PARKER DAM, ARIZ.-CALIF.

LOCATION.--Lat 34°19'00", long 114°09'25", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.3 N., R.27 E., San Bernardino meridian, San Bernardino County, at gaging station at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 miles upstream from Parker Dam, and 154 miles downstream from Hoover Dam.
 PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.
 REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
OCT.												
01...	6940	--	--	83	31	108	5.0	150	0	308	96	--
08...	6940	23	8.0	82	32	110	6.0	138	1	311	97	.8
15...	6030	--	--	82	31	108	5.0	144	0	311	96	--
23...	6860	21	9.0	82	32	107	5.0	143	1	305	96	.4
29...	6640	--	--	84	31	109	5.0	150	0	310	96	--
NOV.												
06...	6800	20	8.0	76	32	110	5.0	121	4	307	98	.4
12...	6780	--	--	84	32	108	5.0	152	0	311	100	--
24...	6780	--	--	84	32	109	5.0	153	0	310	99	--
DEC.												
08...	6900	14	8.0	85	31	110	5.0	148	0	312	96	.4
10...	7000	--	--	85	31	110	5.0	155	0	316	99	--
24...	6940	--	--	86	32	111	5.0	155	0	314	101	--
FEB.												
07...	7460	11	7.0	85	31	107	5.0	139	4	310	96	.4
MAR.												
08...	4340	13	7.0	88	32	109	4.0	148	2	314	98	.4
APR.												
08...	3530	19	5.0	83	31	110	5.0	128	2	321	97	.4
MAY												
07...	4900	21	9.0	89	33	108	5.0	145	2	323	98	.4
JUNE												
08...	5100	24	8.0	82	32	122	4.0	127	4	335	101	.5
JULY												
08...	7870	26	9.0	84	33	133	5.0	137	1	328	101	.5
AUG.												
06...	6820	26	10	83	32	110	5.0	135	1	323	100	.5
SEPT.												
08...	6620	29	9.0	81	34	109	5.0	129	2	318	100	.5

DATE	NITRATE (NO ₃) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO ₃ (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
01...	--	752	--	1.02	41	335	212	2.6	123	7.8	1120
08...	.8	717	717	.98	41	336	221	2.6	115	8.4	1110
15...	--	749	--	1.02	41	332	214	2.6	118	7.9	1120
23...	.7	710	709	.97	51	336	217	3.2	119	8.4	1130
29...	--	757	--	1.03	41	337	214	2.6	123	8.0	1130
NOV.											
06...	.5	701	701	.95	42	321	215	2.7	106	8.5	1100
12...	--	765	--	1.04	40	341	216	2.5	125	7.8	1130
24...	--	766	--	1.04	41	341	215	2.6	125	8.0	1130
DEC.											
08...	1.1	723	722	.98	41	340	219	2.6	121	8.3	1150
10...	--	774	--	1.05	41	340	213	2.6	127	8.0	1140
24...	--	775	--	1.05	41	346	219	2.6	127	8.0	1160
FEB.											
07...	1.0	716	715	.97	40	340	219	2.5	121	8.6	1140
MAR.											
08...	2.2	730	730	.99	40	351	226	2.5	125	8.5	1160
APR.											
08...	.8	718	719	.98	41	335	227	2.6	108	8.4	1150
MAY											
07...	1.6	741	741	1.01	39	358	236	2.5	122	8.4	1180
JUNE											
08...	.8	752	752	1.02	44	336	225	2.9	111	8.5	1160
JULY											
08...	1.3	744	764	1.01	45	345	231	3.1	114	8.4	1170
AUG.											
06...	.8	732	732	1.00	41	339	227	2.6	112	8.4	1150
SEPT.											
08...	.9	724	723	.98	40	342	233	2.6	109	8.5	1140

COLORADO RIVER MAIN STEM

9-4275.2. (revised) COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.

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, Calif., at gaging station on north end of powerplant at Parker Dam, 13 miles northeast of Parker, Ariz., and 14 miles upstream from Headgate Rock Dam.

DRAINAGE AREA.--178,000 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1969.

Water temperatures: February 1954 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 28°C Sept. 9; minimum, 9°C on several days during December and January.

EXTREMES, 1954-69.--Water temperatures: Maximum, 28°C Aug. 12, 13, 18, 1955, Sept. 9, 1969; minimum (1954-65, 1966-69), 8°C Jan. 12, 1964.

REMARKS.--During period October 1963 to September 1968, samples collected 3.9 miles downstream from Parker Dam. Temperature probe above water level Jan. 28 to Feb. 5; recorder inoperative July 8-10.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SODIUM PLUS PO- TAS- SIUM (NA+K) (MG/L)	BICAR- BONATE (HCC3) (MG/L)	SULFATE (SC4) (MG/L)	CHLG- RIDE (CL) (MG/L)
OCT.												
01...	1045	7970	9.3	--	88	27	--	--	114	152	307	96
31...	1500	8480	9.4	--	90	28	--	--	115	160	309	96
DEC.												
02...	1100	10600	9.2	--	90	28	--	--	118	158	310	102
JAN.												
02...	1100	4610	9.4	--	90	29	--	--	118	159	314	100
FEB.												
03...	1240	10700	8.5	--	89	32	--	--	117	158	323	99
MAR.												
03...	1240	14700	10	--	85	27	--	--	111	160	293	89
APR.												
01...	1400	13900	8.5	0	95	28	112	5.8	--	162	328	95
MAY												
01...	0925	12700	8.2	--	96	29	--	--	130	163	348	102
JUNE												
02...	1530	17400	9.3	--	92	32	--	--	121	163	334	100
JULY												
01...	1325	10400	9.8	10	94	29	114	6.1	--	162	324	95
AUG.												
22...	0850	12830	--	--	86	21	116	5.4	--	154	312	99
SEPT.												
18...	1730	8580	--	--	86	21	113	5.4	--	152	312	102

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TCNS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AC- SORP- TIC RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH (UNITS)
OCT.												
01...	--	1.5	--	--	718	.98	15500	332	208	2.7	1130	7.5
31...	--	.7	--	--	727	.99	16600	338	207	2.7	1140	7.5
DEC.												
02...	--	.3	--	--	736	1.00	21500	340	210	2.8	1140	7.4
JAN.												
02...	--	.9	--	--	735	1.01	9200	342	212	2.8	1150	7.7
FEB.												
03...	--	2.6	--	--	750	1.02	33800	352	222	2.7	1150	7.6
MAR.												
03...	--	1.2	--	--	695	.95	27600	322	191	2.7	1070	7.6
APR.												
01...	.4	1.5	200	769	758	1.05	28900	352	219	2.6	1170	7.9
MAY												
01...	--	1.7	--	--	795	1.08	27300	358	224	3.0	1170	7.7
JUNE												
02...	--	.7	--	--	765	1.05	36100	360	226	2.8	1170	7.6
JULY												
01...	.4	.9	210	788	757	1.07	22100	354	221	2.6	1200	7.4
AUG.												
22...	--	--	--	780	725	1.06	27000	344	218	2.7	1170	7.8
SEPT.												
18...	--	--	--	771	--	1.05	17900	344	219	2.7	1160	7.8

TEMPERATURE (°C) OF WATER. WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	23	23	23	22	23	22	22	22	22	23	22	22	22	22	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	20	20	22	
	MINIMUM	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	21	21	21	21	21	20	20	20	20	20	20	20	20	20	20	20	21	
NOVEMBER	MAXIMUM	21	21	20	20	20	19	19	19	19	19	19	19	19	18	18	18	18	18	18	18	17	17	17	17	17	17	16	16	16	15	--	18	
	MINIMUM	20	19	19	19	19	19	19	19	19	19	18	18	18	18	18	18	18	17	17	17	17	17	17	17	17	16	16	16	15	15	--	18	
DECEMBER	MAXIMUM	15	15	14	14	13	13	13	13	13	12	12	12	12	12	12	12	11	11	11	11	11	10	10	10	9	9	9	9	9	9	9	11	
	MINIMUM	14	14	13	13	13	13	13	13	12	12	12	12	12	12	12	11	11	11	11	11	11	10	10	10	9	9	9	9	9	9	9	11	
JANUARY	MAXIMUM	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	12	12	--	--	--	10	
	MINIMUM	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	--	--	10	
FEBRUARY	MAXIMUM	--	--	--	--	--	11	11	11	11	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	14	14	14	--	--	--	12	
	MINIMUM	--	--	--	--	--	11	11	11	11	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	--	--	--	12	
MARCH	MAXIMUM	14	14	14	14	13	13	13	13	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	15	14	15	15	15	16	16	17	18	14
	MINIMUM	13	13	13	13	13	13	13	13	13	13	13	13	13	14	14	13	13	13	14	14	14	14	14	14	14	15	15	15	16	16	17	18	14
APRIL	MAXIMUM	17	17	16	17	17	16	17	17	18	17	16	16	16	16	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	--	17	
	MINIMUM	17	16	16	16	17	16	17	17	17	16	16	16	16	16	16	16	17	17	18	17	17	17	17	17	18	17	18	18	18	18	--	17	
MAY	MAXIMUM	21	21	21	20	20	21	21	21	21	22	22	22	22	21	21	21	21	22	22	22	22	22	22	22	23	23	23	23	23	24	23	22	
	MINIMUM	20	20	20	19	19	20	20	20	20	21	21	21	21	21	21	21	21	22	21	21	21	22	22	22	22	22	22	23	23	23	23	21	
JUNE	MAXIMUM	23	23	23	23	23	24	23	23	23	23	23	23	24	24	24	24	24	25	25	25	24	24	24	24	24	24	24	24	24	25	25	--	24
	MINIMUM	23	23	22	22	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	24	24	25	--	24
JULY	MAXIMUM	25	25	25	24	24	24	24	--	--	--	25	24	24	24	24	24	25	24	24	25	24	25	26	26	25	25	25	26	26	27	27	25	
	MINIMUM	24	24	24	24	24	24	24	--	--	--	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	24	24	24	26	26	26	24	
AUGUST	MAXIMUM	27	27	27	27	27	27	27	26	26	26	26	26	26	26	26	26	26	26	26	26	26	27	27	27	26	26	26	26	26	26	26	26	
	MINIMUM	26	26	27	27	27	26	26	26	26	25	26	26	26	26	26	26	25	25	25	25	26	26	26	26	26	26	26	26	26	25	25	26	
SEPTEMBER	MAXIMUM	27	26	26	26	26	26	27	27	28	27	26	26	26	26	26	26	26	25	26	26	26	26	24	24	25	26	26	24	24	24	--	26	
	MINIMUM	26	26	26	25	25	24	26	27	27	26	26	25	25	25	25	25	24	25	24	24	24	24	24	24	24	24	24	24	24	24	--	25	

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5225. GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.

LOCATION.--Lat 32°52'35", long 114°27'15", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Ariz., at gaging station 0.6 mile downstream from intake at east end of Imperial Dam.

PERIOD OF RECORD.--Water temperatures: January 1956 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 32°C on many days during July to September; minimum, 11°C on several days during January and February.

EXTREMES, 1956-69.--Water temperatures: Maximum, 32°C on many days during July to September of most years; minimum, 7°C Jan. 13-17, 1964.

REMARKS.--No flow Nov. 22-27. Temperature recorder inoperative Dec. 24 to Jan. 2, May 5-14, Sept. 29, 30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
JAN. 09...	1415	97	31	168	142	810	1.10	370	232	1350	7.8

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	25	25	25	24	24	24	24	24	24	24	24	24	24	24	23	22	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	22		
MINIMUM	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	22	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	22		
NOVEMBER																																		
MAXIMUM	20	20	20	20	20	20	19	18	16	16	16	16	16	16	16	16	16	16	16	16	16	16	--	--	--	--	--	14	14	12	--	17		
MINIMUM	20	20	20	20	20	19	18	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	--	--	--	--	--	--	14	12	12	--	17	
DECEMBER																																		
MAXIMUM	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	--	--	--	--	--	--	--	--		
MINIMUM	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	--	--	--	--	--	--	--	--		
JANUARY																																		
MAXIMUM	--	--	11	11	12	12	12	12	12	12	12	12	12	12	12	12	14	14	15	15	15	15	15	15	14	14	15	14	14	14	14	13		
MINIMUM	--	--	11	11	11	12	12	12	12	12	12	12	12	12	12	12	13	14	14	14	14	14	14	14	14	14	14	14	13	12	13	12		
FEBRUARY																																		
MAXIMUM	12	12	12	12	13	14	14	14	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	14	15	16	--	--	--	14		
MINIMUM	11	11	11	22	12	13	14	13	13	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	14	14	15	--	--	14	
MARCH																																		
MAXIMUM	15	16	15	14	14	14	14	14	14	14	14	14	14	14	14	15	16	16	16	16	17	17	17	17	17	17	16	17	19	19	20	16		
MINIMUM	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	15	16	16	17	17	17	17	17	16	16	17	17	18	19	15		
APRIL																																		
MAXIMUM	20	20	20	20	20	20	20	20	20	19	20	21	22	22	21	20	20	20	20	21	22	22	22	22	22	21	20	20	21	22	22	--	21	
MINIMUM	15	19	19	19	20	20	19	19	19	19	19	20	21	21	20	20	20	20	20	21	21	22	22	21	20	20	20	20	21	22	--	20		
MAY																																		
MAXIMUM	23	23	23	22	--	--	--	--	--	--	--	--	--	--	25	25	26	26	26	26	26	26	26	26	26	26	26	26	27	27	28	--		
MINIMUM	22	22	22	21	--	--	--	--	--	--	--	--	--	--	24	24	24	25	25	25	25	25	25	25	25	25	26	26	26	26	27	--		
JUNE																																		
MAXIMUM	27	27	26	26	26	27	27	27	26	26	24	24	25	27	27	27	27	27	27	28	28	28	27	27	27	27	27	27	28	28	29	--		
MINIMUM	26	26	26	25	25	26	26	26	26	26	24	24	24	25	27	26	26	26	26	27	27	27	27	27	26	27	27	27	27	27	--	26		
JULY																																		
MAXIMUM	29	29	30	30	30	30	29	28	28	29	29	29	31	31	31	30	30	29	29	29	30	31	31	31	31	31	31	31	31	31	31	32		
MINIMUM	29	28	29	29	29	29	28	27	27	28	28	29	30	30	30	29	29	29	29	30	30	30	30	31	31	31	30	30	30	30	31	29		
AUGUST																																		
MAXIMUM	32	32	32	32	32	32	31	31	31	30	31	32	32	32	32	32	32	32	32	31	31	31	31	32	31	31	32	32	31	30	30	32		
MINIMUM	31	31	31	32	32	31	30	30	30	30	30	30	30	30	31	32	31	31	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
SEPTEMBER																																		
MAXIMUM	32	32	32	32	31	32	31	31	32	31	31	30	30	30	29	28	28	28	29	28	28	28	27	27	27	28	28	28	27	--	--	26		
MINIMUM	31	31	31	30	30	30	30	30	30	30	30	30	30	30	29	28	28	28	28	28	27	26	26	26	26	26	26	26	26	--	--	29		

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, at gaging station on left bank, 6,000 ft downstream from intake at west end of Imperial Dam, and 13.7 miles upstream from turnout to Yuma Main Canal.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.

REMARKS.--Records of discharge furnished by Imperial Irrigation District.

[illegible]

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5255. YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ.
(Irrigation network station)

LOCATION.--Lat 32°43'39", long 114°37'13", in NW¼NE¼ sec.35, T.16 S., R.22 E., San Bernardino meridian, Yuma County, at gaging station at Colorado River siphon outlet on Arizona side of river, 0.2 mile upstream from bridge on U.S. Highway 80 over Colorado River at Yuma, 0.3 mile west of old Yuma Territorial Prison, and 3.5 miles downstream from siphon-drop powerplant.

PERIOD OF RECORD.--Chemical analyses: September 1926 to September 1928, October 1942 to September 1969.

Water temperatures: May 1961 to September 1969.

EXTREMES, 1968-69.--Dissolved solids: Maximum, 1,040 mg/l Jan. 20-31; minimum, 823 mg/l Mar. 1-31.

Hardness: Maximum, 410 mg/l Apr. 1-30; minimum, 365 mg/l Oct. 1-31, Feb. 1-28.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SODIUM PLUS PO- TAS- SIUM (NA+K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 01-31	--	352	17	10	100	28	151	9.2	--	175	354	142
NOV. 01-30	--	322	15	--	100	32	--	--	167	184	365	148
DEC. 01-31	--	203	14	--	100	32	--	--	165	185	368	144
JAN. 01-19	--	192	14	--	98	31	--	--	166	180	373	138
20-31	--	192	14	--	108	32	--	--	201	210	400	176
FEB. 01-28	--	454	13	--	95	31	--	--	154	160	355	132
MAR. 01-31	--	404	13	--	98	31	--	--	135	174	326	128
APR. 01-30	--	529	14	--	102	38	141	5.5	--	182	362	128
MAY 01-31	--	538	15	--	99	32	--	--	152	180	357	133
JUNE 01-30	--	550	15	--	96	38	--	--	139	180	350	130
JULY 01-31	--	572	16	0	95	32	132	5.6	--	174	351	130
AUG. 01-31	--	531	16	--	94	32	--	--	152	174	354	132
SEPT. 01-30	--	469	15	--	98	32	--	--	161	168	359	143

ANALYSES OF ADDITIONAL SAMPLES

OCT. 01...	0930	--	--	--	94	33	--	--	--	168	--	138
NOV. 05...	1030	--	9.0	--	94	35	--	--	144	176	340	138
DEC. 03...	1430	--	--	--	94	38	--	--	--	176	--	148
JAN. 07...	0930	--	--	--	98	31	--	--	--	168	--	142
FEB. 04...	1000	--	--	--	98	31	--	--	--	168	--	148
MAR. 04...	0915	--	9.0	--	94	35	--	--	137	172	330	138
APR. 03...	1315	--	--	--	95	35	--	--	--	176	--	138
MAY 06...	0920	--	7.0	--	94	40	--	--	134	172	350	132
JUNE 03...	0940	--	8.0	--	94	38	--	--	136	172	350	128
JULY 01...	0930	--	--	--	95	32	--	--	--	168	--	132
AUG. 07...	1320	755	--	--	95	31	--	--	--	168	--	128
SEPT. 02...	--	--	--	--	97	34	--	--	--	164	--	132

9-5255. YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ.--Continued

EXTREMES, 1968-69--Continued

Specific conductance: Maximum daily, 1,670 micromhos Jan. 28; minimum daily, 1,210 micromhos Mar. 6.
 Water temperatures: Maximum, 31°C on many days during July to September; minimum, 7°C Dec. 27.
 EXTREMES, 1943-69.--Dissolved solids: Maximum, 1,040 mg/l Jan. 20-31, 1969; minimum, 532 mg/l Jan. 1-10, 1953.
 Hardness: Maximum, 520 mg/l July 7, 1962; minimum, 260 mg/l Jan. 1-10, 1953.
 Specific conductance: Maximum daily, 1,680 micromhos Dec. 5, 1967; minimum daily, 795 micromhos Jan. 5, 1953.
 Water temperatures (1967-69): Maximum, 31°C on many days during July to September in 1969; minimum, 7°C Dec. 27, 1968.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.												
01-31	.4	4.1	240	915	892	1.24	870	365	222	3.4	1360	8.2
NOV.												
01-30	--	4.4	--	--	921	1.25	801	380	229	3.7	1420	8.2
DEC.												
01-31	--	1.5	--	--	918	1.25	503	380	228	3.7	1390	8.0
JAN.												
01-19	--	1.5	--	--	910	1.24	472	370	222	3.8	1360	8.0
20-31	--	2.0	--	--	1040	1.41	511	400	229	4.4	1570	8.1
FEB.												
01-29	--	3.3	--	--	871	1.18	1070	365	224	3.5	1320	8.5
MAR.												
01-31	--	2.1	--	--	823	1.12	898	370	227	3.0	1290	8.1
APR.												
01-30	.5	1.9	200	384	384	1.20	1270	410	261	3.0	1310	7.9
MAY												
01-31	--	1.1	--	--	877	1.19	1270	378	230	3.4	1350	8.1
JUNE												
01-30	--	1.5	--	--	858	1.17	1270	394	246	3.0	1330	8.1
JULY												
01-31	.4	1.2	220	890	852	1.21	1380	370	227	3.0	1320	8.0
AUG.												
01-31	--	1.3	--	--	869	1.18	1250	368	225	3.4	1330	8.0
SEPT.												
01-30	--	1.7	--	904	904	1.23	1150	378	227	3.6	1390	8.4

ANALYSES OF ADDITIONAL SAMPLES

OCT.												
01...	--	--	--	--	810	1.10	--	370	232	--	1350	7.7
NOV.												
05...	--	--	--	--	848	1.15	--	380	236	3.2	1380	7.6
DEC.												
03...	--	--	--	--	946	1.15	--	390	246	--	1410	8.0
JAN.												
07...	--	--	--	--	934	1.13	--	370	232	--	1390	7.8
FEB.												
04...	--	--	--	--	822	1.12	--	370	232	--	1370	7.9
MAR.												
04...	--	--	--	--	329	1.13	--	380	239	3.1	1300	7.7
APR.												
08...	--	--	--	--	792	1.08	--	380	236	--	1320	8.0
MAY												
06...	--	--	--	--	843	1.15	--	400	259	2.9	1360	7.8
JUNE												
03...	--	--	--	--	840	1.14	--	390	249	3.0	1340	7.9
JULY												
01...	--	--	--	--	810	1.10	--	370	232	--	1350	7.8
AUG.												
07...	--	--	--	--	780	1.06	1590	365	227	--	1300	8.1
SEPT.												
02...	--	--	--	--	798	1.09	--	380	246	--	1330	8.0

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5255. YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	1320	1430	1410	1400	1490	1330	1290	1350	1350	1320	1360	1360
2.....	1320	1370	1410	1410	1380	1310	1300	1360	1330	1310	1350	1350
3.....	1320	1370	--	1400	1410	1330	1290	1360	1330	1320	1270	1330
4.....	1320	1380	1410	1380	1360	1310	1300	1370	1350	1330	1280	1340
5.....	1340	1390	1390	--	1360	1290	1320	1380	1350	1330	1300	1340
6.....	1350	1360	1350	--	1350	1210	1300	1350	1350	1320	1300	1400
7.....	1370	1360	1350	--	1300	1240	1320	1340	1340	1320	1320	1430
8.....	1330	1370	1350	--	1290	1260	1300	1330	1340	1320	1290	1370
9.....	1350	1390	1360	1340	1300	1260	1330	1340	1350	1320	1320	1360
10.....	1360	1390	1390	1320	1310	1280	1300	1350	1370	1320	1320	1370
11.....	1350	1410	1380	1320	1300	1260	1320	1380	1330	1310	1320	1420
12.....	1350	1440	1370	1320	1280	1260	1300	1420	1330	1310	1340	1450
13.....	1370	1430	1370	1320	1260	1270	1320	1400	1320	1320	1350	1460
14.....	1410	1420	1350	1350	1260	1310	1310	1360	1330	1330	1340	1460
15.....	1390	1430	1360	1350	1270	1290	1300	1340	1330	1320	1340	1470
16.....	1390	1410	1400	1360	1270	1290	1310	1350	1350	1320	1340	1420
17.....	1360	--	1400	1340	1300	1320	1320	1350	1320	1320	1320	1420
18.....	1370	--	1410	1320	1310	1340	1310	1330	1330	1320	--	1310
19.....	1370	--	1400	1390	1310	1280	1340	1350	1290	1310	--	1380
20.....	1410	--	1390	1450	--	1290	1330	1350	1320	1300	1340	1460
21.....	1430	1420	1380	1490	--	1280	1310	1350	1310	1320	1340	1410
22.....	1380	1410	--	1530	--	1290	1300	--	1260	1320	1350	1460
23.....	1360	1410	1380	1550	1320	1290	1290	1340	1350	1290	1330	1480
24.....	1350	1410	1380	1530	1340	1280	--	1340	1330	1330	1340	1410
25.....	1360	1430	1380	1570	1330	1270	1300	1310	1320	1320	1330	1390
26.....	1410	1450	1380	1630	1310	1290	--	1320	1330	1310	1340	1350
27.....	--	1440	1370	1660	1320	1280	1290	1340	1330	1320	1330	1360
28.....	--	1450	1490	1670	1330	1300	1360	1340	1330	1330	1340	1360
29.....	--	1480	1420	1620	--	1300	1350	1350	1330	1310	1340	1370
30.....	--	1450	1420	1590	--	1310	1330	1350	1340	1320	1350	1360
31.....	--	--	1430	1620	--	1290	--	1360	--	1320	1340	--
AVERAGE	1360	1410	1390	1450	1320	1290	1310	1350	1330	1320	1330	1400

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	21	20	19	19	19	19	19	20	20	20	20	20	--	--	--	--	--	22
NOVEMBER.	20	19	19	19	19	18	18	17	16	16	16	16	17	16	16	16	--	--	--	--	--	16	16	16	16	16	14	13	12	11	--	16	
DECEMBER.	11	12	--	11	10	11	11	11	11	11	11	11	11	10	10	10	10	11	10	9	10	8	--	8	8	8	8	7	8	8	9	9	10
JANUARY..	11	10	11	11	--	--	--	--	11	11	10	10	12	12	12	13	12	12	13	14	15	14	15	16	16	15	14	14	13	12	12	13	
FEBRUARY.	11	10	11	12	11	11	12	11	12	11	12	12	12	13	12	12	13	13	14	12	--	--	11	12	12	13	13	13	--	--	--	12	
MARCH....	14	13	13	12	12	12	13	12	12	14	12	12	12	13	13	12	13	14	15	11	11	12	11	16	16	16	17	16	16	17	18	19	14
APRIL....	19	19	18	17	18	18	18	17	19	19	19	19	19	20	19	19	19	19	19	19	20	21	21	--	21	--	21	19	20	21	--	19	
MAY.....	21	22	21	20	19	20	19	21	22	23	24	25	26	25	24	24	24	24	25	25	25	--	26	24	24	26	26	26	26	27	27	24	
JUNE.....	26	26	26	25	26	26	26	25	26	26	24	23	23	24	24	26	26	26	26	26	26	26	26	26	27	--	26	26	26	25	27	--	26
JULY.....	27	29	29	29	29	28	28	27	27	28	28	28	29	29	29	29	29	28	28	29	29	30	30	30	31	29	29	29	30	30	31	29	
AUGUST...	29	31	31	31	31	31	31	31	31	29	30	31	31	31	31	31	31	--	--	29	29	30	30	31	30	30	30	30	30	29	29	30	
SEPTEMBER	30	30	31	31	31	30	30	30	30	30	31	30	29	29	28	27	26	27	27	26	23	24	24	25	24	26	26	26	28	27	--	28	

29

10-2544.5. EAST HIGHLINE CANAL NEAR NILAND, CALIF.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.
REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC CONDO- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	1110	33	31	1300	850	1.16	75.7
SEPT. 16...	0900	27	28	1480	984	1.34	71.7

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	.7	.00	1.1	.00	.17	.00
SEPT. 16...	.6	.15	.13	.02	.19	.02

DATE	ALDRIN (UG/L)	DDT (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

[illegible]

LOCATION.--Lat 32°40'26", long 115°22'12", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.17 S., R.15 E., Imperial County, at gaging station at International Boundary, and 6.5 miles east of Calexico.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.

REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	SPECIFIC COND-UCTANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS DUE AT 180 C (MG/L)	DIS-SOLVED SOLIDS PER AC-FT	DIS-SOLVED SOLIDS PER DAY
AUG. 13...	0905	2.0	28	3080	2010	2.73	10.9
SEPT. 16...	1140	2.0	27	3630	2450	3.33	13.2

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	1.7	.01	.56	.05	.24	.12
SEPT. 16...	.1	.11	.87	.05	.38	.05

[illegible]

ANALYSES OF ADDITIONAL SAMPLES

[illegible]

SALTON SEA BASIN

31

10-2546, ALAMO RIVER AT DROP NO. 9, NEAR HOLTVILLE, CALIF.

LOCATION.--Lat 32°49'57", long 115°26'09", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.15 S., R.15 E., Imperial County, at gaging station 3.4 miles northwest of Holtville.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.

REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	0945	217	30	2920	1980	2.69	1160
SEPT. 16...	1040	166	27	3640	2370	3.22	1060

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	57	.01	.97	.29	1.5	.78
SEPT. 16...	23	17	.69	.47	1.7	.92

DATE	ALDRIN (UG/L)	DDD (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDAYE (UG/L)	METHYL PARA- THION (UG/L)	CHLOR- DANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

AUG. 13...	.00	.04	.06	.02	.00	.00	.01	.06	--	.17	.00	.00
SEPT. 16...	.00	.02	.03	.02	.00	.00	.00	.10	.02	1.8	.00	.17

SALTON SEA BASIN

10-2546.7. ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CALIF.

LOCATION.--Lat 33°06'13", long 115°32'38", on line between secs. 19 and 20, T.12 S., R.14 E., Imperial County, at gaging station 2.2 miles southwest of Calipatria.
 PERIOD OF RECORD.--Chemical analyses: August to September 1969.
 REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	1030	620	31	3960	2660	3.62	4450
SEPT. 16...	0935	495	28	4140	2780	3.78	3720

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	95	.01	1.3	.01	1.5	.57
SEPT. 16...	26	.23	1.4	.06	1.4	.42

DATE	ALDRIN (UG/L)	DDD (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	METHYL PARA- THION (UG/L)	CHLOR- DANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

AUG. 13...	.00	.04	.03	.02	.00	.00	.01	.12	--	.00	.00	.01
SEPT. 16...	.00	.04	.03	.03	.00	.00	.00	.35	.04	3.6	.00	.72

SALTON SEA BASIN

33

10-2547.3. ALAMO RIVER NEAR NILAND, CALIF.

LOCATION.--Lat 33°12'03", long 115°36'07", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T.11 S., R.13 E., Imperial County, at gaging station on left bank, 0.6 mile upstream from mouth, and 5.8 miles southwest of Niland.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1967, August to September 1969.

REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	1225	766	31	3670	2610	3.55	5400
SEPT. 16...	0825	635	27	4200	2850	3.88	4890

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	96	.00	.59	.21	1.5	.54
SEPT. 16...	25	.12	1.1	.05	1.3	.37

DATE	ALDRIN (UG/L)	DDD (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	METHYL PARA- THION (UG/L)	CHLOR- DANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

AUG. 13...	.00	.05	.03	.02	.00	.00	.01	.16	--	.00	.00	.00
SEPT. 16...	.00	.05	.03	.00	.00	.00	.00	.28	.03	1.1	.00	.35

SALTON SEA BASIN

10-2549.7. NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CALIF.

LOCATION.--Lat 32°39'57", long 115°30'08", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.17 S., R.14 E., Imperial County, at gaging station at Second Street bridge, 0.2 mile downstream from international boundary, and 0.2 mile west of Calexico.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.

REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	0835	147	31	6970	5240	7.13	2080
SEPT. 16...	1110	156	30	8500	5350	7.28	2250

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	6.9	.31	.30	.47	1.6	.98
SEPT. 16...	.8	1.4	1.6	.90	2.0	1.6

DATE	ALDRIN (UG/L)	DDD (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	METHYL PARA- THION (UG/L)	CHLOR- DANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

AUG. 13...	.00	.06	.02	--	--	--	--	--	--	--	--	--
13...	--	--	--	.00	.00	.00	.03	.01	--	.00	.00	.00
SEPT. 16...	.00	.07	.03	.02	.00	.00	.20	--	.07	.00	.00	.00

10-2554.5. NEW RIVER NEAR IMPERIAL, CALIF.

LOCATION.--Lat 32°54'50", long 115°36'20", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.23, T.14 S., R.13 E., Imperial County, at gaging station at Keystone Road bridge, and 4.6 miles northwest of Imperial.

PERIOD OF RECORD.--Chemical analyses: August to September 1969.

REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	1330	349	31	6740	4220	5.74	3980
SEPT. 16...	1010	407	27	6680	4290	5.83	4710

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	14	.01	.78	.66	20	1.3
SEPT. 16...	3.0	.23	1.9	.28	2.0	.58

DATE	ALDRIN (UG/L)	DDD (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	METHYL PARA- THION (UG/L)	CHLOR- DANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

AUG. 13...	.00	.06	.03	.01	.00	.00	.02	.13	--	.24	.00	.01
SEPT. 16...	.00	.05	.03	.01	.00	.00	.04	.05	.06	.19	.00	.13

SALTON SEA BASIN

10-2555.5. NEW RIVER NEAR WESTMORLAND, CALIF.

LOCATION.--Lat 33°06'17", long 115°39'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.12 S., R.13 E., Imperial County, at gaging station on right bank, 3.5 miles upstream from mouth, and 5.2 miles northwest of Westmorland.
 PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1967, August to September 1969.
 REMARKS.--Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG. 13...	1250	479	32	5750	3650	4.96	4720
SEPT. 16...	0755	617	27	5940	3810	5.18	6350

DATE	NITRATE (NO3) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)
AUG. 13...	11	.01	.63	.49	2.2	.98
SEPT. 16...	21	.23	2.1	.37	1.0	.77

DATE	ALDRIN (UG/L)	DOD (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINOAENE (UG/L)	METHYL PARA- THION (UG/L)	CHLOR- DANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
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ANALYSES OF ADDITIONAL SAMPLES

AUG. 13...	.00	.04	.03	.01	.00	.00	.02	.25	--	.32	.00	.03
SEPT. 16...	.00	.09	.03	.02	.00	.00	.04	.19	.05	.09	.00	.55

10-2560. WHITEWATER RIVER AT WHITE WATER, CALIF.

LOCATION (revised).--Lat 33°55'30", long 116°38'07", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.3 S., R.3 E., Riverside County, at gaging station on Whitewater River cut-off bridge, 0.1 mile east of White Water, and 2.0 miles upstream from San Geronimo River.

DRAINAGE AREA.--57.4 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

REMARKS.--Prior to August 1969, sampling site 1.5 miles upstream. Records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
DEC. 16....	1130	8.5	14	10.0	46	14	13	4.0	190	0	35	4.0
MAR. 17....	1225	115	17	9.3	42	12	10	4.0	171	0	30	3.0
JUNE 23....	1015	142	20	8.3	31	9.0	8.0	3.0	137	0	17	2.0
SEPT. 22....	1045	46	20	8.5	40	12	11	4.0	174	0	24	3.0

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
DEC. 16....	.9	1.7	0	239	.33	172	16	14	.4	156	8.0	375
MAR. 17....	.8	1.6	0	189	.26	154	14	12	.4	140	8.3	329
JUNE 23....	.6	.6	0	132	.18	114	2	13	.3	112	8.3	254
SEPT. 22....	.9	1.6	0	163	.22	149	6	13	.4	143	8.3	321

MOJAVE RIVER BASIN

10-2611. MOJAVE RIVER AT THE FORKS, NEAR CEDAR SPRINGS, CALIF.

LOCATION.--Lat 34°20'35", long 117°14'01", in SW $\frac{1}{4}$ sec.18, T.3 N., R.3 W., San Bernardino County, 100 ft downstream from confluence of Deep Creek and West Fork Mojave River, and 12 miles south of Apple Valley.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey. Water discharge estimated from the discharge of Deep Creek near Hesperia and that of West Fork Mojave River near Hesperia.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 16...	1130	6.0	11	9.6	20	5.0	42	2.0	107	0	56	9.0
JAN. 15...	1400	58	8	10.4	13	1.0	11	2.0	48	0	13	10
APR. 23...	1030	529	10	10.5	9.0	3.0	5.0	1.0	45	0	3.0	3.0
JULY 26...	1030	20	22	9.0	23	6.0	20	2.0	116	0	14	7.0

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 16...	2.6	.0	130	224	.30	70	0	56	2.2	88	7.7	336
JAN. 15...	.6	.0	40	94	.13	37	0	38	.8	39	7.5	142
APR. 23...	.1	.0	0	46	.06	35	0	23	.4	37	7.6	88
JULY 26...	.9	2.0	40	146	.20	82	0	34	1.0	95	8.0	245

10-2615. MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF.

LOCATION (revised).--Lat 34°34'23", long 117°19'11", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.6 N., R.4 W., San Bernardino County, at gaging station 650 ft upstream from bridge on county road, formerly U.S. Highway 66, 0.6 mile downstream from Atchison, Topeka and Santa Fe Railroad bridge, and 3 miles northwest of Victorville.

DRAINAGE AREA.--514 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

Water temperatures: March 1962 to September 1965.

REMARKS.--Prior to July 1969, sampling site 350 ft upstream. Records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 16...	1015	25	13	7.7	40	12	46	5.0	201	0	40	28
JAN. 15...	1250	43	16	7.9	44	9.0	48	8.0	195	0	45	31
APR. 23...	1145	350	16	8.6	16	4.0	11	4.0	79	0	12	5.0
JULY 26...	0930	33	27	6.4	37	8.0	40	14	204	0	35	21

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 16...	.5	4.5	120	311	.42	149	0	39	1.6	165	7.6	493
JAN. 15...	.5	4.0	70	316	.43	147	0	40	1.7	160	7.8	533
APR. 23...	.2	1.0	10	107	.15	56	0	28	.6	65	7.9	165
JULY 26...	.6	2.2	90	291	.40	125	0	38	1.6	167	8.1	441

39

LOCATION.--Lat 34°25'15", long 117°50'19", in NW¼SE¼NE¼ sec.20, T.4 N., R.9 W., Los Angeles County, temperature recorder at gaging station 0.1 mile upstream from Punchbowl Canyon, and 1.9 miles southeast of Valyermo.

DRAINAGE AREA.--22.9 sq mi.

PERIOD OF RECORD.--Water temperatures: January 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 1°C Feb. 1-4.

EXTREMES, 1968-69.--Water temperatures: Minimum, 1°C Feb. 1-4.
EXTREMES, 1962-69.--Water temperatures: Maximum (1962-68), 21°C on many days in 1967 and 1968; minimum, 1°C Feb. 1-4, 1969.

REMARKS.--Probe damaged during flood and thermograph record from Feb. 10 to end of water year is unreliable and will not be published. Where no maximum or minimum is reported, temperatures reported are from actual observations.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		16	16	17	17	17	17	16	15	14	16	16	16	16	16	14	13	14	14	14	15	15	16	15	15	16	16	16	16	15	14	13	15
MINIMUM		12	12	12	13	13	12	12	11	11	12	12	12	11	12	11	10	11	11	11	11	11	11	11	11	11	11	11	11	11	12	10	11
NOVEMBER.		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		13	14	13	13	13	13	13	12	14	13	13	13	12	12	13	12	13	13	13	14	13	13	13	13	13	11	11	12	11	11	12	13
MINIMUM		10	10	11	10	10	9	11	10	11	11	11	11	9	9	10	11	10	11	10	10	10	10	11	9	9	9	9	8	8	8	9	10
DECEMBER.		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		11	10	10	11	12	12	11	12	11	12	10	10	10	10	--	--	--	--	--	--	--	10	10	10	11	10	10	11	11	11	11	11
MINIMUM		9	8	8	8	8	8	8	8	8	9	8	7	7	7	--	--	--	--	--	--	--	7	7	8	8	9	8	8	8	8	8	8
JANUARY..		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		12	12	12	12	12	13	13	11	10	11	12	12	11	12	12	12	11	11	11	9	8	8	8	8	9	9	9	8	7	7	4	5
MINIMUM		8	9	9	9	9	9	9	9	9	8	8	9	9	10	10	9	9	8	9	10	8	8	8	8	8	9	9	8	7	4	2	8
FEBRUARY.		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		7	7	7	6	7	4	6	7	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		1	1	1	1	2	3	2	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH....		--	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL....		--	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	14	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

WALKER LAKE BASIN

10-2930. EAST WALKER RIVER NEAR BRIDGEPORT, CALIF.

LOCATION.--Lat 38°19'40", long 119°12'50", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.34, T.6 N., R.25 E., Mono County, at gaging station on right bank 1,500 ft downstream from Bridgeport Reservoir, 5 miles north of Bridgeport, and 10 miles upstream from Sweetwater Creek.

DRAINAGE AREA.--359 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

REMARKS.--Reported as a miscellaneous station for the period October 1963 to September 1968. Flow regulated by Bridgeport Reservoir.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	SODIUM (NA) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 14...	14	6	10.9	26	14	119	0	2.6	85	0	222	8.3
JAN. 08...	8.4	5	11.2	30	13	130	0	2.7	113	6	294	8.2
MAR. 12...	446	1	10.5	24	21	121	0	4.0	84	0	251	8.2
MAY 26...	594	16	8.2	11	6.4	54	0	.7	37	0	106	7.5
JULY 08...	651	16	7.9	11	4.6	50	0	1.2	37	0	80	7.8
SEPT. 08...	361	18	6.7	19	7.3	84	0	1.8	65	0	143	8.0

10-2960. WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CALIF.

LOCATION.--Lat 38°22'45", long 119°27'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.6 N., R.23 E., Mono County, on left bank 300 ft downstream from U.S. Highway 395 bridge, 500 ft downstream from gaging station, 700 ft downstream from confluence of Little Walker River, and 13 miles southeast of Coleville.

DRAINAGE AREA.--180 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

REMARKS.--Reported as a miscellaneous station for the period October 1963 to September 1968. Flow very slightly regulated by Poor Lake Reservoir.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	SODIUM (NA) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 14...	56	0	11.9	7.0	4.0	36	0	1.5	32	32	71	7.9
JAN. 08...	54	0	12.8	10	4.8	48	0	1.6	36	0	96	7.7
MAR. 12...	63	0	11.5	12	5.7	58	0	1.8	45	0	113	7.7
MAY 26...	2390	5	10.4	5.1	1.6	21	0	.7	16	0	42	7.3
JULY 08...	1090	6	10.1	4.0	1.3	19	0	.7	19	3	38	7.3
SEPT. 08...	177	15	8.1	8.1	3.2	39	0	1.5	31	0	72	7.8

CARSON RIVER BASIN

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10-3055. EAST FORK CARSON RIVER NEAR MARKLEEVILLE, CALIF.

LOCATION.--Lat 38°41'20", long 119°45'44", in sec.27, T.10 N., R.20 E., Alpine County, at State Highway 4 bridge, 2.5 miles southeast of Markleeville.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

REMARKS.--Reported as a miscellaneous station for the period October 1963 to September 1965, and as 10-3082, East Fork Carson River below Markleeville Creek, near Markleeville, for the period October 1965 to September 1968. Discharge data published for the latter period should not be used. No discharge records available.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	SODIUM (NA) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 14...	0	12.6	11	8.6	59	0	3.5	42	0	122	8.0
JAN. 08...	0	13.2	14	8.6	62	0	3.4	50	0	140	7.9
MAR. 12...	0	12.3	19	9.6	83	0	3.3	80	12	188	8.1
MAY 26...	5	10.6	6.0	2.5	28	0	1.3	21	0	55	7.5
JULY 08...	8	10.0	5.7	2.7	30	0	1.2	20	0	54	7.7
SEPT. 08...	15	8.1	9.3	5.6	49	0	2.1	35	0	91	7.8

10-3100. WEST FORK CARSON RIVER AT WOODFORDS, CALIF.

LOCATION.--Lat 38°46'10", long 119°49'55", in NW¼SE¼ sec.34, T.11 N., R.19 E., Alpine County, at gaging station on left bank, 0.3 mile downstream from bridge on State Highway 88-89, 0.6 mile southwest of Woodfords, and 3.8 miles downstream from Willow Creek.

DRAINAGE AREA.--65.6 sq mi.

PERIOD OF RECORD: Chemical analyses: October 1958 to September 1969.

REMARKS.--Reported as a miscellaneous station for the period October 1963 to September 1968. Flow slightly regulated by several small reservoirs.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	SODIUM (NA) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 14...	36	0	12.1	7.8	3.7	40	0	.9	27	0	71	7.9
JAN. 08...	29	0	12.6	8.0	3.4	40	0	.9	30	0	76	7.8
MAR. 12...	34	0	--	8.6	2.9	42	0	.8	33	0	77	7.9
MAY 26...	900	4	11.2	4.2	1.4	20	0	1.3	14	0	36	7.3
JULY 08...	224	8	9.6	6.9	2.2	23	0	.8	19	0	57	7.4
SEPT. 08...	87	14	8.3	8.0	4.3	35	0	1.7	27	0	80	7.7

OWENS LAKE BASIN

10-2783. LOS ANGELES AQUEDUCT AT OUTLET, AT SAN FERNANDO, CALIF.

LOCATION.--Lat 34°18'46", long 118°29'32", (unsurveyed), Los Angeles County, in Mission de San Fernando substation at Los Angeles Aqueduct outlet at upper end of Van Norman Lake, at San Fernando.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey. Records of discharge furnished by Los Angeles Department of Water and Power.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
22...	494	15	9.8	21	29	8.0	38	4.0	128	0	34	16
NOV.												
19...	413	13	10.8	24	25	7.0	35	5.0	114	0	28	16
DEC.												
17...	444	10	11.8	22	23	7.0	36	3.0	111	0	33	14
JAN.												
21...	456	7	12.0	20	22	7.0	35	3.0	106	0	28	14
FEB.												
18...	498	7	11.8	18	22	8.0	33	4.0	90	0	57	17
MAR.												
18...	482	7	11.8	20	27	8.0	68	7.0	123	0	76	35
APR.												
22...	488	15	10.0	19	30	8.0	88	8.0	138	0	113	47
MAY												
20...	486	17	9.6	24	30	7.0	72	6.0	155	0	55	36
JUNE												
17...	520	20	9.0	21	26	6.0	49	5.0	126	0	38	24
JULY												
22...	520	22	8.0	14	20	5.0	31	4.0	73	0	45	15
AUG.												
19...	568	22	8.4	16	20	6.0	28	4.0	85	0	27	14
SEPT.												
16...	677	18	8.8	18	25	6.0	30	3.0	103	0	30	9.0

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
22...	.5	1.0	500	215	.29	105	0	43	1.6	105	8.3	354
NOV.												
19...	.5	1.1	460	199	.27	91	0	44	1.6	94	8.2	308
DEC.												
17...	.5	1.1	400	195	.27	86	0	47	1.7	91	8.1	333
JAN.												
21...	.5	3.3	470	186	.25	84	0	47	1.7	87	8.2	304
FEB.												
18...	.4	1.4	460	206	.28	88	14	44	1.5	74	7.7	332
MAR.												
18...	.5	2.1	640	305	.41	100	0	58	3.0	101	7.6	546
APR.												
22...	.9	.5	890	384	.52	108	0	62	3.7	113	7.9	635
MAY												
20...	1.0	.6	890	309	.42	104	0	58	3.1	127	8.2	529
JUNE												
17...	.7	.6	720	233	.32	90	0	53	2.3	103	8.0	408
JULY												
22...	.4	.5	400	172	.23	70	10	47	1.6	60	7.6	299
AUG.												
19...	.4	.9	320	159	.22	75	5	43	1.4	70	7.9	276
SEPT.												
16...	.4	2.2	370	175	.24	87	3	42	1.4	84	8.2	310

PYRAMID AND WINNEMUCCA LAKES BASIN

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10-3370. LAKE TAHOE AT TAHOE CITY, CALIF.

LOCATION.--Lat 39°10'04", long 120°08'23", in NE¼ sec.7, T.15 N., R.17 E., Placer County, at gaging station at Tahoe City, on pier 1,000 ft east of dam at lake outlet.

DRAINAGE AREA.--505 sq mi at lake outlet.

PERIOD OF RECORD: Chemical analyses: October 1958 to September 1969.

REMARKS.--Reported as a miscellaneous station for the period October 1963 to September 1968.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	SODIUM (NA) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 13...	8	9.3	9.2	6.2	51	0	1.8	32	0	93	8.0
JAN. 07...	5	10.7	8.8	5.8	51	0	1.8	33	0	92	7.9
MAR. 11...	4	10.8	9.2	6.1	55	0	1.9	38	0	98	7.7
MAY 21...	8	10.0	9.2	5.7	50	0	2.4	32	0	92	7.8
JULY 07...	15	8.4	8.6	5.6	52	0	1.7	32	0	83	7.6
SEPT. 08...	18	8.1	9.4	6.1	52	0	1.8	33	0	92	7.8

10-3435, SAGEHEN CREEK NEAR TRUCKEE, CALIF.

LOCATION.--Lat 39°25'54", long 120°14'07", in NE¹/₄NE¹/₄ sec.7, T.18 N., R.16 E., Nevada County, at gaging station on left bank, 2.2 miles upstream from bridge on State Highway 89, and 7.5 miles north of Truckee.

DRAINAGE AREA.--10.8 sq mi.

PERIOD OF RECORD.--Chemical analyses: May 1968 to September 1969.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DIS-CHARGE	TEMP-E-RATURE	SILICA	CAL-CIUM	MAG-NE-SIUM	SODIUM	POT-TAS-SIUM	BICAR-BONATE	CAR-BONATE	SULFATE	CHLO-RIDE
DATE	TIME	(CFS)	(DEG C)	(SI02) (MG/L)	(CA) (MG/L)	(MG) (MG/L)	(NA) (MG/L)	(K) (MG/L)	(HCO3) (MG/L)	(CO3) (MG/L)	(SO4) (MG/L)	(CL) (MG/L)
OCT.												
03...	1540	2.4	11	--	--	--	--	--	--	--	--	--
10...	1600	2.4	9	--	--	--	--	--	--	--	--	--
17...	1530	3.2	9	--	--	--	--	--	--	--	--	--
24...	1545	3.0	9	--	--	--	--	--	--	--	--	--
NOV.												
01...	1545	3.0	5	--	--	--	--	--	--	--	--	--
05...	1650	4.6	4	--	--	--	--	--	--	--	--	--
08...	1040	3.8	4	--	--	--	--	--	--	--	--	--
21...	1600	4.6	4	--	--	--	--	--	--	--	--	--
27...	1650	4.0	2	--	--	--	--	--	--	--	--	--
DEC.												
05...	1315	3.6	2	--	--	--	--	--	--	--	--	--
19...	1545	4.0	1	--	--	--	--	--	--	--	--	--
27...	1630	5.8	0	--	--	--	--	--	--	--	--	--
JAN.												
09...	1535	3.9	2	--	--	--	--	--	--	--	--	--
14...	1310	6.2	1	--	--	--	--	--	--	--	--	--
FEB.												
04...	1555	6.9	2	--	--	--	--	--	--	--	--	--
10...	1545	5.8	3	--	--	--	--	--	--	--	--	--
17...	1610	5.1	2	--	--	--	--	--	--	--	--	--
MAR.												
18...	1330	5.2	3	--	--	--	--	--	--	--	--	--
24...	1615	6.2	3	--	--	--	--	--	--	--	--	--
31...	0905	22	2	--	--	--	--	--	--	--	--	--
APR.												
07...	--	15	3	--	--	--	--	--	--	--	--	--
14...	1630	27	2	--	--	--	--	--	--	--	--	--
23...	1100	64	1	--	--	--	--	--	--	--	--	--
29...	1430	64	4	--	--	--	--	--	--	--	--	--
MAY												
05...	1520	89	4	--	--	--	--	--	--	--	--	--
13...	1220	133	6	--	--	--	--	--	--	--	--	--
19...	1430	140	9	--	--	--	--	--	--	--	--	--
26...	1425	122	11	--	--	--	--	--	--	--	--	--
JUNE												
02...	1425	89	13	--	--	--	--	--	--	--	--	--
10...	0731	67	5	--	--	--	--	--	--	--	--	--
14...	0816	78	7	--	--	--	--	--	--	--	--	--
30...	1800	22	14	--	--	--	--	--	--	--	--	--
JULY												
07...	1335	16	14	--	--	--	--	--	--	--	--	--
14...	1345	12	17	--	--	--	--	--	--	--	--	--
21...	1535	8.7	18	--	--	--	--	--	--	--	--	--
28...	1520	5.0	17	--	--	--	--	--	--	--	--	--
AUG.												
11...	1500	5.0	17	--	--	--	--	--	--	--	--	--
17...	1630	4.3	16	--	--	--	--	--	--	--	--	--
26...	1315	3.9	15	--	--	--	--	--	--	--	--	--
SEPT.												
02...	1445	3.9	15	28	12	4.2	5.4	2.1	74	0	1.0	.2
10...	1030	4.1	10	--	--	--	--	--	--	--	--	--
16...	1545	3.4	12	--	--	--	--	--	--	--	--	--
24...	1530	3.9	12	--	--	--	--	--	--	--	--	--
26...	1100	3.7	--	--	--	--	--	--	--	--	--	--
29...	1515	3.6	13	--	--	--	--	--	--	--	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

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10-3435. SAGEHEN CREEK NEAR TRUCKEE, CALIF.--Continued

REMARKS.--Additional cooperative studies with University of California, Berkeley, Calif., are being conducted. These include biological sampling of streambed biota, periodic photographic log of stream channel to detect and record changes in morphology and vegetation, and annual survey of monumented stream cross-sections. All data available in district office at Menlo Park, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	AMMONIA (NH4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)
OCT.												
03...	--	--	--	--	--	--	--	--	--	134	--	--
10...	--	--	--	--	--	--	--	--	--	133	--	--
17...	--	--	--	--	--	--	--	--	--	128	--	--
24...	--	--	--	--	--	--	--	--	--	129	--	--
NOV.												
01...	--	--	--	--	--	--	--	--	--	128	--	--
05...	--	--	--	--	--	--	--	--	--	116	--	--
08...	--	--	--	--	--	--	--	--	--	121	--	--
21...	--	--	--	--	--	--	--	--	--	113	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
DEC.												
05...	--	--	--	--	--	--	--	--	--	120	--	--
19...	--	--	--	--	--	--	--	--	--	118	--	--
27...	--	--	--	--	--	--	--	--	--	118	--	--
JAN.												
09...	--	--	--	--	--	--	--	--	--	116	--	--
14...	--	--	--	--	--	--	--	--	--	106	--	--
FEB.												
04...	--	--	--	--	--	--	--	--	--	94	--	--
10...	--	--	--	--	--	--	--	--	--	103	--	--
17...	--	--	--	--	--	--	--	--	--	108	--	--
MAR.												
18...	--	--	--	--	--	--	--	--	--	110	--	--
24...	--	--	--	--	--	--	--	--	--	108	--	--
31...	--	--	--	--	--	--	--	--	--	111	--	--
APR.												
07...	--	--	--	--	--	--	--	--	--	80	--	--
14...	--	--	--	--	--	--	--	--	--	69	--	--
23...	--	.0	--	--	--	.00	.21	.02	--	--	.5	2
29...	--	--	--	--	--	--	--	--	--	51	--	--
MAY												
05...	--	--	--	--	--	--	--	--	--	48	--	--
13...	--	--	--	--	--	--	--	--	--	42	--	--
19...	--	--	--	--	--	--	--	--	--	42	--	--
26...	--	--	--	--	--	--	--	--	--	41	--	--
JUNE												
02...	--	--	--	--	--	--	--	--	--	45	--	--
10...	--	--	--	--	--	--	--	--	--	51	--	--
14...	--	--	--	--	--	--	--	--	--	53	--	--
30...	--	--	--	--	--	--	--	--	--	69	--	--
JULY												
07...	--	--	--	--	--	--	--	--	--	74	--	--
14...	--	--	--	--	--	--	--	--	--	82	--	--
21...	--	--	--	--	--	--	--	--	--	91	--	--
28...	--	--	--	--	--	--	--	--	--	108	--	--
AUG.												
11...	--	--	--	--	--	--	--	--	--	113	--	--
17...	--	--	--	--	--	--	--	--	--	116	--	--
26...	--	--	--	--	--	--	--	--	--	119	--	--
SEPT.												
02...	.2	.1	0	89	48	--	--	--	7.7	121	--	--
10...	--	--	--	--	--	--	--	--	--	124	--	--
16...	--	--	--	--	--	--	--	--	--	125	--	--
24...	--	--	--	--	--	--	--	--	--	125	--	--
26...	--	.0	--	--	--	05	.05	.04	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	126	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

10-3435. SAGEHEN CREEK NEAR TRUCKEE, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

[illegible]

PYRAMID AND WINNEMUCCA LAKES BASIN

10-3459. TRUCKEE RIVER AT FLORISTON, CALIF.--Continued
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	BORON (B) (UG/L)
ANALYSES OF ADDITIONAL SAMPLES												
OCT. 15...	413	16	8.6	2.5	4.8	1.5	47	0	4.0	2.0	.1	0
NOV. 15...	379	--	9.5	2.8	5.0	1.5	52	0	4.0	.8	--	0
MAR. 17...	2000	--	9.2	2.7	5.9	1.6	53	0	2.0	1.4	--	0
APR. 17...	3100	16	7.6	2.4	4.5	1.4	42	0	3.0	1.5	.1	30
MAY 15...	3880	--	5.4	1.7	2.6	.8	26	0	2.0	1.1	--	0
JUNE 17...	3750	--	6.9	2.0	4.7	1.7	37	0	2.0	1.8	--	0
JULY 15...	625	16	9.0	2.8	5.9	1.7	48	0	3.0	1.8	.1	20
AUG. 16...	542	--	9.0	2.8	5.8	1.7	46	0	3.0	2.2	--	0

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	87	98	114	104	94	93	85	69	73	89	--	90
2.....	85	98	95	106	94	94	84	69	59	--	--	90
3.....	85	94	96	106	96	95	94	69	59	--	108	91
4.....	88	94	96	106	94	95	100	69	59	75	104	73
5.....	88	96	95	106	94	96	109	79	58	75	96	73
6.....	88	96	95	106	96	95	90	70	65	77	93	73
7.....	87	94	96	105	96	95	90	92	63	75	93	73
8.....	87	95	96	106	95	96	110	61	63	76	95	73
9.....	88	95	96	105	96	95	96	57	63	73	94	73
10.....	89	95	--	104	--	96	91	62	--	69	94	70
11.....	89	95	--	112	--	95	82	--	72	72	97	82
12.....	92	88	--	112	--	95	84	--	77	92	96	82
13.....	91	95	--	111	--	95	81	60	73	--	--	88
14.....	90	95	--	--	--	95	92	56	73	--	--	80
15.....	89	95	--	--	--	97	80	56	72	79	91	80
16.....	89	95	--	--	--	98	98	83	70	79	97	80
17.....	90	96	--	--	--	98	108	--	76	81	97	80
18.....	91	95	--	80	--	98	133	54	77	83	95	81
19.....	91	92	--	79	--	98	77	54	--	83	97	80
20.....	91	90	--	79	--	99	83	55	--	84	99	80
21.....	92	90	--	80	--	99	82	--	--	83	98	81
22.....	92	91	--	87	--	99	--	--	--	83	115	80
23.....	91	90	--	84	--	98	--	52	--	88	110	81
24.....	94	92	--	--	--	100	--	53	80	85	91	--
25.....	94	92	--	--	--	98	--	53	80	92	93	--
26.....	95	92	--	--	--	98	--	54	82	92	89	--
27.....	95	92	--	--	--	97	--	--	--	92	90	--
28.....	95	--	--	--	--	98	--	--	--	92	--	--
29.....	96	--	--	--	--	--	--	--	--	101	--	--
30.....	98	94	--	--	--	--	--	--	--	102	--	--
31.....	98	--	--	--	--	--	--	--	--	--	--	--
AVERAGE	90	93	--	--	--	96	--	--	--	83	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

10-3460. TRUCKEE RIVER AT FARAD, CALIF.

LOCATION.--Lat 39°25'41", long 120°01'59", in NE $\frac{1}{4}$ sec.12, T.18 N., R.17 E., Nevada County, at gaging station on left bank, 0.5 mile upstream from Mystic Canyon, 0.7 mile downstream from Farad powerplant, 2.5 miles north of Floriston, 3.4 miles downstream from Bronco Creek, and 3.5 miles upstream from California-Nevada State line.

DRAINAGE AREA.--932 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1961, November 1967 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT. 02...	0915	509	12	9.6	15	8.5	3.5	4.2	1.3	44	0	.0
NOV. 06...	0910	424	6	10.9	20	9.7	5.5	5.1	1.8	53	0	.8
DEC. 09...	1115	460	3	11.7	1.0	9.3	2.9	4.5	1.3	50	0	2.3
JAN. 09...	0850	424	0	--	2.0	9.2	3.6	5.4	1.8	52	0	2.8

DATE	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 02...	2.0	.2	0	61	.08	32	0	20	.3	36	7.6	94
NOV. 06...	3.1	.0	0	73	.10	41	0	18	.3	43	7.8	106
DEC. 09...	3.4	.1	0	47	.06	35	0	21	.3	41	7.5	98
JAN. 09...	3.7	.1	0	59	.08	38	0	23	.4	43	7.7	105

HONEY LAKE BASIN

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10-3565. SUSAN RIVER AT SUSANVILLE, CALIF.

LOCATION.--Lat 40°25'05", long 120°40'15", in SW¼NE¼ sec.31, T.30 N., R.12 E., Lassen County, at gaging station 0.5 mile west of Susanville, and 1.1 miles upstream from Piute Creek.

DRAINAGE AREA.--184 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT.												
08...	1510	4.4	10	10.6	1.0	--	--	6.8	--	115	0	--
NOV.												
15...	1300	14	6	11.0	3.0	--	--	6.0	--	100	0	--
DEC.												
11...	1520	53	1	12.5	35	--	--	5.0	--	71	0	--
JAN.												
22...	0715	512	0	12.0	140	--	--	3.3	--	43	0	--
FEB.												
18...	1520	84	2	12.0	15	--	--	5.0	--	70	0	--
MAR.												
11...	1600	69	2	12.8	10	--	--	4.2	--	79	0	--
APR.												
09...	1630	372	7	10.6	15	--	--	3.2	--	49	0	--
MAY												
14...	0800	1020	8	11.0	60	6.1	1.9	1.8	.8	31	0	.0
JUNE												
10...	1500	208	15	9.3	4.0	--	--	2.8	--	52	0	--
JULY												
08...	1630	49	19	8.5	9.0	--	--	4.2	--	73	0	--
AUG.												
14...	0715	23	15	8.8	25	--	--	3.5	--	56	0	--
SEPT.												
17...	0845	15	12	9.7	8.0	14	7.0	6.0	1.6	86	0	.0

DATE	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
08...	1.5	--	0	--	--	84	0	15	.3	94	8.0	181
NOV.												
15...	1.6	--	0	--	--	73	0	15	.3	82	8.2	163
DEC.												
11...	1.9	--	0	--	--	59	1	16	.3	58	8.0	124
JAN.												
22...	1.4	--	0	--	--	32	0	18	.3	35	7.7	78
FEB.												
18...	2.2	--	0	--	--	58	1	16	.3	57	8.0	122
MAR.												
11...	2.2	--	0	--	--	78	13	10	.2	65	8.0	136
APR.												
09...	1.3	--	0	--	--	36	0	16	.2	40	7.5	86
MAY												
14...	2.0	.1	0	44	.06	23	0	14	.2	25	7.2	53
JUNE												
10...	.9	--	0	--	--	37	0	14	.2	43	7.7	85
JULY												
08...	1.4	--	0	--	--	53	0	15	.3	60	8.3	117
AUG.												
14...	1.6	--	0	--	--	42	0	15	.2	46	7.9	97
SEPT.												
17...	1.8	.0	0	91	.12	64	0	15	.3	71	7.6	141

PART 11. PACIFIC SLOPE BASINS IN CALIFORNIA

SAN LUIS REY RIVER BASIN

11-0420, SAN LUIS REY RIVER AT OCEANSIDE, CALIF.

LOCATION.--Lat 33°12'48", long 117°22'33", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.11 S., R.5 W., San Diego County, at gaging station 0.7 mile upstream from bridge on U.S. Highway 101, 1.1 miles upstream from mouth, and 1.2 miles north of Ocean-side.

DRAINAGE AREA.--557 sq mi.

PERIOD OF RECORD.--Sediment records: October 1968 to September 1969.

MONTHLY AND ANNUAL SUMMARY OF SUSPENDED-SEDIMENT DISCHARGE,
WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DISCHARGE (CFS)	SUSPENDED-SEDIMENT (TONS)
OCTOBER 1968.....	48.7	3
NOVEMBER.....	54.0	3
DECEMBER.....	56.8	3
JANUARY 1969.....	1658.4	13500
FEBRUARY.....	8686	427000
MARCH.....	1516	5260
APRIL.....	389.9	82
MAY.....	132.0	18
JUNE.....	86.3	8
JULY.....	69.5	5
AUGUST.....	46.7	3
SEPTEMBER.....	20.86	1
TOTAL FOR YEAR.....	12765.16	445886

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 26, 1969	1545	--	242	1880	1230	67	84	95	98	99	100	--	--	--	--	--	SPWC	
FEB 24.....	1105	--	2600	5280	37100	46	54	66	84	95	99	100	--	--	--	--	SPWC	
FEB 24.....	1600	14	2530	5760	39300	37	50	64	80	95	99	100	--	--	--	--	SPWC	
FEB 26.....	1200	13	2000	21100	114000	14	16	20	31	43	60	91	99	100	--	--	VPWC	
MAR 3.....	1700	--	60	3170	514	21	23	24	32	40	53	74	99	100	--	--	VPWC	

SANTA MARGARITA RIVER BASIN

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11-0445. SANTA MARGARITA RIVER NEAR FALLBROOK, CALIF.

LOCATION.--Lat 33°23'54", long 117°15'44", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.9 S., R.4 W., San Diego County, at gaging station 180 ft upstream from De Luz Road, 1.3 miles northwest of Fallbrook, and 1.9 miles downstream from Sandia Canyon.

DRAINAGE AREA.--644 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
DEC. 18...	1230	3.1	6	11.2	90	31	113	3.0	290	0	139	149
MAR. 20...	1415	47	20	9.3	59	25	74	3.0	189	0	108	101
JUNE 26...	1215	6.0	25	7.9	78	36	105	4.0	261	14	128	140
SEPT. 26...	1230	1.7	24	8.7	90	38	108	3.0	328	0	118	156

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
DEC. 18...	.5	.8	130	718	.98	352	114	41	2.6	238	8.0	1140
MAR. 20...	.4	2.5	90	511	.69	250	95	39	2.0	155	7.9	803
JUNE 26...	.5	.5	180	657	.89	343	106	40	2.5	237	8.4	1070
SEPT. 26...	.6	.2	160	671	.91	381	112	38	2.4	269	8.0	1110

SANTA MARGARITA RIVER BASIN

11-0460. SANTA MARGARITA RIVER AT YSIDORA, CALIF.

LOCATION.--Lat 33°14'38", long 117°22'56", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.11 S., R.5 W., San Diego County, at gaging station on right bank, 1 mile downstream from Ysidora, and about 2.5 miles upstream from mouth.

DRAINAGE AREA.--739 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1968 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 13,000 mg/l Feb. 24; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 534,000 tons Feb. 24; minimum daily, 0 tons on many days.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 13,000 mg/l Feb. 24, 1969; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 534,000 tons Feb. 24, 1969; minimum daily, 0 tons on many days.

REMARKS.--No flow Oct. 1 to Jan. 24.

TEMPERATURE (C°) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVERAGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEBRUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	12	13	--	15	--	--	--	--	--
MARCH....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	19	--	--	--	--	--	--	--
APRIL....	--	--	--	--	--	--	--	--	--	--	19	--	23	--	--	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....	--	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--
JUNE.....	--	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....	--	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	--	--	--	--
AUGUST....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	88	110	26	484	240	314
2	0	--	0	72	105	20	439	230	273
3	0	--	0	66	100	18	400	220	238
4	0	--	0	45	95	12	361	210	205
5	0	--	0	39	90	9.5	322	210	183
6	0	--	0	1880	1060	11300	290	200	157
7	0	--	0	1570	731	3680	260	200	140
8	0	--	0	463	281	361	240	190	123
9	0	--	0	258	200	139	230	190	118
10	0	--	0	177	170	81	219	180	106
11	0	--	0	150	150	61	200	180	97
12	0	--	0	102	130	36	185	170	85
13	0	--	0	88	100	24	170	160	73
14	0	--	0	72	75	15	158	150	64
15	0	--	0	64	50	8.6	148	140	56
16	0	--	0	117	131	45	138	130	48
17	0	--	0	100	115	31	130	120	42
18	0	--	0	111	144	47	118	110	35
19	0	--	0	300	144	112	108	100	29
20	0	--	0	447	353	431	103	90	25
21	0	--	0	283	215	166	111	80	24
22	0	--	0	427	309	397	130	300	105
23	0	--	0	521	529	744	110	240	71
24	0	--	0	14400	13000	534000	90	190	46
25	3850	4490	154000	16400	8340	386000	86	150	35
26	4530	2840	46000	1030	415	1450	84	120	27
27	1480	673	2910	514	283	392	82	100	22
28	509	338	479	500	260	350	80	90	19
29	282	220	170	--	--	--	78	85	18
30	159	160	69	--	--	--	77	80	17
31	118	131	42	--	--	--	76	75	15
TOTAL	10928	--	203670	40284	--	939956.1	5707	--	2810

SANTA MARGARITA RIVER BASIN

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 11-0460. SANTA MARGARITA RIVER AT YSIDORA, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	76	75	15	25	60	4.1	3.3	40	.36
2	74	75	15	24	60	3.9	3.1	40	.33
3	72	75	15	23	60	3.7	3.0	40	.32
4	71	70	13	22	60	3.6	2.8	40	.30
5	69	70	13	21	60	3.4	2.5	40	.27
6	68	70	13	20	60	3.2	2.4	40	.26
7	66	70	12	18	55	2.7	2.3	40	.25
8	65	70	12	17	55	2.5	2.1	40	.23
9	63	70	12	16	55	2.4	1.9	40	.21
10	62	65	11	14	55	2.1	1.8	35	.17
11	60	65	11	14	55	2.1	1.7	35	.16
12	59	65	10	13	55	1.9	1.5	35	.14
13	56	65	9.8	12	55	1.8	1.4	35	.13
14	54	65	9.5	11	55	1.6	1.4	35	.13
15	52	65	9.1	10	55	1.5	1.3	35	.12
16	50	65	8.8	9.6	50	1.3	1.2	35	.11
17	47	65	8.2	9.0	50	1.2	1.1	35	.10
18	45	65	7.9	8.0	50	1.1	1.0	35	.09
19	43	65	7.5	7.5	50	1.0	1.0	35	.09
20	40	65	7.0	6.9	50	.93	1.0	35	.09
21	38	65	6.7	6.7	50	.90	.94	30	.08
22	37	65	6.5	6.1	50	.82	.90	30	.07
23	35	65	6.1	5.4	50	.73	.86	30	.07
24	34	65	6.0	5.3	50	.72	.84	30	.07
25	33	60	5.3	5.0	50	.68	.79	30	.06
26	31	60	5.0	4.7	40	.51	.76	30	.06
27	30	60	4.9	4.5	40	.49	.73	30	.06
28	29	60	4.7	4.3	40	.46	.71	30	.06
29	28	60	4.5	4.0	40	.43	.68	30	.06
30	27	60	4.4	3.8	40	.41	.66	30	.05
31	--	--	--	3.5	40	.38	--	--	--
TOTAL	1514	--	273.9	354.3	--	52.56	45.67	--	4.50

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	20	.04	.38	10	.01	.35	10	.01
2	.64	20	.03	.37	10	.01	.35	10	.01
3	.62	20	.03	.37	10	.01	.35	10	.01
4	.61	20	.03	.37	10	.01	.35	10	.01
5	.60	20	.03	.37	10	.01	.35	10	.01
6	.59	20	.03	.37	10	.01	.33	10	.01
7	.58	20	.03	.37	10	.01	.33	10	.01
8	.56	20	.03	.37	10	.01	.33	10	.01
9	.55	20	.03	.37	10	.01	.33	10	.01
10	.54	20	.03	.37	10	.01	.33	10	.01
11	.53	20	.03	.37	10	.01	.30	10	.01
12	.52	20	.03	.37	10	.01	.30	10	.01
13	.51	20	.03	.37	10	.01	.30	10	.01
14	.50	20	.03	.37	10	.01	.30	10	.01
15	.49	20	.03	.37	10	.01	.30	10	.01
16	.47	20	.03	.36	10	.01	.28	10	.01
17	.47	20	.03	.36	10	.01	.28	10	.01
18	.47	20	.03	.36	10	.01	.28	10	.01
19	.47	20	.03	.36	10	.01	.28	10	.01
20	.47	20	.03	.36	10	.01	.28	10	.01
21	.46	20	.02	.36	10	.01	.26	10	.01
22	.46	20	.02	.36	10	.01	.26	10	.01
23	.45	20	.02	.36	10	.01	.26	10	.01
24	.43	20	.02	.36	10	.01	.26	10	.01
25	.43	20	.02	.36	10	.01	.28	10	.01
26	.43	20	.02	.36	10	.01	.30	10	.01
27	.42	20	.02	.36	10	.01	.33	10	.01
28	.41	20	.02	.35	10	.01	.27	10	.01
29	.40	20	.02	.35	10	.01	.24	10	.01
30	.39	20	.02	.35	10	.01	.22	10	.01
31	.39	20	.02	.35	10	.01	--	--	--
TOTAL	15.51	--	.83	11.28	--	.31	8.98	--	.30

 TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
 TOTAL LOAD FOR YEAR (TONS)

 58868.74
 1146768.50

SANTA MARGARITA RIVER BASIN

11-0460. SANTA MARGARITA RIVER AT YSIDORA, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BUTTUM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
FEB 25, 1969	1400	--	17500	10100	477000	19	20	25	36	50	63	85	99	100	--	--	VPWC	
FEB 26.....	1620	15	590	14300	22800	10	10	12	16	22	29	45	78	98	100	--	VPWC	
MAR 3.....	1800	--	390	3440	3620	2	3	4	5	6	14	26	53	96	100	--	VBWC	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
NOV 27, 1967	--	--	7	0	1	4	24	63	80	91	93	97	100	--	--	S	
APR 13, 1969	1200	23	2	56	2	9	62	91	98	100	--	--	--	--	--	S	

SANTA ANA RIVER BASIN

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11-0660.5. SANTA ANA RIVER AT COLTON, CALIF.

LOCATION.--Lat 34°03'45", long 117°18'30", T.1 S., R.4 W., San Bernardino County, 60 ft downstream from Southern Pacific Railroad bridge, 200 ft downstream from Warm Creek, and 1 mile southeast of Colton.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey. Water discharge computed by combining the discharge of Santa Ana River at E Street, near San Bernardino with that of Warm Creek near San Bernardino and Lytle Creek at Colton.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
17...	1245	16	27	9.3	35	25	115	13	314	0	77	110
NOV.												
18...	1200	16	25	8.6	24	33	90	14	322	0	94	67
DEC.												
19...	1230	15	17	9.2	47	17	108	13	317	0	86	100
JAN.												
16...	1400	20	22	8.7	41	24	102	16	279	0	85	106
FEB.												
20...	1300	194	19	9.3	47	13	66	14	196	0	53	88
MAR.												
21...	1145	570	13	9.9	44	8.0	26	5.0	153	0	28	25
APR.												
24...	1215	486	23	8.4	46	8.0	25	5.0	154	0	30	24
MAY												
21...	1200	538	20	8.9	48	8.0	17	4.0	165	0	28	15
JUNE												
19...	1315	278	29	7.1	45	8.0	35	6.0	145	0	39	28
JULY												
28...	1230	146	30	7.2	48	9.0	27	5.0	159	0	35	26
AUG.												
19...	1000	68	26	7.9	48	12	38	5.0	173	0	37	37
SEPT.												
18...	1400	44	11	6.7	45	16	70	8.0	179	0	54	64
DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
17...	1.0	22	560	584	.79	190	0	55	3.6	258	7.5	1030
NOV.												
18...	1.3	15	530	551	.75	196	0	48	2.8	264	7.6	969
DEC.												
19...	1.3	21	560	596	.81	187	0	54	3.4	260	7.3	1060
JAN.												
16...	1.1	18	500	583	.79	201	0	50	3.1	229	7.5	1060
FEB.												
20...	.8	22	--	440	.60	171	10	43	2.2	161	7.5	751
MAR.												
21...	.5	14	90	246	.33	143	17	28	.9	125	7.9	401
APR.												
24...	.6	16	90	240	.33	148	22	26	.9	126	7.9	405
MAY												
21...	.4	10	60	206	.28	153	18	19	.6	135	7.8	369
JUNE												
19...	.6	28	160	264	.36	145	26	33	1.3	119	7.1	452
JULY												
28...	1.1	22	30	264	.36	157	27	26	.9	130	7.2	440
AUG.												
19...	.6	18	130	250	.34	169	27	32	1.3	142	8.3	505
SEPT.												
18...	.8	39	280	381	.52	178	31	45	2.3	147	6.8	645

LOCATION.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, at gaging station at outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 miles west of Corona.

DRAINAGE AREA.--1,485 sq mi, not including 768 sq mi upstream from Lake Elsinore.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

11-0740. SANTA ANA RIVER BELOW PRADO DAM, CALIF.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

REMARKS.--Chemical analyses for this station are performed by California Department of Water Resources and Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	SULFATE (SO ₄) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	ALKALINITY AS CaCO ₃ (MG/L)	PH (UNITS)	SPECIFIC CONDUCTANCE (MICRO- MHOS)
OCT.												
17...	140	151	1.5	26	580	796	--	371	102	269	7.7	1250
NOV.												
01...	103	130	.8	20	370	664	647	333	103	230	7.6	1100
18...	144	142	.9	27	450	765	--	371	117	254	7.7	1230
DEC.												
19...	142	144	.9	30	420	797	--	394	129	265	7.3	1260
JAN.												
14...	78	77	.6	11	230	424	402	196	60	136	6.4	723
16...	147	144	.7	31	430	787	--	394	138	256	7.3	1260
19...	90	90	.6	13	250	496	497	242	76	166	6.8	819
23...	58	48	.7	7.7	120	312	308	152	29	123	6.5	534
29...	35	18	.6	8.3	330	--	200	112	14	98	6.5	340
FEB.												
10...	--	--	--	--	--	222	--	--	--	--	--	--
20...	68	52	.5	11	--	365	--	202	42	160	7.3	608
MAR.												
21...	55	29	.5	9.5	110	269	--	157	40	117	7.5	447
25...	57	32	.7	5.8	190	296	294	176	43	133	7.4	504
31...	--	--	--	--	--	326	--	--	--	--	--	--
APR.												
11...	--	--	--	--	--	398	--	--	--	--	--	--
18...	55	47	.6	.4	210	308	308	158	24	134	8.0	532
24...	70	58	.6	2.7	170	401	--	217	34	183	7.3	651
30...	--	--	--	--	--	546	--	--	--	--	--	--
MAY												
03...	--	--	--	--	--	436	--	--	--	--	--	--
21...	67	58	.6	14	120	364	--	216	46	170	7.2	639
22...	63	58	.6	17	220	384	385	200	43	157	7.8	649
JUNE												
07...	--	--	--	--	--	484	--	--	--	--	--	--
14...	--	--	--	--	--	552	--	--	--	--	--	818
19...	83	82	.7	14	230	473	--	269	59	210	7.5	822
24...	--	--	--	--	--	604	--	--	--	--	--	885
JULY												
03...	--	--	--	--	--	616	--	--	--	--	--	962
09...	--	--	--	--	--	636	--	--	--	--	--	996
18...	--	--	--	--	--	724	--	--	--	--	--	1150
24...	--	--	--	--	--	740	--	--	--	--	--	1170
28...	123	138	.7	7.5	370	730	--	388	74	314	8.0	1180
31...	--	--	--	--	--	784	--	--	--	--	--	1240
AUG.												
15...	--	--	--	--	--	856	--	--	--	--	--	1300
19...	148	157	.9	17	440	770	--	375	85	290	8.5	1300
22...	--	--	--	--	--	944	--	--	--	--	--	1300
29...	--	--	--	--	--	888	--	--	--	--	--	1350
SEPT.												
05...	--	--	--	--	--	860	--	--	--	--	--	1320
12...	--	--	--	--	--	888	--	--	--	--	--	1330
13...	168	168	1.0	21	490	938	--	408	119	289	7.6	1320
19...	--	--	--	--	--	860	--	--	--	--	--	1330

SANTA ANA RIVER BASIN

11-0780, SANTA ANA RIVER AT SANTA ANA, CALIF.

LOCATION.--Lat 33°44'56", long 117°54'30", in NW¹SW¹SE¹ sec.10, T.5 S., R.10 W., Orange County, at gaging station on Fifth Street Bridge in Santa Ana, and 1.8 miles downstream from Santiago Creek.

DRAINAGE AREA.--1,685 sq mi (not including 768 sq mi above Lake Elsinore.

PERIOD OF RECORD.--Water temperatures: October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 78,000 mg/l Feb. 25; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 2,670,000 tons Feb. 25; minimum daily, 0 tons on many days.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 78,000 mg/l Feb. 25, 1969; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 2,670,000 tons Feb. 25, 1969; minimum daily, 0 tons on many days.

REMARKS.--No flow Oct. 1-29, Oct. 31 to Nov. 14, Nov. 17 to Dec. 10, 12-15, 17-19, 21-24, Dec. 27 to Jan. 12, 15-17, June 1 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

SANTA ANA RIVER BASIN

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11-0780. SANTA ANA RIVER AT SANTA ANA, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	--	0	0	--	0	0	--	0
2	0	--	0	0	--	0	0	--	0
3	0	--	0	0	--	0	0	--	0
4	0	--	0	0	--	0	0	--	0
5	0	--	0	0	--	0	0	--	0
6	0	--	0	0	--	0	0	--	0
7	0	--	0	0	--	0	0	--	0
8	0	--	0	0	--	0	0	--	0
9	0	--	0	0	--	0	0	--	0
10	0	--	0	0	--	0	0	--	0
11	0	--	0	0	--	0	1.3	100	.35
12	0	--	0	0	--	0	0	--	0
13	0	--	0	0	--	0	0	--	0
14	0	--	0	0	--	0	0	--	0
15	0	--	0	6.6	1750	54	0	--	0
16	0	--	0	.10	100	.03	.20	100	.05
17	0	--	0	0	--	0	0	--	0
18	0	--	0	0	--	0	0	--	0
19	0	--	0	0	--	0	0	--	0
20	0	--	0	0	--	0	.50	100	.14
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	21	715	232
26	0	--	0	0	--	0	24	307	64
27	0	--	0	0	--	0	0	--	0
28	0	--	0	0	--	0	0	--	0
29	0	--	0	0	--	0	0	--	0
30	.40	--	0	0	--	0	0	--	0
31	0	--	0	--	--	--	0	--	0
TOTAL	.40	--	0	6.70	--	54.03	47.00	--	296.54

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	1930	8500	44300	8430	22000	501000
2	0	--	0	1980	8000	42800	7600	21000	431000
3	0	--	0	2140	8500	49100	7110	20000	384000
4	0	--	0	2390	8000	51600	6470	19000	332000
5	0	--	0	2630	8000	56800	6520	18000	317000
6	0	--	0	3480	9000	84600	6320	16000	273000
7	0	--	0	3350	8500	76900	6000	14000	227000
8	0	--	0	2960	8000	63900	3960	12000	128000
9	0	--	0	2580	7500	52200	1980	10000	53500
10	0	--	0	2520	7000	47600	1200	7000	22700
11	0	--	0	2250	6500	39500	985	6000	16000
12	0	--	0	800	3000	6480	950	4800	12300
13	6.5	113	22	1000	1900	5130	900	4400	10700
14	62	771	285	890	1900	4570	850	4100	9410
15	0	--	0	830	1800	4030	830	3800	8520
16	0	--	0	920	1800	4470	815	3600	7920
17	0	--	0	954	1700	4380	800	3400	7340
18	24	158	61	905	1600	3910	790	3200	6830
19	68	712	273	815	1500	3300	780	3000	6320
20	397	5680	6920	800	4610	9680	800	4400	9500
21	645	6330	12600	686	4540	8890	850	4100	9410
22	450	1250	1530	1230	12100	39000	840	3800	8620
23	877	4430	9430	3400	34200	684000	825	3600	8020
24	1870	16100	129000	6040	46600	843000	815	3400	7480
25	3470	18500	186000	11400	78000	2670000	800	3300	7130
26	5550	40300	623000	7640	53500	1140000	780	3200	6740
27	5030	12700	183000	8130	27000	593000	760	3100	6360
28	1220	4000	13200	8420	25000	568000	740	3000	5990
29	1210	2400	7840	--	--	--	720	3000	5830
30	1450	4020	16100	--	--	--	700	3000	5670
31	2340	11000	65500	--	--	--	680	3000	5510
TOTAL	24669.5	--	1254761	83070	--	7201140	72600	--	2840800

SANTA ANA RIVER BASIN

11-0780, SANTA ANA RIVER AT SANTA ANA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	733	3000	5940	25	5400	365			
2	706	2900	5530	25	4800	324			
3	751	3200	6490	25	4400	297			
4	796	3300	7090	35	4800	454			
5	802	3400	7360	50	6100	824			
6	795	3000	6440	160	24000	10400			
7	751	2900	5880	210	30000	17000			
8	733	2800	5540	210	18000	10200			
9	687	2800	5190	220	16000	9500			
10	642	2700	4680	180	15000	7290			
11	596	2600	4180	145	15000	5870			
12	551	2500	3720	125	14000	4730			
13	527	2400	3410	125	14000	4730			
14	471	2300	2920	155	20000	8370			
15	420	2200	2490	135	19000	6930			
16	366	2100	2080	135	18000	6560			
17	248	2000	1340	145	20000	7830			
18	185	1900	949	160	25000	10800			
19	180	1800	875	185	30000	15000			
20	175	1800	851	185	18000	8990			
21	195	10000	5270	165	15000	6680			
22	210	20000	11300	130	14000	4910			
23	210	16000	9070	116	14000	4380			
24	172	14000	6500	110	13000	3860			
25	94	12000	3050	75	13000	2630			
26	73	10000	1970	50	12000	1620			
27	58	8600	1350	50	12000	1620			
28	43	7800	906	50	11000	1490			
29	33	7000	624	36	10000	972			
30	25	6200	419	1.0	600	1.6			
31	--	--	--	1.0	500	1.4			
TOTAL	12228	--	123414	3419.0	--	164629.0	0	--	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									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
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14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
TOTAL	0	--	0	0	--	0	0	--	0

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

196040.60
11585094.57

SANTA ANA RIVER BASIN

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11-0780. SANTA ANA RIVER AT SANTA ANA, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE. WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPE; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 14, 1969	0850	13	140	9980	3770	33	44	57	71	79	86	90	96	99	100	--	SPWC	
JAN 19.....	1000	13	37	748	75	50	56	66	80	84	90	96	100	--	--	--	VPWC	
JAN 20.....	1605	--	372	6120	6150	35	38	50	60	72	81	91	100	--	--	--	VPWC	
JAN 23.....	1320	--	931	5830	14700	23	25	30	35	39	44	53	68	86	96	97	SPWC	
JAN 27.....	1415	--	5700	12000	185000	14	19	25	34	44	54	70	86	98	100	--	VPWC	
JAN 31.....	1500	--	2470	11300	75400	19	21	27	39	51	63	80	94	100	--	--	VPWC	
FEB 11.....	1130	15	2710	6690	49000	11	12	16	22	28	37	46	71	93	100	--	VPWC	
FEB 24.....	0600	12	5420	31400	460000	33	37	44	59	74	82	89	96	100	--	--	VPWC	
FEB 25.....	1240	--	17000	28700	1320000	26	31	39	52	65	74	86	96	100	--	--	VPWC	
FEB 27.....	1215	14	6720	28100	510000	29	32	47	64	74	80	86	93	99	100	--	VPWC	
MAY 6.....	1545	18	494	24400	32500	20	22	26	45	74	89	94	99	100	--	--	VPWC	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEMPERATURE (C)	NUMBER OF SAMPLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALYSIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
JAN 14, 1969	0835	13	2	120	--	3	19	66	90	96	98	99	100	--	--	S	
JUN 4.....	--	--	4	0	2	5	24	63	85	94	96	97	98	98	100	S	

SANTA ANA RIVER BASIN

MISCELLANEOUS ANALYSES OF STREAMS IN SANTA ANA RIVER BASIN

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
11-0593. SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CALIF. (LAT 34°04'05", LONG 117°17'36")												
DEC. 09...	1050	24	23	30	0	44	13	100	15	362	0	43
JAN. 14...	1105	512	13	6.9	10	57	8.5	37	7.7	187	0	42
21...	0945	3570	--	3.8	0	32	3.7	10	2.7	110	0	13
25...	1115	20700	13	7.5	0	52	7.1	5.9	4.7	188	0	10
26...	1445	2860	15	7.1	0	32	4.4	9.5	3.4	108	0	13

11-0665. SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF. (LAT 33°57'53", LONG 117°27'55")

DEC. 06...	1135	59	20	24	50	75	16	103	8.4	284	0	66
JAN. 14...	1240	291	15	3.0	70	29	3.6	14	4.6	112	0	14
21...	1240	6170	14	11	0	115	16	25	6.6	446	0	29
24...	1210	299	15	5.2	0	56	8.9	38	6.3	162	0	30
25...	1415	35000	13	8.6	0	76	11	16	5.4	254	0	29

11-0680. SANTA ANA RIVER AT AUBURNDALE BRIDGE, NEAR CORONA, CALIF. (LAT 33°55'25", LONG 117°35'50")

DEC. 09...	1410	42	14	21	40	92	20	109	8.2	304	0	91
JAN. 14...	1505	556	15	8.3	60	45	8.5	43	7.9	153	0	46
21...	1515	6670	14	7.6	0	66	11	35	6.0	116	0	38
22...	1500	3130	13	7.3	0	58	9.4	30	5.9	184	0	31
24...	1410	471	14	8.6	0	52	9.3	43	9.5	162	0	49

11-0722. TEMESCAL CREEK AT CORONA, CALIF. (LAT 33°53'46", LONG 117°34'50")

JAN. 14...	1300	3.0	15	4.6	10	37	7.9	27	6.9	74	0	50
21...	1350	107	16	5.2	30	38	8.5	19	9.2	102	0	50

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
11-0734.95. CUCAMONGA CREEK NEAR MIRA LOMA, CALIF. (LAT 33°58'58", LONG 117°35'55")												
JAN. 20...	46	16	4.1	140	19	2.6	29	7.3	78	0	9.0	37
22...	--	12	5.0	20	32	5.5	6.5	3.5	116	0	10	6.0

SANTA ANA RIVER BASIN

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MISCELLANEOUS ANALYSES OF STREAMS IN SANTA ANA RIVER BASIN--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
11-0593. SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CALIF. (LAT 34°04'05", LONG 117°17'36")												
DEC. 09...	66	8.0	2.7	650	470	500	164	0	54	297	7.4	989
JAN. 14...	42	.6	14	200	320	308	177	24	30	153	6.1	498
21...	7.6	.4	4.1	90	129	131	95	5	18	90	6.3	251
25...	2.8	.4	4.8	70	206	188	158	4	7	154	6.4	340
26...	6.4	.4	6.5	70	142	136	98	9	17	89	6.1	235
11-0665. SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF. (LAT 33°57'53", LONG 117°27'55")												
DEC. 06...	120	1.3	14	410	572	568	253	20	46	233	7.7	1030
JAN. 14...	12	.6	5.1	90	137	141	88	0	25	92	6.2	245
21...	18	.4	4.1	140	468	445	353	0	13	366	6.6	777
24...	47	.5	6.8	230	313	279	176	43	31	133	6.3	546
25...	10	.5	5.2	150	295	287	234	26	13	208	6.8	480
11-0680. SANTA ANA RIVER AT AUBURNDALE BRIDGE, NEAR CORONA, CALIF. (LAT 33°55'25", LONG 117°35'50")												
DEC. 09...	125	1.1	21	460	646	639	312	63	42	249	7.1	1100
JAN. 14...	48	.6	9.9	200	268	292	148	23	37	125	7.0	522
21...	31	.5	3.1	170	310	255	210	115	26	95	6.8	571
22...	25	.5	6.2	230	294	265	183	32	25	151	7.0	491
24...	51	.6	11	270	332	314	168	35	34	133	7.0	509
11-0722. TEMESCAL CREEK AT CORONA, CALIF. (LAT 33°53'46", LONG 117°34'50")												
JAN. 14...	29	.5	28	80	255	227	125	64	30	61	6.1	420
21...	22	.3	17	140	218	219	130	46	23	84	7.1	374
DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	
11-0734.95. CUCAMONGA CREEK NEAR MIRA LOMA, CALIF. (LAT 33°58'58", LONG 117°35'55")												
JAN. 20...	.5	.7	260	124	148	58	0	48	64	6.6	280	
22...	.2	5.7	80	130	132	102	7	12	95	7.0	236	

SAN GABRIEL RIVER BASIN

11-0828. SAN GABRIEL RIVER AT AZUSA POWERHOUSE, AT AZUSA, CALIF.

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 mile north of Azusa.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 18...	1115	46	19	8.5	42	14	10	4.0	187	0	22	4.0
NOV. 19...	1200	28	16	9.2	46	13	10	4.0	186	0	26	5.0
DEC. 20...	1115	28	12	9.3	45	14	10	4.0	191	0	24	5.0
JAN. 17...	1230	35	11	10.3	28	25	6.0	4.0	193	0	25	7.0
MAR. 24...	1245	262	13	10.9	36	9.0	8.0	3.0	143	0	19	5.0
APR. 25...	1200	261	16	9.9	40	11	7.0	3.0	151	7	19	4.0
MAY 22...	1300	--	17	9.7	40	12	8.0	3.0	175	0	18	4.0
JUNE 20...	1400	--	20	9.8	41	12	8.0	3.0	172	4	21	3.0
JULY 29...	1045	90	20	10.1	40	12	8.0	3.0	171	0	21	4.0
AUG. 20...	1100	90	21	9.3	36	11	11	3.0	144	8	24	5.0
SEPT. 19...	1200	69	23	9.0	46	13	12	4.0	192	0	27	5.0

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 18...	.4	.0	50	213	.29	162	9	11	.3	153	8.0	355
NOV. 19...	.4	.6	40	210	.29	168	15	11	.3	153	8.1	352
DEC. 20...	.4	1.1	40	213	.29	170	13	11	.3	157	7.9	366
JAN. 17...	.4	.0	70	197	.27	173	15	7	.2	158	7.9	377
MAR. 24...	.3	5.0	20	163	.22	127	10	12	.3	117	8.2	284
APR. 25...	.3	2.8	20	162	.22	145	9	9	.3	135	8.4	301
MAY 22...	.3	2.3	10	165	.22	149	5	10	.3	144	8.2	307
JUNE 20...	.3	2.3	0	166	.23	152	4	10	.3	148	8.4	320
JULY 29...	.5	1.6	20	165	.22	149	9	10	.3	140	8.2	314
AUG. 20...	.4	1.7	20	156	.21	135	4	15	.4	131	8.5	315
SEPT. 19...	.4	2.2	20	201	.27	168	10	13	.4	157	8.2	356

11-0870.4. SAN GABRIEL RIVER AT WHITTIER NARROWS, CALIF.

LOCATION.--Lat 34°01'25", long 118°03'11", in sec.5, T.2 S., R.11 W., Los Angeles County, 200 ft from end of San Gabriel Boulevard (Siphon Road), upstream from Whittier Narrows Dam, and 2.5 miles northeast of Montebello.
 PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.
 REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
OCT. 18...	0955	67	17	10.5	80	30	102	7.0	168	0	94	.5
NOV. 19...	1030	15	15	8.5	69	29	98	11	212	0	102	.7
DEC. 20...	1030	52	8	11.3	74	28	99	11	217	0	113	1.4
JAN. 17...	1145	34	14	8.3	87	26	86	12	229	0	108	.8
FEB. 21...	1130	68	11	11.4	42	14	16	5.0	145	0	22	.3
MAR. 24...	1150	218	16	10.2	56	17	28	4.0	181	0	25	.4
APR. 25...	1045	43	21	9.2	102	31	96	8.0	248	0	103	.7
MAY 22...	1200	129	20	9.9	60	18	35	5.0	203	0	36	.5
JUNE 20...	1300	65	23	--	91	30	85	8.0	258	0	93	.6
JULY 29...	0945	55	24	--	89	27	94	8.0	234	0	102	.8
AUG. 20...	1015	32	25	--	88	25	99	9.0	224	7	104	.6
SEPT. 19...	1115	71	20	9.7	78	26	74	9.0	251	0	76	.7

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CAC03 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 18...	16	190	695	.95	323	185	40	2.5	138	7.5	1070
NOV. 19...	66	450	657	.89	292	118	41	2.5	174	7.8	1060
DEC. 20...	57	530	669	.91	300	122	41	2.5	178	7.2	1110
JAN. 17...	48	560	661	.90	324	136	36	2.1	188	7.2	1110
FEB. 21...	10	--	230	.31	162	43	17	.5	119	8.0	392
MAR. 24...	18	80	301	.41	210	62	22	.8	148	8.1	537
APR. 25...	31	360	698	.95	382	179	35	2.1	203	8.3	1070
MAY 22...	14	110	311	.42	224	57	25	1.0	167	7.5	566
JUNE 20...	28	340	634	.86	351	139	28	1.7	212	7.9	1010
JULY 29...	16	320	639	.87	333	141	47	2.7	192	7.8	1020
AUG. 20...	16	310	610	.83	323	128	39	2.4	195	8.4	1030
SEPT. 19...	23	290	538	.73	302	96	34	1.9	206	7.3	871

LOS ANGELES RIVER BASIN

11-0975. LOS ANGELES RIVER AT LOS ANGELES, CALIF.

LOCATION.--Lat 34°04'52", long 118°13'36", Los Angeles County, at gaging station near Figueroa Street, Los Angeles, and 800 ft upstream from Arroyo Seco.

DRAINAGE AREA.--514 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
OCT.											
02...	11	16	82	32	166	--	196	0	303	135	--
NOV.											
06...	7.4	14	80	28	166	--	176	0	285	128	--
DEC.											
04...	7.8	11	76	35	214	--	159	0	356	168	--
JAN.											
02...	6.9	10	80	37	178	--	179	0	317	133	--
APR.											
02...	56	18	108	38	104	--	140	48	320	86	--
MAY											
07...	27	20	64	28	111	--	73	86	212	33	--
22...	42	18	79	37	100	7.0	219	0	241	87	.7
JUNE											
04...	47	18	96	42	120	--	185	0	298	104	--
JULY											
02...	50	25	76	35	58	--	145	28	195	76	--
SEPT.											
03...	--	23	85	35	132	--	173	4	288	116	--
19...	20	19	82	27	120	9.0	141	0	271	103	1.2

DATE	NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.										
02...	21	920	1.25	52	336	175	3.9	161	8.0	--
NOV.										
06...	19	875	1.19	53	315	171	4.1	144	7.9	--
DEC.										
04...	32	1040	1.41	58	334	204	5.1	130	7.8	--
JAN.										
02...	23	935	1.27	52	352	205	4.1	147	7.9	--
APR.										
02...	24	805	1.09	35	426	231	2.2	194	9.2	--
MAY										
07...	18	685	.93	47	275	72	2.9	201	10.1	--
22...	18	701	.95	38	349	169	2.3	180	7.5	1060
JUNE										
04...	22	890	1.21	39	412	260	2.6	152	8.2	--
JULY										
02...	15	610	.83	27	334	168	1.4	165	9.0	--
SEPT.										
03...	11	915	1.24	45	356	207	3.0	148	8.6	--
19...	50	760	1.03	44	316	200	2.9	116	6.8	1150

11-1020. MISSION CREEK NEAR MONTEBELLO, CALIF.

LOCATION.--Lat 34°01'45", long 118°04'07", in La Merced Grant, Los Angeles County, at gaging station on San Gabriel Boulevard Bridge, 2 miles northeast of Montebello.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1969.

REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey. Sampled prior to 1969 water year at station 11-1022.5., Mission Creek below Whittier Narrows Dam.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
NOV. 19...	2.9	16	7.6	111	24	22	3.0	260	0	163	26	.5
DEC. 20...	2.4	13	8.3	108	27	22	3.0	257	0	160	26	.5
JAN. 17...	5.0	15	8.0	112	23	19	7.0	251	0	161	32	.5
FEB. 21...	13	14	6.6	99	26	20	4.0	231	0	152	30	.4
MAR. 24...	10	18	8.1	110	25	22	4.0	256	0	164	28	.4
APR. 25...	9.8	19	7.7	115	27	23	3.0	262	0	171	30	.5
MAY 22...	8.4	20	8.5	97	32	24	3.0	236	0	172	31	.5
JUNE 20...	8.4	20	8.4	104	28	23	3.0	245	0	166	31	.5
JULY 29...	6.1	21	6.9	99	28	23	3.0	236	0	164	31	.6
AUG. 20...	5.5	21	7.4	101	24	24	3.0	274	8	162	31	.5
SEPT. 19...	5.5	20	7.4	104	28	24	3.0	243	0	170	30	.6

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RFSI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 19...	8.2	90	529	.72	376	163	11	.5	213	7.7	779
DEC. 20...	8.7	90	540	.73	381	162	11	.5	219	7.7	793
JAN. 17...	10	130	493	.67	374	168	9	.4	206	7.7	795
FEB. 21...	14	--	481	.65	354	165	11	.5	189	7.5	729
MAR. 24...	13	100	505	.69	377	167	11	.5	210	7.7	780
APR. 25...	12	90	526	.72	398	183	11	.5	215	7.8	785
MAY 22...	12	60	493	.67	374	180	12	.5	194	7.5	755
JUNE 20...	12	60	483	.66	375	174	12	.5	201	7.7	759
JULY 29...	9.5	90	487	.66	362	168	12	.5	194	7.8	727
AUG. 20...	9.6	90	437	.59	351	154	13	.6	197	8.5	753
SEPT. 19...	8.8	90	475	.65	375	176	12	.5	199	7.7	753

SANTA CLARA RIVER BASIN

11-1085, SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CALIF.

LOCATION.--Lat 34°23'59", long 118°42'14", in San Francisco Grant, Ventura County, at gaging station on old diversion weir, 0.8 mile west of Los Angeles-Ventura County Line.

DRAINAGE AREA.--644 sq mi.

PERIOD OF RECORD.--Chemical analyses: January to September 1969.

Water temperatures: October 1968 to September 1969.

Sediment records: October 1968 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, not determined; minimum daily, 20 mg/l Jan. 6-12.

Sediment loads: Maximum daily, 3,300,000 tons (estimated) Feb. 25; minimum daily, 0.05 ton Jan. 7.

REMARKS.--Where no maximum or minimum is shown, temperature is once-daily reading.

CHEMICAL ANALYSES, JANUARY TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLU- RIDE (CL) (MG/L)
JAN.												
14...	6.5	14	13	30	178	93	257	7.5	356	0	795	132
20...	301	11	5.5	0	114	26	54	7.4	142	0	312	23
21...	2500	14	5.2	0	93	21	34	3.9	108	0	146	16
24...	665	12	10	0	112	39	82	28	178	0	297	34
25...	13500	13	8.1	0	113	34	41	5.2	138	0	311	14

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	ALKA- LINITY AS CaCO ₃ (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
JAN.											
14...	.7	5.3	990	2340	1660	826	534	40	292	7.1	1640
20...	.6	4.5	240	740	617	392	276	23	116	7.0	850
21...	.4	4.0	390	606	377	318	229	19	89	6.8	964
24...	.7	10	250	768	701	440	294	27	146	6.9	1110
25...	.5	5.1	220	--	600	422	309	17	113	6.8	637

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), JUNE TO SEPTEMBER 1969

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	1950	1900	1920	2340	2160	2240	2560	2390	2480
2	---	---	---	2050	1940	1990	2460	2210	2290	2430	2260	2350
3	---	---	---	2040	1960	2010	2770	2450	2590	2450	2290	2360
4	---	---	---	2090	1990	2040	2880	2500	2670	2410	2190	2290
5	---	---	---	2130	2060	2100	2570	2190	2400	2460	2150	2320
6	---	---	---	2220	2130	2160	2650	2330	2480	2220	2120	2160
7	---	---	---	2320	2230	2270	2650	2120	2440	2230	2100	2150
8	---	---	---	---	---	---	2550	2230	2370	2350	2110	2230
9	---	---	---	---	---	---	2690	2460	2540	2340	2040	2190
10	---	---	---	---	---	---	2880	2450	2580	2230	1940	2050
11	---	---	---	---	---	---	2680	2510	2580	2060	1960	2000
12	---	---	---	---	---	---	2600	2370	2470	2170	1940	2020
13	---	---	---	---	---	---	2410	2200	2280	2260	1830	2120
14	---	---	---	---	---	---	2340	2150	2210	2240	1750	2060
15	---	---	---	---	---	---	2510	2240	2350	2190	1950	2050
16	---	---	---	2250	2060	2100	2650	2450	2550	2000	1890	1940
17	---	---	---	2270	2100	2150	2610	2280	2430	1980	1880	1930
18	---	---	---	2300	2150	2190	2300	2210	2250	2030	1870	1950
19	---	---	---	2350	2200	2250	2280	2130	2220	2020	1910	1960
20	2000	1910	1960	2420	2220	2320	2260	2090	2190	1950	1890	1910
21	1960	1850	1920	2360	2180	2270	2300	2040	2190	2070	1940	2010
22	1920	1840	1900	2490	2340	2420	2170	2040	2110	2070	1890	1980
23	1900	1830	1880	2540	2340	2450	2220	2050	2130	2070	1930	2000
24	1880	1820	1850	2550	2430	2500	2170	2050	2110	2110	1980	2030
25	1850	1770	1810	2570	2240	2410	2150	2070	2110	2280	2060	2160
26	1810	1720	1800	2560	2320	2420	2650	2150	2300	2140	2060	2090
27	1860	1720	1800	2610	2460	2530	3200	2450	2700	---	---	---
28	1870	1740	1790	2580	2280	2390	2800	2370	2580	---	---	---
29	1890	1780	1840	2560	2220	2350	2520	2230	2360	---	---	---
30	1920	1840	1870	2590	2420	2520	2360	2200	2260	---	---	---
31	---	---	---	2620	2300	2480	2510	2210	2280	---	---	---
MONTHLY SUMMARY	---	---	---	---	---	---	3200	2040	2363	2560	1750	2107

SANTA CLARA RIVER BASIN

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11-1085, SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CALIF.--Continued

PH (UNITS), JUNE TO SEPTEMBER 1969

DAY	JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	7.9	7.3	7.6	7.4	7.5	7.3
2	---	---	7.8	7.3	7.6	7.4	7.5	7.3
3	---	---	7.8	7.4	7.5	7.4	7.5	7.4
4	---	---	7.9	7.5	7.5	7.4	7.8	7.4
5	---	---	7.9	7.6	7.6	7.4	7.9	7.7
6	---	---	7.8	7.7	7.8	7.5	7.8	7.7
7	---	---	7.8	7.7	7.8	7.6	7.8	7.6
8	---	---	---	---	7.8	7.6	7.8	7.6
9	---	---	---	---	7.7	7.5	7.7	7.6
10	---	---	---	---	7.7	7.5	7.7	7.5
11	---	---	---	---	7.7	7.5	7.8	7.6
12	---	---	---	---	7.7	7.6	8.0	7.7
13	---	---	---	---	7.8	7.6	7.8	7.6
14	---	---	---	---	7.8	7.7	7.8	7.7
15	---	---	---	---	7.8	7.7	7.8	7.7
16	---	---	7.7	7.5	7.8	7.7	7.8	7.7
17	---	---	7.8	7.5	7.8	7.7	7.7	7.6
18	---	---	7.7	7.5	7.9	7.7	7.8	7.7
19	---	---	7.6	7.5	7.9	7.7	7.8	7.7
20	7.5	7.4	7.6	7.4	7.8	7.5	7.9	7.8
21	7.6	7.5	7.6	7.3	7.7	7.6	7.9	7.7
22	7.6	7.5	7.5	7.3	7.8	7.6	7.9	7.7
23	7.8	7.5	7.5	7.3	7.8	7.6	7.9	7.7
24	7.8	7.5	7.6	7.4	7.7	7.6	7.8	7.6
25	--	--	7.7	7.5	7.8	7.6	7.8	7.6
26	8.0	7.5	7.7	7.5	7.7	7.5	7.8	7.7
27	8.0	7.6	7.6	7.4	7.5	7.3	---	---
28	8.0	7.6	7.6	7.4	7.5	7.3	---	---
29	8.0	7.5	7.6	7.3	7.5	7.4	---	---
30	8.0	7.5	7.5	7.3	7.5	7.4	---	---
31	---	---	7.6	7.4	7.6	7.4	---	---
MONTH	---	---	---	---	7.9	7.3	8.0	7.3

CHLORIDE (CL), IN MILLIGRAMS PER LITER, JUNE TO SEPTEMBER 1969

DAY	JUN	JUL	AUG	SEP
1	---	83	89	88
2	---	84	89	82
3	---	77	95	81
4	---	78	94	85
5	---	81	82	90
6	---	84	86	86
7	---	89	87	82
8	---	---	83	82
9	---	---	86	80
10	---	---	87	76
11	---	---	84	76
12	---	---	78	79
13	---	---	74	79
14	---	---	73	77
15	---	---	76	76
16	---	84	81	71
17	---	90	82	71
18	---	89	83	74
19	---	87	86	75
20	93	88	84	79
21	95	84	95	81
22	75	88	95	80
23	80	90	91	79
24	69	95	87	80
25	82	93	86	84
26	89	92	89	85
27	95	93	105	---
28	84	87	96	---
29	79	83	91	---
30	83	95	88	---
31	---	97	87	---
MONTHLY SUMMARY	---	---	87	---

11-1085. SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	2.6	50	.35	209	2500	1410	1600	8800	38000
2	3.7	40	.40	173	2400	1120	1300	8400	29500
3	3.7	30	.30	149	1150	463	1100	8000	23800
4	3.7	30	.30	125	1100	371	1000	7500	20300
5	2.7	22	.16	185	2200	1100	900	7000	17000
6	3.0	20	.16	1450	8210	42200	800	6500	14000
7	.90	20	.05	629	5400	9170	750	6000	12200
8	1.5	20	.08	374	4600	4650	700	5800	11000
9	3.0	20	.16	337	3800	3460	640	5600	9680
10	3.7	20	.20	283	2500	1910	580	5400	8460
11	3.0	20	.16	233	1690	1060	540	5200	7580
12	3.0	20	.16	233	1700	1070	500	5000	6750
13	13	113	9.5	210	1750	992	420	4950	5610
14	14	222	14	149	1800	724	350	4920	4650
15	1.2	50	.16	221	2950	3310	330	4700	4190
16	1.5	40	.16	336	5000	4540	310	4400	3680
17	.90	30	.07	209	3700	2090	290	4200	3290
18	2.7	93	1.2	453	4500	5500	270	4000	2920
19	56	400	60	431	3800	4420	260	3700	2600
20	365	5900	5780	364	3200	3140	250	3510	2370
21	3670	15000	210000	301	3100	2520	230	3400	2110
22	487	4920	6970	783	4480	10700	210	3300	1870
23	215	1080	627	4000	--	160000	190	3200	1640
24	558	5410	8460	15000	--	1300000	170	3000	1380
25	27400	34800	3220000	28800	--	3300000	165	2900	1290
26	3170	15000	128000	5500	20000	297000	165	2800	1250
27	500	5600	7560	2700	12000	87500	165	2700	1200
28	300	3500	2840	2000	10000	54000	165	2580	1150
29	275	3100	2300	--	--	--	165	2550	1140
30	250	2800	1890	--	--	--	165	2500	1110
31	225	2600	1580	--	--	--	165	2500	1110
TOTAL	37538.80	--	3596094.57	65837	--	5304420	14845	--	242830

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	165	2450	1090	88	1750	416	51	1560	215
2	166	2400	1080	89	1750	421	51	1550	213
3	168	2400	1090	90	1750	425	52	1540	216
4	170	2370	1090	93	1750	439	53	1530	219
5	165	2300	1020	96	1800	467	55	1510	224
6	160	2300	994	98	1700	450	56	1500	227
7	158	2200	939	98	1600	423	57	1490	229
8	157	2200	933	97	1600	419	59	1480	236
9	150	2100	851	96	1500	389	60	1470	238
10	135	2100	765	94	1400	355	62	1450	243
11	127	2010	689	93	1300	326	63	1440	245
12	123	2000	664	90	1200	292	62	1430	239
13	120	1900	616	84	1150	261	60	1420	230
14	118	1900	605	80	1140	246	56	1410	213
15	116	1900	595	76	1140	234	52	1400	197
16	115	1800	559	72	1130	220	48	1390	180
17	114	1780	548	68	1130	207	44	1380	164
18	113	1750	534	65	1120	197	40	1370	148
19	112	1730	523	60	1120	181	36	1360	132
20	111	1710	512	55	1100	163	33	1350	120
21	111	1700	509	52	1250	176	31	1340	112
22	109	2000	589	51	1240	171	30	1330	108
23	104	2500	702	50	1240	167	28	1320	100
24	102	2930	807	50	1230	166	27	1310	95
25	98	2800	741	50	1230	166	26	1300	91
26	94	2600	660	49	1220	161	26	1300	91
27	91	2400	590	49	1220	161	27	1300	95
28	85	2300	528	48	1200	156	28	1300	98
29	86	2100	488	48	1600	207	33	1350	113
30	85	1900	436	50	1580	213	33	1400	125
31	--	--	--	51	1570	216	--	--	--
TOTAL	3728	--	21747	2230	--	8491	1337	--	5156

SANTA CLARA RIVER BASIN

11-1085, SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	35	1500	142	22	1400	83	14	900	34
2	38	1520	156	22	1400	83	14	1000	38
3	37	1500	150	22	1350	80	14	1100	42
4	37	1400	140	22	1300	77	14	1220	46
5	36	1350	131	22	1250	74	14	1200	45
6	35	1300	123	21	1230	70	14	1200	45
7	34	1250	115	21	1220	69	14	1200	45
8	32	1200	104	21	1200	68	15	1050	43
9	31	1150	96	20	1200	65	15	900	36
10	30	1100	89	20	1180	64	15	750	30
11	29	1050	82	20	1160	63	15	583	24
12	28	1000	76	19	1150	59	15	600	24
13	27	950	69	19	1130	58	15	600	24
14	26	850	60	18	1120	54	16	1000	43
15	25	818	55	18	1100	53	16	1000	43
16	24	800	52	18	1080	52	16	1000	43
17	23	800	50	17	1060	49	17	1100	50
18	22	800	48	17	1050	48	17	1150	53
19	21	800	45	17	1040	48	17	1000	46
20	21	800	45	16	1020	44	18	1000	49
21	20	900	49	16	1010	44	18	1000	49
22	20	1000	54	16	1000	43	18	1000	49
23	20	1100	57	15	980	40	19	1000	51
24	20	1270	69	15	960	39	19	900	46
25	20	1270	69	15	940	38	20	900	49
26	20	1270	69	14	930	35	20	800	43
27	20	1270	69	14	919	35	20	800	43
28	21	1300	74	14	850	32	21	700	40
29	21	1400	79	14	766	29	21	600	34
30	22	1500	89	14	800	30	22	537	32
31	22	1450	86	14	800	30	--	--	--
TOTAL	817	--	2594	553	--	1656	503	--	1239
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									127677.95
TOTAL LOAD FOR YEAR (TONS)									9184350.10

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMPERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALYSIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
NOV 5, 1968	1420	22	1.9	94	.48	35	49	66	73	77	83	90	98	100	--	--	SBWC
JAN 19, 1969	1220	14	10	309	8.3	41	57	66	69	71	79	81	94	100	--	--	VBWC
JAN 20.....	0100	11	466	22300	28100	33	46	60	76	84	90	93	97	99	100	--	SPWC
MAR 12.....	1045	11	504	5050	6870	19	28	33	43	53	65	89	100	--	--	--	VPWC
AUG 27.....	0830	21	14	857	32	18	24	31	40	53	74	86	100	--	--	--	VBWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEMPERATURE (C)	NUMBER OF SAMPLES	DISCHARGE (CFS)		PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALYSIS
						.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
OCT 21, 1968	--	--	9	D	.80	5	8	24	55	75	85	89	91	94	98	100	S
NOV 5.....	1400	22	3		1.9	--	--	7	42	80	97	100	--	--	--	--	S
FEB 10, 1969	--	--	2	D	283	5	12	27	47	64	75	80	85	93	99	100	S
AUG 27.....	0830	21	3		14	1	3	26	49	74	93	98	100	--	--	--	S

D DAILY MEAN DISCHARGE.

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LOCATION.--Lat 34°34'40", long 119°15'25", in SE¹NW¹SW¹ sec.30, T.6 N., R.22 W., Ventura County, temperature recorder at gaging station at Sespe Gorge, 1.6 miles upstream from Tule Creek, 5 miles upstream from Cold Springs damsite, and 5 miles northeast of Wheeler Springs.

PERIOD OF RECORD.--Water temperatures: February 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C Sept. 2; minimum, 3°C Dec. 21, 22.

EXTREMES, 1962-69, --Water temperatures: Maximum, 29°C Sept. 2; minimum, 3°C Dec. 21, 22.
EXTREMES, 1962-69, --Water temperatures: Maximum, 29°C Aug. 11, 1964; minimum (1962-64, 1965-66, 1967-69),
2°C Mar. 16, 1963, Jan. 7, 13-15, 1968.

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	19	18	18	18	18	18	17	14	16	17	14	13	14	14	14	14	14	14	14	14	15	14	14	14	14	14	14	13	13	14	11	15	
	MINIMUM	14	14	14	13	13	13	12	12	12	15	12	10	12	12	9	10	11	11	11	11	11	11	10	10	10	11	10	10	10	10	11	9	11
NOVEMBER	MAXIMUM	11	11	12	11	11	10	11	11	12	13	12	11	9	8	9	10	10	10	10	10	10	9	11	10	9	7	7	7	7	8	---	10	
	MINIMUM	9	9	10	9	9	8	9	9	10	11	10	9	8	6	8	8	8	8	8	9	8	8	8	5	8	6	6	6	6	7	---	8	
DECEMBER	MAXIMUM	8	7	7	7	7	7	7	7	7	7	8	6	6	7	9	9	7	7	6	6	4	4	4	6	6	8	8	6	7	7	7	7	
	MINIMUM	7	6	6	6	6	6	6	6	6	6	6	5	4	6	7	7	6	5	6	4	3	3	4	5	6	6	6	5	6	6	5	6	
JANUARY	MAXIMUM	7	7	7	9	9	8	8	8	8	8	9	8	8	11	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
	MINIMUM	6	6	6	6	6	6	8	8	7	7	6	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
FEBRUARY	MAXIMUM	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8	8	8	8	8	8	8	8	8	8	6	8	9	10	8	---	---	---	
	MINIMUM	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8	8	7	8	8	8	8	8	7	5	5	6	7	7	6	---	---	---	
MARCH	MAXIMUM	10	10	9	9	10	9	9	9	8	8	9	9	9	10	11	12	12	12	12	12	12	9	11	12	11	12	12	13	14	14	15	11	
	MINIMUM	7	6	7	6	6	6	5	5	8	7	6	6	6	6	6	7	7	8	7	7	8	7	7	7	7	7	8	8	9	10	11	7	
APRIL	MAXIMUM	14	11	13	11	9	10	12	13	11	13	14	15	14	13	16	12	13	13	13	13	16	16	16	11	12	14	15	14	15	17	17	---	13
	MINIMUM	10	9	8	8	8	7	7	8	8	9	8	10	9	8	8	8	8	10	9	10	9	9	9	9	8	7	9	9	10	11	11	---	9
MAY	MAXIMUM	15	14	13	11	12	12	13	17	17	19	18	18	18	19	19	20	19	21	21	21	21	21	21	22	22	21	21	21	22	22	22	18	
	MINIMUM	10	10	10	8	9	11	11	11	13	14	14	12	11	12	11	11	10	10	12	11	11	12	12	13	13	13	13	13	13	13	14	14	12
JUNE	MAXIMUM	22	22	22	22	21	22	21	19	14	16	17	21	21	22	20	21	19	21	21	22	22	22	22	21	21	21	21	21	21	21	21	21	
	MINIMUM	14	13	14	14	11	13	1																										

SANTA CLARA RIVER BASIN

11-1130. SESPE CREEK NEAR FILLMORE, CALIF.

LOCATION.--Lat 34°27'03", long 118°55'30", in NE¼NW¼NE¼ sec.12, T.4 N., R.20 W., Ventura County, at gaging station on right bank, 0.1 mile downstream from Little Sespe Creek, and 3.5 miles north of Fillmore.

DRAINAGE AREA.--251 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

Water temperatures: October 1966 to September 1969.

Sediment records: October 1966 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 31,800 mg/l Jan. 25; minimum daily, 1 mg/l (estimated) on many days.

Sediment loads: Maximum daily, 2,950,000 tons Jan. 25; minimum daily, 0 tons on many days.

EXTREMES, 1966-69.--Sediment concentrations: Maximum daily, 31,800 mg/l Jan. 25, 1969; minimum daily, 1 mg/l on many days each year.

Sediment loads: Maximum daily, 2,950,000 tons Jan. 25, 1969; minimum daily, 0 tons on many days in 1968 and 1969.

REMARKS.--Chemical-quality records partially furnished by California Department of Water Resources and reviewed by Geological Survey. Where no maximum or minimum is shown, temperature is once-daily reading.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SiO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT.												
15...	1335	1.0	20	11.0	--	--	79	24	94	3.0	174	0
DEC.												
17...	1300	6.1	--	--	--	--	105	21	118	--	200	0
JAN.												
14...	--	69	11	--	6.3	50	80	17	47	2.4	120	0
14...	1620	50	12	10.1	--	--	100	24	65	3.0	137	0
20...	1030	1910	--	--	--	--	43	9.0	10	--	81	0
21...	1115	15800	--	--	--	--	33	3.0	5.0	--	72	0
22...	--	2960	13	--	12	0	151	27	27	4.3	174	0
24...	--	3300	13	--	11	0	149	26	23	3.8	201	0
26...	--	21400	13	--	9.4	0	55	7.7	7.0	2.5	126	0
27...	1130	14600	--	--	--	--	53	14	8.0	--	115	0
FEB.												
28...	1530	3580	--	--	--	--	76	16	20	--	137	0
MAR.												
11...	0915	790	--	--	--	--	114	30	32	--	214	0
APR.												
22...	1445	192	16	9.7	--	--	106	30	39	2.0	178	0
JUNE												
05...	1545	68	--	--	--	--	84	36	47	--	159	0
JULY												
25...	1715	28	--	7.8	--	--	91	28	58	3.0	148	0

DATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	ALKA- LILITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
15...	196	110	1.3	.0	2300	637	--	296	153	143	8.3	990
DEC.												
17...	256	127	1.4	--	3100	827	--	349	185	164	8.0	1190
JAN.												
14...	176	35	.8	3.1	830	460	427	270	172	98	6.7	685
14...	288	49	1.2	2.0	950	665	--	348	236	112	7.9	913
20...	86	10	.2	--	240	239	--	144	78	66	7.6	375
21...	49	5.0	.2	--	160	167	--	95	36	59	7.4	251
22...	365	11	.7	9.0	130	888	693	488	345	143	6.9	727
24...	292	7.0	.7	5.6	90	672	617	479	314	165	6.7	832
26...	53	2.3	.4	1.9	90	217	201	168	65	103	6.7	289
27...	109	8.0	.4	--	150	307	--	190	--	94	7.7	474
FEB.												
28...	163	9.0	.5	--	110	421	--	256	144	112	8.1	609
MAR.												
11...	283	9.0	.6	--	200	682	--	408	232	176	8.0	889
APR.												
22...	285	13	.0	.0	370	604	--	388	242	146	8.3	835
JUNE												
05...	279	24	.9	--	520	629	--	358	228	130	8.1	888
JULY												
25...	292	32	1.3	.6	950	584	--	342	221	121	8.1	844

SANTA CLARA RIVER BASIN

11-1130. SESPE CREEK NEAR FILLMORE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.10			.10			.30	--	0
2	.10			.10			.30	--	0
3	.10			.10			.20	--	0
4	.10			.10			.20	--	0
5	.10			.10			.20	--	0
6	.10			.10			.20	--	0
7	.10			.10			.20	--	0
8	.10			.10			.20	--	0
9	.10			.10			.20	--	0
10	.10			.10			.20	--	0
11	.10			.10			.20	--	0
12	.10			.10			.20	--	0
13	.10			.10			.20	--	0
14	.80			.10			.60	11	.02
15	1.2			.80			9.2	47	1.2
16	.70			1.0			8.2	30	.66
17	.80			1.0			6.1	17	.28
18	.50			1.0			4.3	10	.12
19	.10			1.0			2.7	6	.04
20	.30			1.0			3.5	4	.04
21	.70			1.0			4.2	4	.05
22	.40			1.0			4.2	4	.05
23	.10			1.0			4.8	4	.05
24	.10			.80			5.0	4	.05
25	.10			.40			28	127	13
26	.10			.40			19	85	4.7
27	.10			.30			12	55	1.8
28	.10			.30			14	49	1.9
29	.10			.30			12	20	.65
30	.10			.30			9.8	10	.26
31	.10			--			8.6	5	.12
TOTAL	7.70	--	0	13.00	--	0	159.00	--	24.99

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8	4	.09	2430	258	1720	2240	817	4940
2	7	4	.08	1530	185	778	1760	555	2640
3	6	4	.06	948	150	384	1510	403	1640
4	6	4	.06	748	110	222	1350	323	1180
5	6	4	.06	873	170	401	1190	260	835
6	5	4	.05	6630	12600	296000	1110	180	539
7	5	4	.05	1760	3800	18100	1030	180	501
8	6	4	.06	1190	1700	5460	948	180	461
9	6	4	.06	988	500	1330	884	200	477
10	6	4	.06	956	300	774	852	180	414
11	6	4	.06	980	190	503	780	160	337
12	6	4	.06	948	110	282	716	140	271
13	12	52	3.6	716	80	155	665	125	224
14	149	409	239	630	50	85	600	110	178
15	22	48	2.9	832	1100	3210	558	100	151
16	17	30	1.4	996	450	1210	528	99	141
17	10	29	.77	844	190	433	516	98	137
18	14	74	5.7	836	180	406	522	97	137
19	3890	6490	144000	820	150	332	486	96	126
20	4080	7230	113000	812	100	219	468	95	120
21	17200	16200	971000	863	130	303	528	95	135
22	3010	1970	18500	1150	350	1090	516	90	125
23	1390	583	2200	5400	10400	209000	486	84	110
24	3410	2600	32700	19700	15800	1230000	468	78	99
25	29100	31800	2950000	22600	25800	1970000	434	72	84
26	20500	19800	1190000	8460	5430	141000	406	66	72
27	5920	5520	90700	3110	1880	16200	406	60	66
28	5210	2650	37300	2720	1480	11300	406	54	59
29	4550	1210	14700	--	--	--	400	48	52
30	3410	729	6870	--	--	--	400	42	45
31	2740	521	3930	--	--	--	400	34	37
TOTAL	104707	--	5575154.12	90470	--	3910897	23563	--	16333

SANTA CLARA RIVER BASIN

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11-1130. SESPE CREEK NEAR FILLMORE, CALIF.--Continued
SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	365	30	30	150	13	5.3	69	9	1.7
2	346	500	467	148	12	4.8	69	9	1.7
3	390	420	442	145	12	4.7	68	8	1.5
4	309	130	108	158	11	4.7	68	8	1.5
5	364	638	627	142	11	4.2	68	8	1.5
6	395	800	853	136	11	4.0	68	7	1.3
7	318	420	361	133	10	3.6	69	7	1.3
8	304	230	189	129	10	3.5	71	7	1.3
9	304	120	98	127	10	3.4	73	6	1.2
10	314	60	51	125	10	3.4	74	6	1.2
11	318	50	43	122	10	3.3	74	6	1.2
12	322	40	35	120	11	3.6	74	5	1.0
13	296	30	24	118	11	3.5	73	5	.99
14	259	28	20	116	11	3.4	71	5	.96
15	216	26	15	114	12	3.7	68	5	.92
16	210	24	14	112	12	3.6	66	5	.89
17	204	22	12	108	13	3.8	65	5	.88
18	204	20	11	106	13	3.7	63	5	.85
19	198	20	11	104	13	3.7	62	5	.84
20	195	18	9.5	102	13	3.6	59	5	.80
21	192	18	9.3	100	13	3.5	59	5	.80
22	192	17	8.8	98	12	3.2	58	5	.78
23	189	17	8.7	96	12	3.1	56	5	.76
24	180	16	7.8	92	12	3.0	55	5	.74
25	174	16	7.5	88	11	2.6	54	20	2.9
26	171	43	20	85	11	2.5	53	20	2.9
27	165	15	6.7	79	11	2.3	53	20	2.9
28	160	14	6.0	77	10	2.1	51	20	2.8
29	158	14	6.0	74	10	2.0	50	20	2.7
30	152	13	5.3	73	10	2.0	48	20	2.6
31	--	--	--	71	9	1.7	--	--	--
TOTAL	7564	--	3506.6	3448	--	105.5	1909	--	43.41

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	46	25	3.1	25	39	2.6	12	30	.97
2	46	25	3.1	25	39	2.6	11	30	.89
3	43	25	2.9	24	39	2.5	9.8	30	.79
4	41	25	2.8	24	39	2.5	9.8	30	.79
5	41	25	2.8	21	39	2.2	9.6	30	.78
6	41	30	3.3	20	39	2.1	10	28	.76
7	41	30	3.3	24	38	2.5	10	28	.76
8	41	30	3.3	24	38	2.5	9.8	28	.74
9	40	30	3.2	24	38	2.5	8.6	28	.65
10	39	30	3.2	25	38	2.6	8.6	28	.65
11	38	35	3.6	26	38	2.7	8.6	26	.60
12	44	35	4.2	27	38	2.8	8.6	26	.60
13	44	35	4.2	21	38	2.2	8.6	26	.60
14	40	35	3.8	16	37	1.6	8.6	26	.60
15	37	35	3.5	15	37	1.5	8.6	26	.60
16	35	40	3.8	16	36	1.6	8.6	24	.56
17	34	40	3.7	18	36	1.7	9.4	24	.61
18	34	40	3.7	21	36	2.0	9.4	24	.61
19	31	40	3.3	21	36	2.0	9.4	24	.61
20	31	40	3.3	21	36	2.0	9.4	24	.61
21	30	40	3.2	21	34	1.9	9.4	22	.56
22	28	40	3.0	21	34	1.9	9.4	22	.56
23	28	41	3.1	21	34	1.9	9.4	22	.56
24	28	41	3.1	20	34	1.8	9.4	22	.56
25	28	41	3.1	19	34	1.7	9.4	22	.56
26	27	41	3.0	19	32	1.6	9.4	20	.51
27	27	40	2.9	19	32	1.6	9.0	20	.49
28	27	40	2.9	19	32	1.6	9.0	31	.75
29	26	40	2.8	19	32	1.6	8.6	20	.46
30	26	40	2.8	19	32	1.6	8.2	20	.44
31	26	39	2.7	19	32	1.6	--	--	--
TOTAL	1088	--	100.7	654	--	63.5	279.6	--	19.23

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)233862.30
9506248.05

SANTA CLARA RIVER BASIN

11-1130, SESPE CREEK NEAR FILLMORE, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED													METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00			
JAN 14, 1969	0715	11	314	658	558	41	57	72	84	90	98	99	100	--	--	--	SBWC		
JAN 14.....	1355	12	62	196	33	51	72	84	92	96	99	99	100	--	--	--	SBWC		
JAN 19.....	1450	15	2000	3400	18400	30	35	47	63	83	94	100	--	--	--	--	VPWC		
JAN 21.....	0800	11	28000	25500	1930000	17	20	28	42	56	72	89	98	100	--	--	VPWC		
JAN 21.....	1825	13	8000	9230	199000	17	23	32	43	58	74	87	95	98	99	100	VPWC		
JAN 22.....	1055	13	3190	1920	16500	20	30	41	54	65	73	80	86	91	95	100	SPWC		
JAN 24.....	1820	12	4360	2790	32800	11	15	21	28	38	48	62	81	98	100	--	VPWC		
JAN 26.....	1530	12	21900	20600	1220000	12	14	20	32	45	61	79	91	98	100	--	VPWC		
FEB 8.....	1210	12	1200	1510	4890	26	33	46	60	75	88	99	100	--	--	--	VPWC		
FEB 13.....	1215	11	716	167	323	5	15	34	45	53	77	86	94	100	--	--	SBWC		
FEB 23.....	1715	7	8570	17100	396000	8	11	14	19	27	33	41	56	80	96	99	SPWC		
FEB 25.....	1220	10	13700	21300	788000	13	20	26	37	50	60	76	90	97	100	--	SPWC		

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
JAN 14, 1969	1345	12	3	62	--	--	--	3	11	30	59	82	97	100	--	S	
FEB 19.....	--	--	6	D 820	1	2	4	13	25	31	36	47	62	85	98	S	

D DAILY MEAN DISCHARGE.

SANTA CLARA RIVER BASIN

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11-1133. SANTA CLARA RIVER NEAR SANTA PAULA, CALIF.

LOCATION.--Lat 34°21'14", long 119°01'38", in sec.12, T.3 N., R.21 W., Ventura County, 1.5 miles upstream from Santa Paula bridge, and 1.8 miles east of Santa Paula.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

REMARKS.--Chemical analyses for this station are performed by California Department of Water Resources and Geological Survey. Water discharge given is difference between Santa Paula Creek near Santa Paula, and Saticoy Diversion near Saticoy (unpublished).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
OCT. 15...	--	21	9.6	190	72	151	6.0	306	0	713	65	1.3
DEC. 17...	--	--	--	224	70	172	--	325	0	804	73	1.0
JAN. 14...	--	16	7.6	96	32	72	4.0	160	0	323	40	1.0
FEB. 26...	17400	--	--	89	23	37	--	148	0	249	11	.5
MAR. 11...	1450	--	--	128	36	48	--	223	0	334	18	.6
JUNE 05...	--	26	7.6	150	46	92	--	256	0	451	43	.7
JULY 25...	--	26	7.6	141	49	72	4.0	220	0	458	29	.9

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 15...	12	870	1510	2.05	771	520	30	2.4	251	8.0	1840
DEC. 17...	14	990	1680	2.28	847	580	31	2.6	267	7.8	2090
JAN. 14...	5.8	770	725	.99	371	240	29	1.6	131	7.6	988
FEB. 26...	--	100	557	.76	317	196	20	.9	121	7.9	751
MAR. 11...	8.0	360	795	1.08	468	285	18	1.0	183	8.0	1040
JUNE 05...	14	560	1050	1.43	536	326	26	1.7	210	8.0	1390
JULY 25...	9.5	720	934	1.27	554	374	22	1.3	180	8.2	1190

SANTA CLARA RIVER BASIN

11-1135, SANTA PAULA CREEK NEAR SANTA PAULA, CALIF.

LOCATION.--Lat 34°23'44", long 119°04'32", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.4 N., R.21 W., Ventura County, at gaging station 15 ft upstream from Santa Paula Water Works diversion dam, 200 ft upstream from Mud Creek, and 3 miles north of Santa Paula.

DRAINAGE AREA.--40.0 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

Water temperatures: April to September 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISS- SOLVED (GFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)
OCT. 15...	1110	2.3	18	10.6	--	--	111	37	110	3.0	292	0
DEC. 17...	1445	3.7	--	--	--	--	113	27	100	--	274	0
JAN. 14...	1415	8.4	15	--	12	30	74	30	87	2.3	256	0
14...	1500	20	15	10.7	--	--	102	32	86	2.0	231	14
20...	0515	275	--	--	--	--	53	13	22	--	103	0
20...	1705	400	14	--	--	--	58	21	32	3.0	113	0
21...	0715	3980	13	--	9.8	0	46	7.8	11	2.8	114	0
21...	0945	2250	--	--	--	--	27	5.0	4.0	--	65	0
24...	1615	924	13	--	11	0	56	11	21	2.1	132	0
27...	1015	1500	--	--	--	--	48	11	10	--	100	0
FEB. 28...	1430	580	--	--	--	--	58	11	20	--	120	0
MAR. 11...	1150	220	--	--	--	--	85	24	29	--	190	0
APR. 22...	1300	44	16	9.6	--	--	88	21	34	2.0	203	0
JUNE 05...	1230	27	--	--	--	--	99	23	38	--	199	0
JULY 25...	1600	13	26	7.1	--	--	87	25	45	2.0	203	0

DATE	SULFATE (SO4) (MG/L)	CHL- ORIDE (CL) (MG/L)	FLUO- ORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	MURDOM (M) (UG/L)	DIS- SOLVED SOLIDS (RESID- UE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- UENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	ALKA- LITY AS CAC03 (MG/L)	PH	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 15...	315	72	.6	6.5	510	877	--	429	189	239	7.9	1230
DEC. 17...	285	72	.3	--	450	871	--	393	168	225	7.9	1170
JAN. 14...	200	67	.4	2.3	400	692	601	308	98	210	7.3	1030
14...	253	66	.6	1.9	400	770	--	386	173	212	8.4	1060
20...	125	20	.5	4.0	150	340	--	186	102	84	7.7	515
20...	154	23	.5	11	--	326	--	231	138	93	7.5	602
21...	50	4.5	.3	5.4	90	228	194	147	54	94	6.7	400
21...	50	4.0	.3	--	120	163	--	88	35	53	7.3	251
24...	89	11	.3	5.4	150	297	272	184	76	108	6.4	433
27...	96	10	.4	--	100	275	--	165	83	82	7.7	435
FEB. 28...	136	9.0	.4	--	90	354	--	190	92	98	8.0	502
MAR. 11...	200	15	.4	--	130	543	--	311	155	156	8.1	710
APR. 22...	192	14	.4	2.3	110	469	--	306	139	167	9.3	690
JUNE 05...	194	20	.4	--	160	563	--	317	154	163	8.1	772
JULY 25...	203	22	.6	.0	210	495	--	320	153	167	8.1	743

11-1135. SANTA PAULA CREEK NEAR SANTA PAULA, CALIF.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), APRIL TO SEPTEMBER 1969

DAY	APR	MAY	JUN	JUL	AUG	SEP
1	---	660	696	761	793	857
2	---	654	707	757	791	850
3	---	668	717	753	796	846
4	---	676	731	747	800	846
5	---	673	739	753	811	838
6	---	658	751	771	813	841
7	---	671	775	770	815	839
8	---	683	775	764	815	842
9	---	703	791	767	817	849
10	---	721	800	789	828	844
11	---	723	810	799	829	846
12	---	738	796	782	837	850
13	---	765	786	797	852	861
14	---	780	780	798	867	863
15	---	804	778	802	865	870
16	---	789	781	803	865	886
17	---	795	774	803	867	880
18	---	798	766	799	873	872
19	---	794	762	801	877	872
20	---	795	783	806	881	891
21	---	784	782	813	878	884
22	---	781	760	810	877	886
23	---	767	775	808	871	892
24	---	771	795	801	862	893
25	---	777	792	796	855	885
26	---	771	785	791	852	884
27	---	772	778	787	851	891
28	---	774	775	785	844	885
29	---	760	765	780	854	880
30	673	675	766	784	858	890
31	---	676	---	783	857	---
MONTHLY SUMMARY	---	737	769	785	843	867

TEMPERATURE (°C) OF WATER, APRIL TO SEPTEMBER 1969

		DAY																															AVER-
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
APRIL	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14	--	--
MAY	MAXIMUM	18	16	15	18	20	--	--	22	24	24	23	22	20	22	23	24	24	24	24	21	22	20	22	23	22	24	24	26	26	25	22	22
	MINIMUM	14	14	12	12	12	--	--	13	14	15	15	16	14	14	14	14	14	15	14	16	14	15	16	16	15	15	16	16	16	16	17	18
JUNE	MAXIMUM	18	22	22	22	24	22	18	20	18	20	17	20	24	24	22	18	20	24	24	--	--	24	24	24	24	24	24	24	24	26	--	22
	MINIMUM	17	16	16	16	16	16	16	16	16	15	15	16	15	16	17	17	17	17	15	--	--	15	15	16	14	15	15	15	14	16	--	16
JULY	MAXIMUM	26	26	26	26	22	20	24	26	26	26	20	26	27	26	26	27	27	27	26	26	28	27	27	26	26	26	26	26	28	29	30	26
	MINIMUM	16	17	18	17	17	17	16	17	16	16	16	16	18	18	18	18	17	18	18	18	18	18	18	18	18	18	18	18	18	20	20	18
AUGUST	MAXIMUM	29	29	30	30	30	29	30	30	30	26	28	30	30	30	29	29	29	28	28	29	29	28	28	28	28	28	28	28	27	28	28	29
	MINIMUM	20	20	19	20	19	19	20	20	21	20	20	20	20	20	20	20	20	20	20	16	18	17	17	18	18	18	18	18	19	19	18	16
SEPTEMBER	MAXIMUM	28	30	28	28	27	28	29	29	28	28	26	26	26	26	25	26	26	26	26	--	25	26	26	26	25	25	25	25	26	26	--	26
	MINIMUM	18	20	19	18	18	19	20	19	18	18	16	15	16	18	20	19	17	17	18	--	16	16	17	18	18	17	16	15	17	16	--	18

SANTA CLARA RIVER BASIN

11-1139.2. SANTA CLARA RIVER AT SATICOY, CALIF.

LOCATION.--Lat 34°16'29", long 119°08'11", in Santa Clara Del Norte Grant, Ventura County, at gaging station on third pier from left levee of bridge on State Highway 118, and 0.9 mile southeast of Saticoy.

DRAINAGE AREA.--1,595 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 69,200 mg/l Feb. 25; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 20,400,000 tons Feb. 25; minimum daily, 0 tons on many days.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 69,200 mg/l Feb. 25, 1969; minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 20,400,000 tons Feb. 25, 1969; minimum daily, 0 tons on many days.

REMARKS.--No flow Oct. 1 to Jan. 18.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI) (2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-IUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
JAN.												
20...	2800	12	6.2	0	59	16	35	3.2	86	0	183	13
21...	65200	13	6.2	10	54	11	18	3.2	92	0	129	3.5
22...	6700	13	6.9	10	78	14	23	3.0	166	0	143	7.0
25...	154000	--	6.5	10	139	23	38	5.5	133	0	379	16

DATE	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	ALKALINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECIFIC CONDUCTANCE (MICROMHOS)
JAN...	.6	8.2	210	366	366	213	142	26	71	7.8	554
21...	.4	4.3	140	284	275	180	105	18	75	7.6	424
22...	.4	4.9	130	338	362	252	116	16	136	7.1	516
25...	.3	3.4	180	684	677	442	333	16	109	7.4	897

TEMPERATURE (°C) OF WATER. WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

SANTA CLARA RIVER BASIN

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11-1139.2. SANTA CLARA RIVER AT SATICOY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	770	1100	2290	9080	5330	131000
2	0	--	0	740	690	1380	6380	4600	79200
3	0	--	0	710	430	824	4920	4300	57100
4	0	--	0	704	260	494	4000	4050	43700
5	0	--	0	698	160	302	3290	3800	33800
6	0	--	0	10200	41500	1340000	2800	3510	26500
7	0	--	0	2930	14900	126000	2340	2610	16500
8	0	--	0	1800	3300	16000	2170	2000	11700
9	0	--	0	1710	2100	9700	1940	1680	8800
10	0	--	0	1660	2000	8960	1780	1650	7930
11	0	--	0	1550	2000	8370	1670	1800	8120
12	0	--	0	1440	2100	8160	1620	2160	9450
13	0	--	0	1410	2160	8220	1590	1820	7810
14	0	--	0	1160	2100	6580	1440	2060	8010
15	0	--	0	1330	3640	14700	1240	1800	6030
16	0	--	0	1090	5090	15500	1110	1220	3660
17	0	--	0	946	3750	9580	1050	1300	3690
18	0	--	0	946	3500	8940	1040	1700	4770
19	1700	4550	55200	946	3450	8810	1120	1800	5440
20	5630	12100	243000	864	3400	7930	1180	1710	5450
21	32100	44000	4850000	853	3900	9390	1180	1780	5670
22	5680	15500	244000	1740	11400	53800	1100	2100	6240
23	2480	5330	37900	10400	29900	1330000	1010	2500	6820
24	5630	13900	247000	23500	35800	2750000	967	2620	6840
25	74300	61300	14300000	92300	69200	20400000	981	2100	5560
26	25800	24500	1940000	19900	18300	1060000	953	1650	4250
27	7350	7200	151000	11800	9700	313000	932	1300	3270
28	3770	5450	56100	10700	8790	262000	1010	1500	4090
29	2530	4350	30000	--	--	--	876	1000	2370
30	1710	2690	12500	--	--	--	869	800	1880
31	1110	1730	5260	--	--	--	848	600	1370
TOTAL	169790	--	22171960	204797	--	27780930	62486	--	527020

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	842	500	1140	57	260	40	15	70	2.8
2	842	400	909	55	240	36	15	70	2.8
3	890	372	894	52	240	34	13	70	2.5
4	844	340	775	50	220	30	13	70	2.5
5	680	330	606	65	220	39	13	70	2.5
6	608	330	542	35	100	9.5	13	65	2.3
7	528	350	499	34	100	9.2	12	65	2.1
8	466	390	491	34	100	9.2	12	65	2.1
9	406	440	482	34	100	9.2	11	65	1.9
10	370	470	470	33	100	8.9	9.4	65	1.6
11	345	490	456	31	100	8.4	8.9	60	1.4
12	284	500	383	29	100	7.8	8.9	60	1.4
13	252	510	347	25	100	6.8	8.5	60	1.4
14	220	510	303	24	90	5.8	8.1	60	1.3
15	200	520	281	22	90	5.3	11	60	1.8
16	175	520	246	21	90	5.1	11	52	1.5
17	160	518	224	20	90	4.9	9.8	50	1.3
18	147	510	202	20	90	4.9	9.4	50	1.3
19	135	460	168	20	90	4.9	8.9	50	1.2
20	127	400	137	19	90	4.6	8.5	50	1.1
21	111	350	105	18	85	4.1	8.1	45	.98
22	107	317	92	17	85	3.9	8.1	45	.98
23	96	310	80	17	83	3.8	7.2	45	.87
24	91	310	76	17	80	3.7	7.6	45	.92
25	85	310	71	17	80	3.7	7.6	45	.92
26	80	310	67	16	80	3.5	8.1	45	.98
27	77	300	62	16	80	3.5	8.1	45	.98
28	74	300	60	14	75	2.8	8.5	45	1.0
29	72	280	54	14	75	2.8	8.9	45	1.1
30	66	280	50	15	75	3.0	8.9	44	1.1
31	--	--	--	15	75	3.0	--	--	--
TOTAL	9380	--	10272	856	--	321.3	300.5	--	46.63

SANTA CLARA RIVER BASIN

11-1139.2. SANTA CLARA RIVER AT SATICOY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	8.9	45	1.1	6.6	35	.62	8.5	10	.23
2	8.9	45	1.1	7.6	35	.72	8.9	10	.24
3	8.9	45	1.1	8.5	35	.80	9.4	10	.25
4	8.9	45	1.1	7.6	35	.72	8.9	10	.24
5	9.8	45	1.2	8.1	35	.77	9.4	10	.25
6	9.8	45	1.2	8.5	30	.69	9.4	10	.25
7	8.9	45	1.1	8.9	30	.72	9.4	10	.25
8	8.9	45	1.1	9.4	30	.76	9.4	10	.25
9	8.5	45	1.0	10	30	.81	9.4	10	.25
10	7.2	45	.87	11	30	.89	9.4	10	.25
11	7.6	44	.90	11	30	.89	9.4	10	.25
12	8.9	40	.96	12	30	.97	9.4	10	.25
13	8.9	40	.96	11	30	.89	9.4	10	.25
14	8.5	40	.92	11	30	.89	9.4	10	.25
15	8.1	40	.87	10	30	.81	9.4	10	.25
16	7.6	40	.82	8.1	20	.44	9.8	10	.26
17	7.2	40	.78	7.2	20	.39	10	10	.27
18	7.2	40	.78	7.2	20	.39	12	10	.32
19	7.2	40	.78	7.2	20	.39	11	10	.30
20	7.6	40	.82	7.6	20	.41	10	10	.27
21	7.2	35	.68	8.1	20	.44	10	10	.27
22	6.9	35	.65	8.1	20	.44	10	10	.27
23	7.2	35	.68	8.1	20	.44	10	10	.27
24	7.6	35	.72	8.1	20	.44	11	10	.30
25	7.6	35	.72	8.5	20	.46	12	10	.32
26	8.9	35	.84	8.9	20	.48	12	10	.32
27	9.4	35	.89	9.4	20	.51	12	10	.32
28	8.9	35	.84	9.4	20	.51	12	10	.32
29	9.4	35	.89	9.4	10	.25	13	10	.35
30	8.9	35	.84	9.4	10	.25	13	10	.35
31	7.6	35	.72	8.5	10	.23	--	--	--
TOTAL	257.1	--	27.93	274.4	--	18.42	306.9	--	8.22
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									448447.9
TOTAL LOAD FOR YEAR (TONS)									50490604.50

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN-NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 19, 1969	1100	11	42	2050	232	67	73	83	93	100	--	--	--	--	--	--	SPWC
JAN 20.....	0305	13	14500	18800	736000	21	26	31	47	60	73	90	97	100	--	--	VPWC
JAN 25.....	1015	14	163000	91400	40200000	26	34	40	60	77	91	100	--	--	--	--	SPWC
JAN 25.....	1725	13	56100	71200	10800000	22	26	32	50	66	78	95	99	100	--	--	SPWC
JAN 26.....	1540	13	28700	21100	1640000	17	19	25	34	44	54	71	89	97	100	--	VPWC
FEB 6.....	0900	10	16400	53400	2360000	22	23	32	44	71	73	94	99	100	--	--	SPWC
FEB 19.....	1000	11	970	3420	8960	26	37	53	71	82	89	97	100	--	--	--	VPWC

SANTA CLARA RIVER BASIN

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MISCELLANEOUS ANALYSES OF STREAMS IN SANTA CLARA RIVER BASIN

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
11-1105, HOPPER CREEK NEAR PIRU, CALIF. (LAT 34°24'03", LONG 118°49'32")												
JAN.												
20...	100	10	6.5	50	70	24	37	2.5	113	0	234	6.5
24...	310	11	7.9	40	90	22	24	2.4	160	0	211	4.0
25...	1950	13	9.3	0	280	28	14	5.7	119	0	685	2.1

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	ALKA- LINITY AS CaCO ₃ (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
JAN.											
20...	.5	4.3	130	458	441	273	180	23	93	7.8	659
24...	.4	4.3	90	442	445	315	184	14	131	7.2	620
25...	.4	6.9	70	1180	1090	814	716	4	98	7.4	1270

LOCATION (revised).--Lat 34°21'08", long 119°18'27", in southeast corner of Santa Ana Grant, Ventura County, at gaging station 50 ft downstream from county road bridge at Foster Memorial Park, 0.2 mile downstream from Coyote Creek, and 5 miles north of Ventura.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1969.

Water temperatures: October 1968 to September 1969.

Sediment records: October 1968 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, not determined; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 2,220,000 tons (estimated) Jan. 25; minimum daily, 0 tons on many days.

REMARKS.--Prior to June 1969, sampling site was 450 ft downstream. Sediment loads estimated Jan. 21, 25, 26, Feb. 23-25. No flow Oct. 1 to Jan. 18. Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

DATE	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (PG/L)	FLUO- RIDE (F) (MG/L)
APR. 21...	17	8.0	134	36	50	3.0	270	0	260	47	.6
JULY 25...	26	11.0	68	34	54	2.0	95	0	256	50	.5

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKAL- INITY AS CaCO3 (MG/L)	PH	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
APR. 21...	39	220	715	.97	483	262	18	1.0	221	7.9	1040
JULY 25...	26	370	574	.78	310	232	27	1.3	78	8.0	820

[illegible]

11-1185. VENTURA RIVER NEAR VENTURA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	600	660	1070	1300	960	3370
2	0	--	0	500	500	675	1100	750	2230
3	0	--	0	450	420	510	900	660	1600
4	0	--	0	400	440	475	650	824	1450
5	0	--	0	600	900	1460	530	940	1350
6	0	--	0	3500	6000	56700	440	1110	1320
7	0	--	0	1700	1500	6890	410	1820	2010
8	0	--	0	1100	1300	3860	390	470	495
9	0	--	0	600	1300	2110	380	300	308
10	0	--	0	350	1300	1230	370	2050	2050
11	0	--	0	200	1300	702	360	2400	2330
12	0	--	0	150	1300	527	330	2510	2240
13	0	--	0	130	1100	386	270	3360	2450
14	0	--	0	128	900	311	220	3800	2260
15	0	--	0	127	700	240	195	1200	632
16	0	--	0	126	600	204	170	1100	505
17	0	--	0	125	500	169	150	2970	1200
18	0	--	0	122	500	165	140	3200	1210
19	1590	5070	65000	119	500	161	130	3100	1090
20	893	2470	15600	117	400	126	120	2900	940
21	6800	--	460000	115	400	124	110	2970	882
22	1500	3200	13000	113	640	195	105	800	227
23	500	500	675	2000	--	42000	100	700	189
24	2000	5600	30200	14000	--	1100000	98	2570	680
25	20000	--	2220000	17000	--	1600000	96	2700	700
26	13000	--	770000	5000	7600	103000	94	2820	716
27	5000	3500	47300	2300	3000	18600	93	2600	653
28	2800	2500	18900	1500	1600	6480	92	2390	594
29	2000	1900	10300	--	--	--	95	800	205
30	1300	1300	4560	--	--	--	98	1900	159
31	900	900	2190	--	--	--	100	1900	513
TOTAL	58283	--	3657725	53172	--	2948370	9636	--	36558

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	105	1800	510	49	40	5.3	28	36	2.7
2	105	1700	482	49	40	5.3	28	36	2.7
3	102	1670	460	49	40	5.3	28	36	2.7
4	100	1600	432	49	40	5.3	28	36	2.7
5	98	600	159	48	35	4.5	27	36	2.6
6	96	500	130	47	35	4.4	27	36	2.6
7	94	600	152	46	35	4.3	27	36	2.6
8	91	800	197	44	30	3.6	27	36	2.6
9	90	830	202	42	30	3.4	27	36	2.6
10	88	800	190	41	30	3.3	27	36	2.6
11	86	800	186	39	30	3.2	27	35	2.6
12	85	800	184	38	30	3.1	27	35	2.6
13	84	800	181	37	30	3.0	26	35	2.5
14	82	800	177	36	30	2.9	26	35	2.5
15	80	800	173	35	30	2.8	25	35	2.4
16	77	750	156	35	30	2.8	25	35	2.4
17	74	700	140	35	30	2.8	21	35	2.0
18	72	700	136	34	30	2.8	21	35	2.0
19	70	700	132	33	30	2.7	19	35	1.8
20	68	600	110	33	30	2.7	17	35	1.6
21	66	600	107	32	32	2.8	17	40	1.8
22	65	2350	412	32	35	3.0	13	40	1.4
23	63	600	102	31	35	2.9	15	40	1.6
24	61	400	66	31	36	3.0	18	40	1.9
25	58	200	31	30	36	2.9	18	40	1.9
26	55	100	15	30	37	3.0	19	40	2.1
27	53	80	11	29	37	2.9	17	40	1.8
28	51	60	8.3	29	37	2.9	15	40	1.6
29	50	40	5.4	29	37	2.9	13	40	1.4
30	50	40	5.4	29	37	2.9	11	43	1.3
31	--	--	--	29	37	2.9	--	--	--
TOTAL	2319	--	5252.1	1150	--	105.6	664	--	65.6

VENTURA RIVER BASIN

11-1185. VENTURA RIVER NEAR VENTURA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	11	43	1.3	11	20	.59	3.0	10	.08
2	14	43	1.6	12	20	.65	1.5	10	.04
3	10	43	1.2	12	20	.65	1.2	10	.03
4	14	43	1.6	9.8	20	.53	1.2	10	.03
5	20	45	2.4	6.7	20	.36	1.2	10	.03
6	20	45	2.4	5.0	20	.27	1.5	10	.04
7	18	40	1.9	14	20	.76	1.9	10	.05
8	11	35	1.0	16	20	.86	1.5	10	.04
9	7.4	30	.60	13	20	.70	1.8	10	.05
10	16	40	1.7	17	20	.92	2.0	10	.05
11	27	53	3.9	16	20	.86	2.2	10	.06
12	28	50	3.8	8.2	20	.44	2.2	10	.06
13	27	40	2.9	7.5	20	.41	2.4	10	.06
14	27	30	2.2	9.0	20	.49	2.6	10	.07
15	27	30	2.2	5.4	20	.29	2.8	10	.08
16	24	30	1.9	7.9	10	.21	3.1	10	.08
17	24	30	1.9	7.5	10	.20	3.1	10	.08
18	23	30	1.9	6.0	10	.16	3.1	10	.08
19	23	30	1.9	6.3	10	.17	3.2	10	.09
20	24	30	1.9	4.4	10	.12	3.5	10	.09
21	17	25	1.1	3.4	10	.09	3.0	10	.08
22	13	20	.70	4.4	10	.12	2.5	10	.07
23	13	20	.70	5.0	10	.14	2.6	10	.07
24	14	20	.76	4.4	10	.12	2.5	10	.07
25	13	20	.70	6.3	10	.17	2.6	10	.07
26	14	20	.76	6.0	10	.16	2.6	10	.07
27	14	20	.76	4.8	10	.13	2.8	10	.08
28	14	20	.76	4.8	10	.13	3.0	10	.08
29	13	20	.70	4.8	10	.13	3.0	10	.08
30	12	20	.65	4.3	10	.12	3.1	10	.08
31	11	20	.59	4.0	10	.11	--	--	--
TOTAL	543.4	--	48.38	246.9	--	11.06	72.7	--	1.94

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

126087.0
6648137.68

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 19, 1969	0930	11	152	197	81	62	83	92	94	95	97	98	99	100	--	--	SBWC	
JAN 20.....	1450	14	160	291	126	57	76	87	93	95	98	100	--	--	--	--	SBWC	
JAN 20.....	2255	14	3540	13500	129000	22	28	36	46	59	72	86	96	100	--	--	VPWC	
JAN 21.....	0900	15	12000	20800	674000	18	22	34	45	58	71	88	97	100	--	--	VPWC	
JAN 24.....	1445	11	2370	2740	17500	15	17	26	33	41	50	66	87	99	100	--	VPWC	
JAN 24.....	1840	13	4600	5300	65800	16	18	27	35	45	57	72	87	97	100	--	VPWC	
JAN 26.....	1015	11	14200	34400	132000	14	18	24	31	42	52	72	89	98	100	--	SPWC	
FEB 4.....	1300	12	404	440	480	18	29	39	47	51	74	88	99	100	--	--	VBWC	
FEB 6.....	1110	11	4160	7300	82000	15	16	23	26	37	46	60	84	97	100	--	VPWC	
FEB 8.....	1400	12	1070	1440	4160	30	37	52	67	83	93	98	100	--	--	--	VPWC	
FEB 11.....	1520	12	184	1560	775	28	30	40	57	68	74	80	96	99	100	--	VPWC	
FEB 24.....	1540	10	19600	29300	1550000	16	16	21	32	43	54	72	92	99	100	--	SPWC	
MAR 12.....	1430	14	325	4840	4250	25	36	57	69	85	95	100	--	--	--	--	VPWC	

VENTURA RIVER BASIN

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MISCELLANEOUS ANALYSES OF STREAMS IN VENTURA RIVER BASIN
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
11-1145. MATILIJA CREEK ABOVE RESERVOIR, NEAR MATILIJA HOT SPRINGS, CALIF. (LAT 34°29'41", LONG 119°19'48")												
OCT. 14...	2.9	21	8.2	122	31	96	4.0	248	0	260	112	1.4
JAN. 13...	5.6	13	8.3	123	32	74	3.0	258	0	275	66	1.0
APR. 21...	61	18	9.0	105	30	28	2.0	196	0	260	9.0	.6
JULY 25...	14	26	8.2	105	29	39	3.0	190	0	268	18	.8

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 14...	.8	2900	811	1.10	432	229	32	2.0	203	7.8	1200
JAN. 13...	.0	1700	793	1.08	439	227	27	1.5	212	8.0	1080
APR. 21...	.0	250	537	.73	396	225	14	.6	161	7.8	804
JULY 25...	.0	680	583	.79	381	225	18	.9	156	8.1	819

Note.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

SANTA MARIA RIVER BASIN

11-1410. SANTA MARIA RIVER AT GUADALUPE, CALIF.

LOCATION.--Lat 34°54'35", long 120°34'15", in Guadalupe Grant, Santa Barbara County, at gaging station on bridge on State Highway 1, 0.5 mile north of Guadalupe, and 4.5 miles upstream from mouth.
 DRAINAGE AREA.--1,741 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1968 to September 1969.

Sediment records: October 1968 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 59,200 mg/l Feb. 25; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 2,030,000 tons Feb. 25; minimum daily, 0 tons on many days.

REMARKS.--No flow Oct. 1 to Jan. 18, Mar. 23, 24, Mar. 27 to Apr. 1, Apr. 15 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	12	12	11	--	16	14	14	9	10	12	--	--
FEBRUARY..	14	16	--	--	--	10	13	16	16	18	--	12	6	13	13	16	12	16	15	16	14	13	11	13	11	14	12	14	--	--	--	14	
MARCH....	14	14	13	14	14	9	9	8	14	13	14	13	9	--	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	60	11000	1780	4920	51500	684000
2	0	--	0	40	11000	1190	5280	39500	561000
3	0	--	0	20	10000	540	4140	26400	297000
4	0	--	0	5.0	9500	128	4260	16000	185000
5	0	--	0	0	--	0	3750	14800	154000
6	0	--	0	432	23200	44700	2240	18000	109000
7	0	--	0	1730	27800	131000	1300	13000	45600
8	0	--	0	898	16500	44900	1690	20000	91300
9	0	--	0	300	12000	9720	1410	9500	36200
10	0	--	0	167	12000	5410	1190	13000	41800
11	0	--	0	114	10000	3080	1040	9000	25300
12	0	--	0	82	8600	1900	548	7500	11100
13	0	--	0	27	7300	532	446	4800	5780
14	0	--	0	5.2	9700	136	614	5200	8620
15	0	--	0	3.0	10000	81	350	7400	6990
16	0	--	0	48	12000	1560	200	9300	5020
17	0	--	0	.60	13000	21	120	7700	2490
18	0	--	0	1.9	17000	87	60	6800	1100
19	16	1130	883	5.2	13000	183	30	5500	446
20	389	16900	23400	24	10300	664	20	3000	162
21	2220	29400	238000	34	7400	686	14	5000	189
22	725	23100	46800	49	13600	1870	1.8	3100	15
23	57	15400	2490	165	20300	12500	0	--	0
24	25	14000	1020	3670	36200	510000	0	--	0
25	8540	50200	1520000	11700	59200	2030000	.30	4900	4.0
26	7940	49600	1080000	4600	28000	355000	.40	4600	5.0
27	2330	35800	246000	3490	25500	236000	0	--	0
28	674	20500	38700	4230	52600	620000	0	--	0
29	299	14300	11600	--	--	--	0	--	0
30	179	12000	5850	--	--	--	0	--	0
31	80	11000	2380	--	--	--	0	--	0
TOTAL	23474	--	3217123	31900.90	--	4013668	33624.50	--	2272121.0

SANTA MARIA RIVER BASIN

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11-1410, SANTA MARIA RIVER AT GUADALUPE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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						
2	3.1	9600	80						
3	217	8000	4690						
4	113	5600	1710						
5	118	9310	4320						
6	427	10400	12300						
7	285	6000	4620						
8	162	6900	3020						
9	118	6300	2010						
10	118	7800	2490						
11	11	6800	202						
12	5.2	6400	90						
13	2.8	6200	47						
14	1.4	6000	23						
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	--	--	--						
TOTAL	1581.5	--	35602	0	--	0	0	--	0

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

90580.90
9538514.0

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 20, 1969	0910	11	1750	24200	114000	38	44	55	71	78	82	90	98	100	--	--	VPWC
JAN 21.....	1600	--	4140	43900	491000	26	29	35	47	57	64	75	91	97	100	--	SPWC
JAN 22.....	1700	12	716	19100	36900	30	38	57	73	87	95	99	100	--	--	--	VPWC
JAN 29.....	1300	11	284	13900	10700	30	35	45	58	70	82	95	99	100	--	--	VPWC
FEB 7.....	1500	13	1270	19000	65200	21	26	32	44	59	75	91	98	100	--	--	VPWC
FEB 13.....	0930	6	30	7400	599	43	56	73	85	90	96	100	--	--	--	--	VPWC
FEB 25.....	1715	11	7920	63100	1350000	14	15	19	26	38	50	75	94	99	100	--	SPWC
FEB 27.....	1745	12	2400	29800	193000	17	21	27	37	51	66	88	97	100	--	--	SPWC
MAR 4.....	0845	--	4330	16700	195000	11	13	17	22	32	44	68	93	100	--	--	SPWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE											METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
NOV 26, 1968	--	--	4	0	5	9	31	75	88	92	94	96	98	100	--	S
JAN 23, 1969	1600	12	3	10	3	7	40	81	97	99	99	100	--	--	--	S
FEB 10.....	--	--	15	0	9	20	56	90	98	99	100	--	--	--	--	S
FEB 13.....	0930	6	3	30	35	51	80	95	99	100	--	--	--	--	--	S

SANTA MARIA RIVER BASIN

MISCELLANEOUS ANALYSES OF STREAMS IN SANTA MARIA RIVER BASIN

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DFG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
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11-1381. CUYAMA RIVER BELOW TWITCHELL DAM, CALIF. (LAT 34°56'40", LONG 120°17'30")

APR. 21...	25	8.1	204	95	137	6.0	364	0	738	83	.8
JULY 25...	13	10.0	94	31	43	3.0	181	0	256	25	.6

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
APR. 21...	.8	310	1530	2.08	900	601	25	2.0	299	8.2	1910
JULY 25...	1.5	190	572	.78	362	214	20	1.0	148	7.8	803

Note.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

11-1411.5. ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°11'03", long 120°26'11", in Arroyo Grande Grant, San Luis Obispo County, at gaging station at county road bridge, 100 ft upstream from Phoenix Creek, and 8.8 miles northeast of Arroyo Grande.

DRAINAGE AREA.--13.4 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 49,300 mg/l Jan. 25; minimum daily, 2 mg/l on several days during October and November.

Sediment loads: Maximum daily, 69,700 tons Jan. 25; minimum daily, 0 tons on several days during October.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 49,300 mg/l Jan. 25, 1969; minimum daily, 1 mg/l on several days in 1967 and 1968.

Sediment loads: Maximum daily, 69,700 tons Jan. 25, 1969; minimum daily, 0 tons on many days in 1967 and 1968.

REMARKS.--Total sediment load was sampled at control at gage Oct. 1 to Jan. 20 when control was damaged. Samples from Jan. 21 to Sept. 25 represent suspended sediment only. Total sediment discharge and concentration during this period were adjusted based on direct bed-load measurements, modified Einstein procedure computation, and suspended-sediment samples. Control was rebuilt and total-sediment discharge was sampled from Sept. 26 to end of water year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	17	--	19	19	--	--	--	17	--	--	--	17	18	--	--	--	--	--	--	--	18	--	--	--	17	--	--	16	17	--	--	
NOVEMBER..	--	16	15	--	--	14	14	--	18	--	--	--	14	--	12	--	--	--	--	--	11	--	15	--	--	--	12	--	--	12	--	--	
DECEMBER..	--	--	--	12	--	--	7	--	--	--	11	--	--	6	10	--	--	10	--	--	5	--	--	10	--	9	--	--	--	--	9	--	
JANUARY..	--	--	--	--	--	15	--	--	--	12	--	--	12	12	9	--	--	10	--	11	15	--	11	14	--	13	15	12	14	13	13	--	
FEBRUARY..	--	--	--	--	12	11	11	15	--	14	--	--	--	13	15	9	--	--	11	10	--	--	--	12	--	--	--	16	13	--	--	--	
MARCH....	10	--	15	--	--	--	11	--	--	10	--	13	--	13	10	--	19	--	--	19	--	10	--	--	19	--	22	--	12	--	--	--	
APRIL....	20	--	17	--	--	--	--	17	16	--	--	--	22	--	--	--	--	--	13	--	--	--	--	--	20	--	--	--	--	--	--	--	
MAY.....	--	22	--	--	--	21	--	--	25	--	--	--	--	--	22	--	23	--	--	--	22	--	--	--	--	--	--	--	22	--	--	22	--
JUNE.....	--	--	--	--	--	25	--	--	--	--	--	16	--	23	--	--	--	17	--	19	--	--	--	21	--	--	22	--	--	--	--	--	
JULY.....	--	--	23	--	21	--	--	--	--	22	--	23	--	--	--	--	--	22	26	--	--	--	--	--	--	22	--	28	--	28	--	--	
AUGUST...	--	--	--	--	--	22	16	--	22	--	--	--	22	--	--	--	--	--	--	--	--	21	--	--	--	--	20	--	--	22	--	--	
SEPTEMBER	--	--	21	--	--	--	--	--	--	--	--	--	--	--	--	--	17	--	--	21	--	21	--	--	21	--	--	--	21	--	--	21	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)
1	.82	11	.02	1.0	2	.01	1.1	4	.01
2	.89	16	.04	1.0	2	.01	1.1	4	.01
3	.84	11	.02	1.6	24	.14	1.1	4	.01
4	.86	6	.01	1.1	5	.01	1.1	4	.01
5	.82	3	.01	1.0	5	.01	1.1	4	.01
6	.84	2	0	1.0	10	.03	1.1	4	.01
7	.86	2	0	1.0	21	.06	1.1	4	.01
8	.85	2	0	1.0	15	.04	1.1	4	.01
9	.81	3	.01	1.0	6	.02	1.1	4	.01
10	.83	3	.01	1.0	3	.01	2.0	150	.81
11	.85	3	.01	1.1	3	.01	2.4	16	.10
12	.91	3	.01	1.1	3	.01	1.4	27	.10
13	3.0	120	1.8	1.1	3	.01	1.3	45	.16
14	2.7	49	.65	1.3	3	.01	1.7	25	.11
15	.91	2	0	1.9	194	1.2	2.0	20	.11
16	.87	2	0	1.5	14	.06	1.8	20	.10
17	.82	2	0	1.1	8	.02	1.5	27	.11
18	.82	2	0	1.1	5	.01	1.4	42	.16
19	.81	2	0	1.1	4	.01	1.4	63	.24
20	.84	2	0	1.1	4	.01	1.4	77	.29
21	.84	2	0	1.0	4	.01	1.4	77	.29
22	.89	2	0	1.0	3	.01	1.4	67	.25
23	.88	3	.01	1.1	3	.01	1.4	62	.23
24	.89	6	.01	1.1	3	.01	1.5	63	.26
25	.89	12	.03	1.1	4	.01	1.8	100	.49
26	.88	17	.04	1.1	5	.01	2.3	210	1.3
27	.90	12	.03	1.1	5	.01	1.5	190	.77
28	.94	6	.02	1.1	5	.01	1.8	140	.68
29	1.2	11	.04	1.1	4	.01	1.7	110	.50
30	1.2	5	.02	1.1	4	.01	1.7	82	.38
31	1.0	2	.01	--	--	--	1.7	73	.34
TOTAL	31.46	--	2.80	33.9	--	1.79	46.4	--	7.87

ARROYO GRANDE BASIN

11-1411.5. ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CALIF.--Continued

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)
1	1.5	70	.28	16	2270	98	80	23900	5160
2	1.5	69	.28	13	1910	67	60	16000	2590
3	1.5	65	.26	11	1720	51	45	11400	1390
4	1.5	60	.24	14	1900	72	35	8250	780
5	1.5	51	.21	35	9150	865	28	7040	532
6	1.5	45	.18	70	21300	4030	23	6010	373
7	1.5	44	.18	50	9780	1320	21	5310	301
8	1.5	47	.19	35	7560	714	19	5500	282
9	1.5	53	.21	26	5210	366	18	8020	390
10	1.5	65	.26	23	4320	268	23	8520	529
11	1.6	70	.30	19	3700	190	21	7460	423
12	1.7	70	.32	17	3640	167	18	6130	298
13	2.7	185	2.0	14	3390	128	20	4780	258
14	3.3	251	2.7	15	3580	145	16	3590	155
15	1.9	38	.19	20	7070	382	14	4050	153
16	1.8	17	.08	16	8450	365	14	4600	174
17	1.7	9	.04	12	6700	217	13	4760	167
18	7.3	247	8.9	13	6410	225	13	4640	163
19	116	10300	6310	16	8870	383	12	4480	145
20	45	4520	1410	15	6400	259	12	4510	146
21	139	16400	8150	14	4290	162	16	5760	249
22	21	5330	302	20	3780	204	14	5790	219
23	14	3490	132	31	21400	2060	12	4100	133
24	86	11100	4340	165	40300	24400	12	3020	98
25	391	49300	69700	184	33400	16600	12	2720	88
26	283	41000	41800	140	17800	6730	11	3000	89
27	150	23700	9600	80	11400	2460	11	3600	107
28	90	17900	4350	100	32100	8670	11	3500	104
29	60	11200	1810	--	--	--	10	2810	76
30	30	7670	621	--	--	--	10	2440	66
31	20	4570	247	--	--	--	10	2220	60
TOTAL	1482.0	--	148788.82	1184	--	71598	634	--	15698
DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)
1	11	2320	69	2.4	772	5.0	1.7	436	2.0
2	14	2880	109	2.4	772	5.0	1.7	436	2.0
3	19	3800	195	2.3	757	4.7	1.7	479	2.2
4	16	4170	180	2.2	741	4.4	1.7	501	2.3
5	22	4950	294	2.2	741	4.4	1.7	545	2.5
6	14	4710	178	2.1	741	4.2	1.7	566	2.6
7	9.6	4280	111	2.1	741	4.2	1.8	576	2.8
8	8.2	3660	81	2.0	704	3.8	1.9	604	3.1
9	7.4	2800	56	2.0	648	3.5	2.0	592	3.2
10	6.8	2120	39	1.9	604	3.1	2.5	622	4.2
11	6.0	1730	28	1.9	663	3.4	5.0	889	12
12	5.4	1510	22	1.9	760	3.9	4.8	849	11
13	4.8	1310	17	1.8	906	4.4	4.7	788	10
14	4.5	1320	16	1.8	1150	5.6	4.6	733	9.1
15	4.2	1320	15	1.8	1230	6.0	4.5	675	8.2
16	4.2	1320	15	1.8	864	4.2	4.5	642	7.8
17	4.3	1550	18	1.7	523	2.4	4.4	615	7.3
18	4.2	1760	20	1.7	436	2.0	4.3	603	7.0
19	3.7	1700	17	1.7	370	1.7	4.2	582	6.6
20	3.3	1680	15	1.7	370	1.7	4.1	569	6.3
21	3.1	1790	15	1.7	436	2.0	4.0	574	6.2
22	3.1	1670	14	1.7	436	2.0	4.0	611	6.6
23	3.4	1630	15	1.7	436	2.0	3.9	655	6.9
24	3.3	1460	13	1.7	458	2.1	3.8	682	7.0
25	3.2	1390	12	1.7	458	2.1	3.7	641	6.4
26	3.0	1360	11	1.7	479	2.2	3.7	581	5.8
27	2.9	1240	9.7	1.7	501	2.3	3.6	514	5.0
28	2.8	1070	8.1	1.7	501	2.3	3.6	484	4.7
29	2.6	912	6.4	1.7	501	2.3	3.5	466	4.4
30	2.5	800	5.4	1.7	479	2.2	3.5	476	4.5
31	--	--	--	1.7	436	2.0	--	--	--
TOTAL	202.5	--	1604.6	58.1	--	101.1	100.8	--	169.7

11-1411.5. ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CALIF.--Continued

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	TOTAL SEDIMENT DISCHARGE (TONS/DAY)
1	3.4	479	4.4	2.0	592	3.2	.93	199	.50
2	3.3	505	4.5	2.0	556	3.0	.90	181	.44
3	3.2	521	4.5	2.0	518	2.8	.87	192	.45
4	3.1	526	4.4	2.0	481	2.6	.81	187	.41
5	3.1	502	4.2	1.9	468	2.4	.80	176	.38
6	3.0	481	3.9	1.9	468	2.4	.86	172	.40
7	3.0	444	3.6	1.9	682	3.5	.92	201	.50
8	2.9	421	3.3	2.4	926	6.0	1.0	193	.52
9	2.9	409	3.2	2.3	934	5.8	1.1	189	.56
10	2.9	421	3.3	2.1	794	4.5	1.2	213	.69
11	2.8	463	3.5	2.1	670	3.8	1.2	204	.66
12	2.8	542	4.1	1.8	556	2.7	1.3	197	.69
13	2.8	556	4.2	1.9	507	2.6	1.3	185	.65
14	3.5	603	5.7	2.1	476	2.7	1.3	185	.65
15	3.1	526	4.4	2.1	423	2.4	1.4	206	.78
16	2.9	498	3.9	1.8	370	1.8	1.4	196	.74
17	2.7	453	3.3	1.8	350	1.7	1.4	190	.72
18	2.6	442	3.1	1.7	305	1.4	1.4	185	.70
19	2.5	608	4.1	1.4	265	1.0	1.4	185	.70
20	2.4	679	4.4	1.4	246	.93	1.4	185	.70
21	2.3	644	4.0	1.3	217	.76	1.4	185	.70
22	2.3	596	3.7	1.3	197	.69	1.5	183	.74
23	2.2	555	3.3	1.3	185	.65	1.5	188	.76
24	2.2	505	3.0	1.2	191	.62	1.5	200	.81
25	2.2	488	2.9	1.1	178	.53	1.5	220	.89
26	2.1	459	2.6	1.1	199	.59	1.5	150	.61
27	2.1	441	2.5	1.1	199	.59	1.5	180	.73
28	2.1	459	2.6	1.1	199	.59	1.6	180	.78
29	2.0	537	2.9	1.1	199	.59	1.6	180	.78
30	2.0	666	3.6	1.1	189	.56	1.6	160	.69
31	2.0	648	3.5	.99	195	.52	--	--	--
TOTAL	82.4	--	114.6	51.29	--	63.92	38.09	--	19.33
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									3944.94
TOTAL LOAD FOR YEAR (TONS)									238170.53

TOTAL SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMPERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALYSIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
NOV 3, 1968	0735	15	3.3	48	.43	--	--	--	--	--	74	84	96	98	100	--	S
DEC 26.....	0930	9	3.6	210	2.0	--	--	--	--	--	63	65	84	98	100	--	S
JAN 14, 1969	0715	12	5.5	328	4.9	--	--	--	--	--	80	83	92	98	99	100	S
JAN 20.....	1540	14	11	1220	36	17	19	24	27	33	42	77	98	100	--	--	VPWC

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

JAN 26.....	0815	14	626	72700	123000	15	17	19	23	31	41	65	96	100	--	--	SPWC
JAN 26.....	1250	13	342	39100	36100	13	15	17	21	27	35	65	91	99	100	--	SPWC
JAN 27.....	0845	11	D150	21700	8790	8	9	10	13	17	22	36	65	80	88	97	SPWC
FEB 5.....	0910	10	36	4160	404	16	17	20	24	31	43	76	98	100	--	--	VPWC
FEB 5.....	1305	12	36	2800	272	13	14	16	21	28	41	76	98	100	--	--	VPWC
FEB 6.....	1240	11	D70	23300	4400	9	9	11	13	17	26	46	80	95	98	99	SPWC
MAR 14.....	1055	13	16	2050	89	19	20	26	32	40	46	62	91	98	99	99	SPWC
APR 13.....	1515	22	4.8	928	12	17	20	24	29	37	54	83	98	100	--	--	VPWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE											METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
DEC 13, 1968	0900		4	1.1	--	2	27	65	87	98	100	--	--	--	--	S
FEB 5, 1969	0900		4	36	1	6	34	65	84	95	96	97	98	100	--	S
FEB 5.....	1445		5	36	2	11	37	53	66	73	76	79	83	91	100	S
FEB 19.....	1430		4	D16	--	5	47	80	91	97	98	99	100	--	--	S
FEB 27.....	1515		3	79	--	3	21	49	78	91	94	97	98	100	--	S
MAR 14.....	1040		3	16	--	2	27	53	82	95	98	99	100	--	--	S
APR 9.....	1500		4	9.3	1	8	45	59	72	91	97	99	100	--	--	S
AUG 7.....	1000		3	1.9	--	4	38	47	72	95	100	--	--	--	--	S

D Daily mean discharge.

ARROYO GRANDE BASIN

11-1412.8. LOPEZ CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°13'48", long 120°28'22", in SE¼NE¼ sec.16, T.31 S., R.14 E., San Luis Obispo County, at gaging station 0.7 mile upstream from unnamed tributary, 3.2 miles upstream from mouth, and 9.2 miles northeast of Arroyo Grande.

DRAINAGE AREA.--21.4 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 9,310 mg/l Jan. 19; minimum daily, 1 mg/l on many days during October to December.

Sediment loads: Maximum daily, 30,100 tons Jan. 25; minimum daily, 0 tons on several days during October.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 9,310 mg/l Jan. 19, 1969; minimum daily, 1 mg/l on many days in 1967 and 1968.

Sediment loads: Maximum daily, 30,100 tons Jan. 25, 1969; minimum daily, 0 tons on several days in 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	16	--	19	17	--	--	--	13	--	--	18	--	17	16	--	18	--	--	19	--	--	19	--	--	17	--	--	--	14	--	--	--	
NOVEMBER..	14	--	--	16	--	--	--	--	19	--	--	17	--	14	--	--	--	--	17	--	--	--	--	13	--	--	--	14	--	14	--	--	
DECEMBER..	--	--	13	--	--	--	13	--	--	--	13	9	13	12	--	11	--	11	--	10	--	--	--	11	--	10	--	--	--	12	--	--	
JANUARY..	--	--	10	--	--	--	10	--	--	11	--	--	12	12	--	--	12	11	12	13	13	12	11	12	13	13	11	11	9	10	10	--	
FEBRUARY..	11	--	--	11	--	10	11	11	--	--	--	12	12	11	11	11	--	11	11	12	--	11	10	11	11	11	11	12	--	--	--	--	
MARCH....	11	13	--	11	--	--	10	--	13	--	12	--	12	--	--	--	10	--	--	13	--	--	--	--	11	--	--	--	--	13	--	--	
APRIL....	--	12	11	--	12	13	11	--	14	15	--	17	--	--	12	--	--	13	--	--	--	--	13	--	--	--	12	--	--	13	--	--	--
MAY.....	--	13	--	--	--	13	--	--	16	--	--	--	--	15	--	--	20	--	--	--	18	--	--	16	--	--	--	17	--	--	--	16	--
JUNE.....	--	--	20	--	--	--	21	--	--	17	--	--	20	--	--	--	--	17	--	16	--	--	--	--	22	--	--	--	18	--	--	--	--
JULY.....	--	21	--	19	--	--	--	--	--	--	17	--	--	--	--	18	--	--	17	--	--	--	24	--	--	22	--	--	--	21	--	--	--
AUGUST....	21	--	--	--	--	17	--	17	20	--	--	22	--	--	18	--	--	--	18	--	--	--	18	--	--	--	20	--	--	23	--	--	--
SEPTEMBER	--	22	--	--	16	--	--	--	23	--	--	16	--	--	--	17	21	--	18	--	--	--	19	--	--	--	16	--	--	--	16	--	--

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.6	3	.01	2.1	8	.05	2.7	3	.02
2	1.6	1	0	2.1	8	.05	2.7	3	.02
3	1.6	1	0	3.1	7	.06	2.7	3	.02
4	1.6	1	0	2.9	6	.05	2.7	3	.02
5	1.6	1	0	2.7	5	.04	2.7	3	.02
6	1.6	1	0	2.5	3	.02	2.7	3	.02
7	1.5	1	0	2.3	2	.01	2.7	4	.03
8	1.5	1	0	2.3	1	.01	2.7	4	.03
9	1.5	1	0	2.3	1	.01	2.7	2	.01
10	1.5	1	0	2.3	1	.01	3.1	1	.01
11	1.5	1	0	2.3	1	.01	3.5	1	.01
12	1.6	1	0	2.3	2	.01	3.2	5	.04
13	2.7	10	.08	2.3	3	.02	3.1	2	.02
14	3.4	3	.03	2.5	4	.03	3.6	4	.04
15	2.6	3	.02	4.4	4	.05	4.6	4	.05
16	2.2	4	.02	3.5	4	.04	5.3	3	.04
17	2.1	4	.02	3.1	5	.04	4.5	3	.04
18	2.1	4	.02	2.9	6	.05	4.1	3	.03
19	2.0	3	.02	2.8	6	.05	3.9	4	.04
20	2.0	3	.02	2.7	6	.04	3.9	6	.06
21	2.0	4	.02	2.7	5	.04	3.7	6	.06
22	2.0	5	.03	2.6	4	.03	3.8	4	.04
23	1.9	4	.02	2.5	4	.03	3.8	3	.03
24	1.8	2	.01	2.6	4	.03	3.9	3	.03
25	1.8	1	0	2.5	5	.03	4.4	4	.05
26	1.8	1	0	2.5	7	.05	6.7	7	.13
27	1.8	1	0	2.5	8	.05	6.0	6	.10
28	2.0	1	.01	2.7	6	.04	5.5	5	.07
29	2.1	4	.02	2.7	3	.02	5.5	4	.06
30	2.3	6	.04	2.7	3	.02	5.2	4	.06
31	2.1	7	.04	--	--	--	5.0	4	.05
TOTAL	59.4	--	.43	79.4	--	.99	120.6	--	1.25

11-1412.8. LOPEZ CREEK NEAR ARROYO GRANDE, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.7	3	.04	50	280	38	193	485	253
2	4.6	2	.02	40	180	19	145	320	125
3	4.5	2	.02	35	120	11	113	240	73
4	4.3	2	.02	31	90	7.5	89	210	50
5	4.5	3	.04	119	1340	1560	75	190	38
6	4.5	4	.05	383	3130	3780	70	180	34
7	4.5	5	.06	166	750	336	71	175	34
8	4.3	5	.06	110	300	89	64	200	35
9	4.2	7	.08	78	200	42	50	140	19
10	4.2	9	.10	62	150	25	52	100	14
11	4.5	9	.11	58	130	20	54	75	11
12	4.4	9	.11	45	120	15	50	44	5.9
13	5.3	11	.16	38	90	9.2	48	23	3.0
14	9.4	13	.33	42	70	7.9	43	20	2.3
15	7.6	10	.21	59	250	44	45	22	2.7
16	6.5	7	.12	45	185	22	42	26	2.9
17	5.9	4	.06	35	160	15	41	34	3.8
18	19	206	33	38	150	15	42	35	4.0
19	343	9310	16200	48	140	18	41	40	4.4
20	218	2880	2190	42	100	11	38	41	4.2
21	404	1660	2290	41	120	13	38	72	7.4
22	220	830	547	62	210	35	36	80	7.8
23	140	556	208	164	1840	1090	34	70	6.4
24	252	870	809	789	3570	10400	33	65	5.8
25	1360	6150	30100	483	1500	2150	31	61	5.1
26	743	3280	8090	261	750	529	32	58	5.0
27	259	895	644	181	635	310	32	57	4.9
28	167	590	266	233	1050	702	30	56	4.5
29	122	370	122	--	--	--	29	56	4.4
30	95	290	74	--	--	--	29	50	3.9
31	64	330	57	--	--	--	28	40	3.0
TOTAL	4493.9	--	61631.59	3738	--	21313.6	1718	--	777.4

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	27	35	2.6	16	20	.86	14	14	.53
2	30	35	2.9	16	22	.95	13	10	.35
3	32	41	3.5	16	17	.73	13	8	.28
4	28	30	2.3	16	11	.48	14	8	.30
5	58	726	154	16	9	.39	15	8	.32
6	68	250	46	16	8	.35	14	7	.26
7	45	100	12	16	9	.39	14	7	.26
8	37	33	3.3	15	15	.61	15	7	.28
9	34	28	2.6	16	21	.91	15	8	.32
10	30	31	2.5	16	21	.91	14	10	.38
11	24	33	2.1	15	19	.77	14	10	.38
12	24	32	2.1	16	16	.69	13	9	.32
13	22	28	1.7	16	13	.56	13	7	.25
14	21	22	1.2	16	11	.48	13	7	.25
15	21	17	.96	16	9	.39	12	6	.19
16	23	16	.99	15	8	.32	12	6	.19
17	22	15	.89	15	8	.32	12	5	.16
18	21	15	.85	15	8	.32	12	5	.16
19	20	16	.86	15	8	.32	12	15	.49
20	20	18	.97	15	8	.32	13	53	1.9
21	19	21	1.1	16	7	.30	13	62	2.2
22	19	22	1.1	15	5	.20	12	62	2.0
23	21	22	1.2	15	4	.16	12	62	2.0
24	19	20	1.0	16	4	.17	12	62	2.0
25	18	19	.92	15	4	.16	12	62	2.0
26	17	16	.73	15	4	.16	12	64	2.1
27	18	15	.73	15	4	.16	12	68	2.2
28	18	14	.68	14	4	.15	12	70	2.3
29	17	14	.64	14	4	.15	12	68	2.2
30	16	16	.69	13	6	.21	11	64	1.9
31	--	--	--	13	16	.56	--	--	--
TOTAL	789	--	253.11	474	--	13.45	387	--	28.47

ARROYO GRANDE BASIN

11-1412.8. LOPEZ CREEK NEAR ARROYO GRANDE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	11	58	1.7	8.0	53	1.1	8.0	10	.22
2	11	54	1.6	8.0	52	1.1	8.0	13	.28
3	11	51	1.5	8.0	44	.95	6.9	14	.26
4	12	48	1.6	6.5	38	.67	6.8	15	.28
5	12	46	1.5	6.5	35	.61	6.9	14	.26
6	12	46	1.5	6.5	35	.61	7.1	12	.23
7	12	45	1.5	6.5	44	.77	7.1	10	.19
8	12	45	1.5	6.8	52	.95	7.0	7	.13
9	12	38	1.2	6.5	30	.53	6.7	7	.13
10	11	27	.80	5.8	18	.28	6.5	8	.14
11	11	22	.65	8.0	14	.30	6.7	12	.22
12	11	21	.62	8.0	13	.28	7.2	15	.29
13	11	22	.65	7.2	12	.23	6.5	16	.28
14	12	24	.78	7.2	12	.23	6.6	14	.25
15	11	26	.77	7.2	11	.21	6.8	10	.18
16	11	29	.86	7.2	10	.19	7.0	6	.11
17	10	34	.92	8.0	9	.19	6.5	8	.14
18	10	39	1.1	8.0	8	.17	5.8	15	.23
19	9.4	37	.94	7.2	7	.14	6.4	18	.31
20	9.4	32	.81	8.0	8	.17	5.8	18	.28
21	9.4	28	.71	7.2	10	.19	6.5	16	.28
22	9.4	25	.63	8.0	12	.26	6.5	12	.21
23	9.4	22	.56	7.2	13	.25	5.7	9	.14
24	9.4	20	.51	7.2	13	.25	5.5	9	.13
25	9.4	18	.46	7.2	12	.23	5.5	11	.16
26	9.4	18	.46	7.2	10	.19	5.6	13	.20
27	9.4	17	.43	8.0	7	.15	5.7	10	.15
28	9.4	17	.43	7.2	6	.12	5.6	6	.09
29	8.7	16	.38	8.0	5	.11	5.5	5	.07
30	8.7	21	.49	7.2	5	.10	5.1	5	.07
31	8.0	36	.78	8.0	7	.15	--	--	--
TOTAL	322.4	--	28.34	227.5	--	11.68	193.5	--	5.91
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									12602.7
TOTAL LOAD FOR YEAR (TONS)									84066.22

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS	
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS)													
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00			
JAN 18, 1969	2105	11	68	1070	196	37	51	69	80	90	96	100	--	--	--	--	VPWC		
JAN 19.....	1315	12	285	3580	2750	25	35	48	61	73	84	96	100	--	--	--	VPWC		
JAN 20.....	1630	13	125	634	214	28	41	52	62	69	80	89	97	100	--	--	SBWC		
JAN 21.....	0815	13	415	1760	1970	18	25	35	44	54	61	72	84	91	94	98	SPWC		
JAN 21.....	1615	13	282	806	614	25	37	47	57	66	75	85	96	100	--	--	VBWC		
JAN 22.....	1530	12	170	636	292	26	36	46	54	60	72	83	96	100	--	--	VBWC		
JAN 23.....	0900	10	135	522	190	17	25	32	37	39	48	53	65	78	90	96	SBWC		
JAN 24.....	1000	12	135	380	139	17	25	31	36	40	46	51	63	81	91	100	SBWC		
JAN 24.....	1700	12	324	1520	1330	15	21	31	40	50	61	79	97	100	--	--	VPWC		
JAN 25.....	0715	13	2830	12600	96300	19	27	36	46	57	70	88	98	100	--	--	VPWC		
JAN 25.....	1045	13	1520	4780	19600	19	28	38	49	60	73	92	100	--	--	--	VPWC		
JAN 25.....	1600	13	1090	2840	8360	17	24	33	42	51	62	80	97	100	--	--	VPWC		
JAN 26.....	0900	13	1240	3900	13100	23	32	42	53	62	73	88	98	100	--	--	VPWC		
JAN 27.....	0930	11	230	1010	627	17	24	31	36	41	49	55	67	81	88	98	SBWC		
FEB 4.....	1440	12	36	55	5.3	8	17	30	42	47	53	60	70	85	95	100	SBWC		
FEB 6.....	1040	10	363	2880	2820	6	9	12	14	15	20	24	36	59	85	98	SBWC		
FEB 23.....	0800	10	104	1620	455	11	14	22	30	40	48	59	78	92	98	100	SPWC		
FEB 24.....	1640	11	1690	4900	22400	15	21	30	38	51	60	80	95	100	--	--	VPWC		
FEB 25.....	0740	11	502	1800	2440	13	19	26	33	40	46	57	79	98	100	--	VPWC		
FEB 26.....	0710	10	288	740	575	17	26	33	39	44	55	63	76	92	100	--	VBWC		
FEB 26.....	1515	11	236	763	486	22	29	38	44	49	53	59	69	84	96	100	SBWC		
APR 5.....	1530	12	58	2400	376	17	23	30	38	58	61	79	96	100	--	--	VPWC		

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
				PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
				.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	128	
FEB 4, 1969	1330	4	36	--	--	--	2	6	8	11	15	22	39	52	100	S

BIG SUR RIVER BASIN

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11-1430. BIG SUR RIVER NEAR BIG SUR, CALIF.

LOCATION.--Lat 36°14'45", long 121°46'20", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.19 S., R.2 E., Monterey County, temperature recorder at gaging station on right bank at downstream side of bridge, 0.4 mile upstream from Post Creek, and 2.6 miles southeast of Big Sur.

DRAINAGE AREA.--46.5 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 19°C Aug. 9-12, 15; minimum, 6°C Dec. 21, 22.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-67, 1968-69), 20°C Aug. 1, 5, 17, 1966; minimum (1965-66, 1967-69), 5°C Dec. 15, 1967.

REMARKS.--Recorder stopped Apr. 18 to May 8.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																			
	MAXIMUM	15	14	14	16	15	14	14	14	13	14	14	14	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14		
	MINIMUM	14	14	14	14	14	14	14	13	13	13	13	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	12	12	13		
NOVEMBER																																			
	MAXIMUM	13	13	13	12	12	12	12	12	13	13	14	14	13	11	12	12	12	13	13	12	12	12	12	12	11	11	10	10	9	9	--	12		
	MINIMUM	12	12	13	12	12	12	12	12	13	13	13	13	11	10	11	12	12	12	12	12	12	11	12	11	11	11	10	9	9	8	9	--	11	
DECEMBER																																			
	MAXIMUM	10	10	9	9	9	9	9	10	11	12	11	10	9	10	11	11	9	8	8	8	7	7	8	9	10	10	9	9	9	9	9	9		
	MINIMUM	9	9	8	8	8	9	9	9	10	11	10	9	8	9	10	9	8	8	8	7	6	6	7	8	9	9	9	8	8	9	7	8	8	
JANUARY																																			
	MAXIMUM	9	9	9	9	10	11	10	10	10	9	9	10	12	12	12	11	11	12	13	13	13	13	13	12	13	14	14	12	12	11	11	11	11	
	MINIMUM	8	8	8	9	9	10	10	9	9	8	8	9	10	12	9	10	9	10	12	13	13	13	12	11	12	13	12	12	11	10	10	9	10	
FEBRUARY																																			
	MAXIMUM	11	11	11	11	11	11	11	11	13	13	13	12	12	12	12	12	12	12	11	12	11	11	11	11	11	12	12	12	--	--	--	--	11	
	MINIMUM	10	11	10	10	11	11	10	10	12	11	12	11	10	11	11	11	11	12	11	11	10	9	10	11	11	11	11	11	--	--	--	--	11	
MARCH																																			
	MAXIMUM	12	12	12	11	12	11	11	11	10	10	10	10	10	10	10	11	11	12	12	12	11	11	12	12	12	12	12	13	13	13	13	13	11	
	MINIMUM	11	11	11	11	11	11	10	9	9	9	9	9	9	9	8	9	10	11	10	11	10	10	10	11	11	11	11	11	11	12	11	12	12	10
APRIL																																			
	MAXIMUM	12	11	11	11	11	11	11	12	12	12	13	13	12	11	12	12	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	11	11	10	10	11	10	9	11	11	11	11	12	11	10	10	11	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAY																																			
	MAXIMUM	--	--	--	--	--	--	--	--	--	14	14	14	14	14	14	15	16	16	15	16	16	16	16	16	16	16	16	16	16	17	18	18	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	14	14	14	14	13	12	13	13	14	13	13	14	14	14	14	14	13	14	14	14	14	14	16	16	--
JUNE																																			
	MAXIMUM	17	16	16	16	15	16	16	16	15	16	16	15	16	16	16	16	16	17	17	17	16	17	17	17	17	17	17	16	16	17	17	--	16	
	MINIMUM	16	15	14	14	14	14	14	14	14	14	14	14	14	14	15	14	15	15	15	15	15	15	16	14	16	16	16	16	16	14	14	14	--	15
JULY																																			
	MAXIMUM	17	18	18	18	18	17	16	16	17	17	18	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	17	17	18	18	18	17	
	MINIMUM	14	15	16	16	16	15	14	14	15	15	16	16	16	16	16	16	16	17	17	17	17	17	17	17	17	16	16	16	16	16	17	16	16	
AUGUST																																			
	MAXIMUM	18	18	18	18	18	18	18	18	19	19	19	19	18	18	19	18	17	16	17	17	17	17	17	17	17	17	17	17	17	16	16	17	18	
	MINIMUM	16	17	17	17	17	17	16	16	18	18	18	18	17	17	17	17	16	16	15	16	16	16	16	16	16	16	16	15	15	15	15	15	16	
SEPTEMBER																																			
	MAXIMUM	17	17	17	16	16	17	18	18	18	17	17	17	17	16	16	15	14	15	16	16	15	15	15	15	15	15	15	15	16	15	15	--	16	
	MINIMUM	15	16	16	16	16	16	17	17	17	17	17	16	16	15	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	--	15	

SALINAS RIVER BASIN

11-1470.4. SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF.

LOCATION.--Lat 35°32'03", long 120°50'47", in Asuncion Grant, San Luis Obispo County, at gaging station on downstream pier of highway bridge, 0.2 mile downstream from unnamed tributary, and 8.6 miles west of Templeton.

DRAINAGE AREA.--2.95 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 5,710 mg/l Jan. 19; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 9,770 tons Jan. 19; minimum daily, 0 tons on many days.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 5,710 mg/l Jan. 19, 1969; minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 9,770 tons Jan. 19, 1969; minimum daily, 0 tons on many days each year.

REMARKS.--No flow Oct. 1 to Dec. 13, Dec. 23, June 24 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	11	--	--	--	--	7	--	--	10	10	10	10	10	10	10	10	--
JANUARY..	--	--	--	--	12	--	--	--	12	--	--	--	--	--	--	--	--	10	--	12	12	11	--	11	13	12	11	8	8	--	--	--
FEBRUARY.	--	--	--	--	10	10	--	--	--	--	--	--	9	--	11	--	10	--	--	--	10	10	10	10	11	11	--	10	--	--	--	--
MARCH....	12	11	--	9	--	--	--	--	--	--	10	--	--	--	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL....	--	--	--	--	10	11	--	13	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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
2							0	--	0
3							0	--	0
4							0	--	0
5							0	--	0
6							0	--	0
7							0	--	0
8							0	--	0
9							0	--	0
10							0	--	0
11							0	--	0
12							0	--	0
13							0	--	0
14							2.0	4	.02
15							11	86	6.5
16							4.4	31	.50
17							.72	16	.03
18							.34	13	.01
19							.28	10	.01
20							.26	7	0
21							.22	4	0
22							.02	3	0
23							0	--	0
24							1.9	440	5.7
25							16	1070	68
26							9.1	155	5.4
27							2.2	15	.09
28							5.0	84	2.1
29							3.2	19	.16
30							1.4	9	.03
31							.82	3	.01
TOTAL	0	--	0	0	--	0	58.86	--	88.56

SALINAS RIVER BASIN

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11-1470.4. SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.56	3	0	15	20	.81	43	50	5.8
2	.39	2	0	13	20	.70	24	15	.97
3	.28	2	0	10	20	.54	16	9	.39
4	.23	2	0	14	20	.76	10	9	.24
5	.20	2	0	25	70	4.7	7.2	7	.14
6	.18	2	0	52	89	14	4.8	6	.08
7	.17	2	0	27	25	1.8	3.5	5	.05
8	.16	1	0	20	19	1.0	2.7	4	.03
9	.18	1	0	18	17	.83	2.1	3	.02
10	.15	1	0	16	16	.69	2.1	2	.01
11	.15	1	0	14	15	.57	1.4	2	.01
12	.13	1	0	22	154	13	1.4	2	.01
13	30	384	67	14	50	1.9	1.4	2	.01
14	22	178	15	11	30	.89	1.1	4	.01
15	3.9	14	.15	93	154	48	.90	7	.02
16	1.6	5	.02	34	25	2.3	.72	6	.01
17	.84	2	0	22	11	.65	.72	6	.01
18	123	1570	1460	18	10	.49	.66	6	.01
19	496	5710	9770	17	10	.46	.66	6	.01
20	255	2280	2770	13	10	.35	.72	6	.01
21	127	1020	681	18	28	4.0	.72	5	.01
22	38	45	4.6	25	18	1.2	.55	5	.01
23	13	20	.70	84	120	45	.55	5	.01
24	159	1060	1200	405	2650	4410	.45	5	.01
25	455	5000	9000	105	201	68	.45	5	.01
26	133	748	401	49	40	5.3	.45	4	0
27	62	60	10	27	20	1.5	.41	4	0
28	51	130	18	75	187	47	.41	4	0
29	40	25	2.7	--	--	--	.37	4	0
30	26	20	1.4	--	--	--	.37	4	0
31	18	20	.97	--	--	--	.37	4	0
TOTAL	2057.12	--	25402.54	1256	--	4676.44	130.18	--	7.89

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	.33	3	0	.72	5	.01	.13	2	0
2	1.3	3	.01	.60	5	.01	.13	2	0
3	.66	2	0	.60	5	.01	.13	2	0
4	.41	2	0	.60	5	.01	.13	2	0
5	57	559	157	.60	5	.01	.12	2	0
6	19	54	2.8	.67	4	.01	.12	2	0
7	7.2	16	.31	.70	4	.01	.12	2	0
8	4.9	16	.21	.67	4	.01	.12	2	0
9	4.1	9	.10	.65	4	.01	.13	2	0
10	3.5	9	.09	.62	4	.01	.13	2	0
11	2.7	9	.07	.55	4	.01	.12	1	0
12	2.5	9	.06	.52	4	.01	.13	1	0
13	2.1	9	.05	.52	13	.02	.12	1	0
14	1.9	9	.05	.49	4	.01	.11	1	0
15	1.7	9	.04	.50	4	.01	.10	1	0
16	1.6	8	.03	.44	4	0	.09	1	0
17	1.4	8	.03	.38	4	0	.10	1	0
18	1.3	8	.03	.30	4	0	.09	1	0
19	1.2	8	.03	.29	4	0	.06	1	0
20	1.1	8	.02	.27	4	0	.06	1	0
21	1.1	7	.02	.26	3	0	.04	1	0
22	1.1	7	.02	.25	3	0	.01	1	0
23	1.9	7	.04	.25	3	0	.01	1	0
24	1.3	7	.02	.25	3	0	0	--	0
25	1.2	7	.02	.24	3	0	0	--	0
26	1.1	6	.02	.22	3	0	0	--	0
27	1.0	6	.02	.20	3	0	0	--	0
28	.90	6	.01	.17	3	0	0	--	0
29	.72	6	.01	.15	3	0	0	--	0
30	.72	6	.01	.13	3	0	0	--	0
31	--	--	--	.12	3	0	--	--	--
TOTAL	126.94	--	161.12	12.93	--	.16	2.30	--	0

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)3644.33
30336.71

SALINAS RIVER BASIN

11-1470.4, SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMPERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALYSIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
DEC 24, 1968	1630	10	1.2	1040	3.4	86	91	95	98	99	100	--	--	--	--	--	SPWC
DEC 25.....	1630	11	35	1260	119	66	74	84	92	94	97	98	100	--	--	--	VPWC
JAN 19, 1969	1430	--	670	9060	16400	13	14	19	24	31	42	63	90	100	--	--	VPWC
JAN 19.....	1700	--	584	6750	10600	18	19	27	33	42	52	70	91	100	--	--	VPWC
JAN 20.....	0900	12	156	678	286	24	34	43	52	56	74	87	96	99	100	--	VBWC
JAN 21.....	1145	12	91	300	74	31	42	54	64	70	80	87	95	100	--	--	VBWC
JAN 25.....	0845	10	397	7710	8260	17	19	28	35	45	55	70	90	99	100	--	VPWC
JAN 25.....	1540	13	290	1830	1430	21	22	32	38	47	53	64	80	95	99	100	VPWC
JAN 28.....	1700	8	D51	109	15	33	49	73	82	88	95	98	100	--	--	--	SBWC
FEB 24.....	1030	--	718	2830	5490	20	23	32	39	49	59	75	93	99	100	--	VPWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT .062	FINER .125	THAN .250	THE .500	SIZE 1.00	2.00	4.00	8.00	16.0	32.0	64.0		
JAN 22, 1969	1400	11	4	29	--	1	3	9	15	24	36	50	68	91	100	S	
D Daily mean discharge.																	

11-1470.7. SANTA RITA CREEK NEAR TEMPLETON, CALIF.

LOCATION.--Lat 35°31'26", long 120°45'54", in Asuncion Grant, San Luis Obispo County, at gaging station 1.6 miles upstream from Paso Robles Creek, and 4 miles west of Templeton.

DRAINAGE AREA.--18.2 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 5,470 mg/l Jan. 19; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 30,500 tons Jan. 19; minimum daily, 0 tons on many days.

EXTREMES, 1967-69.--Sediment concentrations: Maximum daily, 5,470 mg/l Jan. 19, 1969; minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 30,500 tons Jan. 19, 1969; minimum daily, 0 tons on many days each year.

REMARKS.--No flow Oct. 1 to Dec. 14, July 25 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	--	--	--	--	--	--	--	--	--	7	--	--	--	--	9	7	--
JANUARY..	--	8	--	--	--	--	--	--	--	--	--	12	--	8	8	--	7	--	--	8	8	8	8	11	8	8	8	8	8	8	8	--	
FEBRUARY.	--	--	--	--	7	8	8	--	--	--	10	12	--	11	10	10	10	8	9	9	9	10	8	8	10	8	10	10	--	--	--	--	
MARCH....	11	11	11	12	7	8	7	7	7	7	7	7	7	7	7	10	8	9	12	10	10	10	9	11	--	17	13	18	--	17	--	13	10
APRIL....	16	13	11	13	11	11	--	16	12	11	--	13	13	13	--	16	--	16	--	21	20	14	13	--	13	--	--	--	--	--	--	--	--
MAY.....	--	14	--	14	14	--	14	--	18	--	20	--	15	--	21	--	19	--	19	--	19	--	19	--	19	--	21	--	19	--	22	--	--
JUNE.....	17	--	18	--	21	--	18	--	--	15	--	14	--	16	--	16	18	--	--	16	--	18	--	19	--	18	--	22	--	21	--	--	--
JULY.....	--	--	21	--	--	24	--	--	--	--	--	--	--	--	--	--	--	--	27	--	--	--	--	26	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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
2							0	--	0
3							0	--	0
4							0	--	0
5							0	--	0
6							0	--	0
7							0	--	0
8							0	--	0
9							0	--	0
10							0	--	0
11							0	--	0
12							0	--	0
13							0	--	0
14							0	--	0
15							6.1	20	.33
16							13	170	9.0
17							1.9	20	.10
18							.90	15	.04
19							.70	10	.02
20							.60	5	.01
21							.41	5	.01
22							.35	4	0
23							.35	3	0
24							.47	3	0
25							20	190	21
26							16	65	2.8
27							4.7	17	.22
28							6.6	25	.45
29							9.8	25	.66
30							4.2	4	.05
31							2.9	5	.04
TOTAL	0	--	0	0	--	0	88.98	--	34.73

SALINAS RIVER BASIN

11-1470.7. SANTA RITA CREEK NEAR TEMPLETON, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	2.3	5	.03	55	18	2.7	178	260	125
2	1.9	4	.02	44	16	1.9	122	102	34
3	1.7	4	.02	39	14	1.5	94	69	18
4	1.5	4	.02	34	12	1.1	75	64	13
5	1.5	4	.02	70	77	24	52	50	7.0
6	1.3	4	.01	200	275	150	51	64	8.8
7	1.3	4	.01	105	285	81	46	59	7.3
8	1.3	4	.01	74	150	30	41	46	5.3
9	1.3	4	.01	59	60	9.6	38	43	4.4
10	1.2	4	.01	50	30	4.1	37	142	14
11	1.2	4	.01	44	20	2.4	26	44	3.1
12	1.3	4	.01	54	40	5.8	19	127	6.5
13	41	79	33	41	30	3.3	18	40	1.9
14	64	105	18	29	23	1.8	19	753	44
15	22	82	4.9	254	832	690	19	120	6.2
16	11	38	1.1	137	73	27	18	18	.87
17	8.1	20	4.4	89	40	9.6	18	8	.39
18	185	763	1350	77	50	10	16	7	.30
19	1710	5470	30500	68	43	7.9	15	5	.20
20	742	2420	6060	55	18	2.7	15	367	19
21	582	965	2460	63	253	78	16	300	13
22	173	500	234	94	200	51	13	7	.25
23	79	250	53	338	1230	1670	12	12	.39
24	366	1740	3290	1210	4170	17300	12	12	.39
25	1740	4280	27400	452	1300	1970	11	11	.33
26	602	1380	2660	206	210	117	9.4	7	.18
27	226	310	189	129	150	52	8.8	9	.17
28	184	228	117	238	984	749	7.7	6	.19
29	122	100	33	--	--	--	7.1	6	.12
30	97	25	6.5	--	--	--	6.5	6	.11
31	71	22	4.2	--	--	--	6.5	7	.12
TOTAL	7042.9	--	74414.32	4308	--	23053.4	1027.0	--	334.51

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	6.5	4	.07	7.1	3	.06	2.4	4	.03
2	9.4	156	10	7.1	3	.06	2.5	5	.03
3	14	289	20	7.1	3	.06	2.3	6	.04
4	7.7	16	.33	6.8	3	.06	2.4	4	.03
5	121	728	415	6.2	2	.03	2.4	2	.01
6	89	131	37	5.9	4	.06	2.3	4	.02
7	49	32	4.2	6.0	6	.10	2.2	6	.04
8	38	20	2.1	5.5	8	.12	2.3	6	.04
9	32	16	1.4	5.1	10	.14	2.4	6	.04
10	28	18	1.4	5.0	7	.09	2.5	6	.04
11	26	17	1.2	4.7	5	.06	2.6	7	.05
12	24	16	1.0	4.3	6	.07	2.5	8	.05
13	21	12	.68	4.4	8	.10	2.2	8	.05
14	19	10	.51	4.2	7	.08	2.1	8	.05
15	18	11	.53	4.1	6	.07	2.0	10	.05
16	18	12	.58	3.9	4	.04	1.9	12	.06
17	17	9	.41	3.3	3	.03	1.8	12	.06
18	15	6	.24	3.2	4	.03	1.7	12	.06
19	14	8	.30	3.0	6	.05	1.5	12	.05
20	14	9	.34	2.9	4	.03	1.4	12	.05
21	12	4	.13	2.8	3	.02	1.2	18	.06
22	12	21	.68	2.7	3	.02	1.0	24	.06
23	16	10	.43	2.7	4	.03	.89	10	.02
24	14	10	.38	2.7	6	.04	.74	6	.01
25	11	10	.30	2.6	8	.06	.62	8	.01
26	9.4	8	.20	2.5	6	.04	.52	10	.01
27	8.8	6	.14	2.4	5	.03	.46	20	.02
28	8.2	4	.09	2.3	6	.04	.41	31	.03
29	7.7	3	.06	2.3	8	.05	.35	25	.02
30	7.7	3	.06	2.1	6	.03	.28	22	.02
31	--	--	--	2.1	4	.02	--	--	--
TOTAL	687.4	--	499.76	127.0	--	1.72	49.87	--	1.11

11-1470.7. SANTA RITA CREEK NEAR TEMPLETON, CALIF.---Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	.26	20	.01						
2	.31	18	.02						
3	.22	16	.01						
4	.17	12	.01						
5	.16	10	0						
6	.18	7	0						
7	.23	7	0						
8	.25	7	0						
9	.24	7	0						
10	.21	7	0						
11	.18	7	0						
12	.17	7	0						
13	.16	7	0						
14	.15	7	0						
15	.15	7	0						
16	.14	7	0						
17	.12	7	0						
18	.10	7	0						
19	.09	10	0						
20	.08	10	0						
21	.06	12	0						
22	.05	14	0						
23	.03	10	0						
24	.02	5	0						
25	0	--	0						
26	0	--	0						
27	0	--	0						
28	0	--	0						
29	0	--	0						
30	0	--	0						
31	0	--	0						
TOTAL	3.73	--	.05	0	--	0	0	--	0
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									13334.88
TOTAL LOAD FOR YEAR (TONS)									98339.60

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- ERATURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE										METHOD OF ANALY- SIS	
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
DEC 16, 1968	0915	8	11	173	5.1	--	--	--	--	--	99	100	--	--	--	--	S
JAN 14, 1969	0825	8	73	77	15	58	68	83	88	88	97	98	99	100	--	--	SBWC
JAN 20.....	1600	8	482	1640	2130	24	29	37	47	57	69	86	100	--	--	--	VPWC
JAN 24.....	1500	11	354	1730	1650	17	23	28	35	43	54	71	88	97	100	--	VPWC
JAN 25.....	1600	8	1150	1740	5400	21	26	31	40	50	62	78	95	100	--	--	VPWC
JAN 27.....	0900	8	240	302	196	33	48	59	68	74	88	96	100	--	--	--	VBWC
JAN 28.....	1410	8	208	376	211	35	46	56	63	67	79	86	96	100	--	--	VBWC
FEB 23.....	0745	7	1020	4760	13100	14	19	27	34	43	54	74	95	99	100	--	VPWC
FEB 23.....	1030	8	470	2550	3240	15	16	21	24	32	40	53	78	99	100	--	VPWC
FEB 24.....	1000	9	1620	3520	15400	13	16	20	27	33	42	61	85	93	94	97	SPWC
FEB 24.....	1400	9	3530	4700	44800	22	24	34	43	52	63	79	96	100	--	--	VPWC
FEB 24.....	1600	10	2080	5900	33100	19	24	31	39	48	57	74	96	100	--	--	VPWC
MAR 14.....	1730	7	22	1560	93	47	58	74	92	99	100	--	--	--	--	--	SPWC

SALINAS RIVER BASIN

11-1488. NACIMIENTO RIVER NEAR BRYSON, CALIF.

LOCATION.--Lat 35°48'06", long 121°06'50", in NW $\frac{1}{4}$ sec.33, T.24 S., R.8 E., Monterey County, at gaging station 0.6 mile upstream from Turtle Creek, 1.6 miles west of Bryson, and 10 miles southwest of Lockwood.

DRAINAGE AREA.--140 sq mi.

PERIOD OF RECORD.--Water temperatures: March 1958 to September 1959, October 1960 to September 1964, March 1965 to September 1969.

Sediment records: March 1958 to September 1959, October 1960 to September 1964, March 1965 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 4,360 mg/l Jan. 25; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 242,000 tons Jan. 25; minimum daily, 0 tons on many days.

EXTREMES, 1958-59, 1960-64, 1965-69.--Sediment concentrations: Maximum daily, 6,860 mg/l Nov. 13, 1960;

minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 242,000 tons Jan. 25, 1969; minimum daily, 0 tons on many days each year.

REMARKS.--No flow Oct. 1 to Dec. 10, Aug. 2 to Sept. 30.

REVISIONS.--Revised figures for mean discharge, sediment concentration, and sediment load for the water year 1967,

superseding those previously published, are given herewith:

Dec. 6, 1966: Water discharge, 24,600 cfs; sediment concentration, 1,520 mg/l; sediment load, 128,000 tons.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9	--	7	--	--	4	--	6	--	--	--	--	7	--	--	8	--
JANUARY..	--	6	--	--	--	--	9	7	--	--	8	--	--	10	--	9	--	--	--	--	8	--	8	--	12	12	10	--	7	7	7	--
FEBRUARY.	--	--	7	--	--	8	--	--	8	--	11	--	--	9	--	--	10	--	--	8	--	8	--	11	9	--	--	--	--	--	--	--
MARCH....	--	--	9	--	9	8	--	--	--	9	--	9	--	11	--	--	11	--	12	--	13	--	--	14	--	15	--	16	--	--	17	--
APRIL....	--	--	--	13	--	--	11	--	--	12	--	--	16	--	--	14	--	16	--	--	--	16	--	14	--	16	--	--	16	--	--	--
MAY.....	--	--	--	16	--	--	--	18	--	--	--	19	--	--	18	--	--	22	--	--	--	24	--	--	24	--	--	21	--	--	22	--
JUNE.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	31	--	--	--	--	--	--	--
JULY.....	--	--	--	--	--	--	--	--	27	--	--	21	--	--	22	--	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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
2							0	--	0
3							0	--	0
4							0	--	0
5							0	--	0
6							0	--	0
7							0	--	0
8							0	--	0
9							0	--	0
10							0	--	0
11							51	2	.28
12							15	2	.08
13							8.2	2	.04
14							154	13	8.6
15							243	16	15
16							245	10	6.6
17							72	5	.97
18							38	3	.31
19							25	3	.20
20							20	3	.16
21							16	5	.22
22							12	5	.16
23							11	3	.09
24							46	10	8.3
25							741	109	229
26							579	50	78
27							254	8	5.5
28							216	9	5.2
29							209	10	5.6
30							146	9	3.5
31							110	7	2.1
TOTAL	0	--	0	0	--	0	3211.2	--	369.91

11-1488. NACIMIENTO RIVER NEAR BRYSON, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	89	4	.96	984	11	29	2320	90	564
2	73	3	.59	850	8	18	1700	25	115
3	66	3	.53	742	7	14	1340	13	47
4	56	3	.45	665	6	11	1050	12	34
5	52	3	.42	1310	121	892	812	11	24
6	46	2	.25	2840	212	1700	628	6	10
7	42	2	.23	1750	65	307	550	5	7.4
8	38	1	.10	1250	20	.68	477	4	5.2
9	35	1	.09	1010	9	25	426	4	4.6
10	33	1	.09	849	6	14	392	3	3.2
11	31	1	.08	916	22	81	346	2	1.9
12	29	1	.08	1830	79	447	320	2	1.7
13	1630	86	815	1140	9	28	301	2	1.6
14	1720	73	422	925	9	22	271	2	1.5
15	412	15	17	4560	1080	15700	243	2	1.3
16	246	2	1.3	2010	350	1900	225	3	1.8
17	180	2	.97	1290	300	1040	207	3	1.7
18	2110	507	9640	1160	260	814	193	2	1.0
19	13900	2410	99300	1050	110	312	183	1	.49
20	5960	1490	30500	938	25	63	175	1	.47
21	11000	1570	50900	844	7	16	188	2	1.0
22	3680	484	5760	957	10	26	161	2	.87
23	1770	98	468	2560	167	1440	149	6	2.4
24	2860	801	11400	16000	2370	125000	137	11	4.1
25	19800	4360	242000	5120	515	7680	127	8	2.7
26	12900	1960	92400	2840	155	1190	119	5	1.6
27	3300	240	2230	1980	70	374	110	4	1.2
28	2280	110	677	2790	200	1510	104	4	1.1
29	1680	57	259	--	--	--	94	3	.76
30	1400	32	121	--	--	--	86	3	.70
31	1170	18	57	--	--	--	83	3	.67
TOTAL	88588	--	546972.14	61160	--	160721	13517	--	844.96

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	77	3	.62	76	2	.41	18	1	.05
2	93	4	1.0	73	1	.20	18	1	.05
3	219	8	4.7	70	1	.19	18	1	.05
4	130	2	.70	70	1	.19	20	1	.05
5	538	178	436	68	1	.18	20	1	.05
6	850	160	367	60	2	.32	22	1	.06
7	530	30	43	58	2	.31	22	1	.06
8	389	6	6.3	58	3	.47	21	1	.06
9	329	2	1.8	58	2	.31	24	1	.06
10	291	1	.79	56	2	.30	27	1	.07
11	260	1	.70	54	1	.15	28	1	.08
12	225	1	.61	48	1	.13	30	1	.08
13	206	1	.56	44	1	.12	27	1	.07
14	191	1	.52	44	1	.12	24	1	.06
15	179	1	.48	45	2	.24	21	1	.06
16	155	2	.84	43	2	.23	19	1	.05
17	146	3	1.2	40	1	.11	19	1	.05
18	137	6	2.2	36	1	.10	18	1	.05
19	131	2	.71	35	1	.09	18	1	.05
20	128	1	.35	33	1	.09	16	1	.04
21	119	1	.32	32	1	.09	16	1	.04
22	113	1	.31	30	1	.08	16	1	.04
23	134	2	.72	28	1	.08	15	1	.04
24	140	3	1.1	28	1	.08	14	1	.04
25	113	2	.61	27	1	.07	12	4	.13
26	107	1	.29	24	1	.06	11	4	.12
27	95	1	.26	25	1	.07	11	4	.12
28	86	2	.46	24	1	.06	9.8	4	.11
29	83	3	.67	21	1	.06	9.1	4	.10
30	83	2	.45	20	1	.05	8.4	4	.09
31	--	--	--	18	1	.05	--	--	--
TOTAL	6277	--	875.27	1346	--	5.01	552.3	--	1.98

SALINAS RIVER BASIN

11-1488. NACIMIENTO RIVER NEAR BRYSON, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	7.8	3	.06	.05	1	0			
2	7.1	3	.06	0	--	0			
3	6.5	3	.05	0	--	0			
4	5.4	3	.04	0	--	0			
5	4.9	3	.04	0	--	0			
6	4.4	3	.04	0	--	0			
7	4.0	3	.03	0	--	0			
8	4.0	3	.03	0	--	0			
9	4.0	3	.03	0	--	0			
10	4.0	3	.03	0	--	0			
11	3.6	5	.05	0	--	0			
12	3.2	8	.07	0	--	0			
13	2.8	4	.03	0	--	0			
14	2.5	3	.02	0	--	0			
15	2.5	2	.01	0	--	0			
16	2.3	2	.01	0	--	0			
17	2.3	2	.01	0	--	0			
18	2.0	2	.01	0	--	0			
19	2.0	2	.01	0	--	0			
20	2.0	2	.01	0	--	0			
21	1.7	2	.01	0	--	0			
22	1.3	2	.01	0	--	0			
23	.96	2	.01	0	--	0			
24	.73	2	0	0	--	0			
25	.73	2	0	0	--	0			
26	.62	1	0	0	--	0			
27	.62	1	0	0	--	0			
28	.54	1	0	0	--	0			
29	.46	1	0	0	--	0			
30	.32	1	0	0	--	0			
31	.20	1	0	0	--	0			
TOTAL	85.48	--	.67	.05	--	0	0	--	0
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									174737.03
TOTAL LOAD FOR YEAR (TONS)									709790.94

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 14, 1969	0945	10	1690	74	338	12	30	47	56	62	77	90	97	100	--	--	SBWC	
JAN 25.....	1755	12	10800	1160	33800	7	11	15	20	25	39	55	83	98	100	--	VBWC	
JAN 26.....	1230	12	9900	1070	28600	8	12	18	24	32	45	65	87	99	100	--	VBWC	
JAN 27.....	1600	10	2840	206	1580	12	20	32	39	43	62	74	92	99	100	--	SBWC	
FEB 6.....	1115	8	2820	184	1400	7	10	21	26	28	38	52	71	84	97	100	SBWC	
FEB 15.....	1400	--	5750	768	11900	7	10	14	19	24	36	52	81	95	100	--	VBWC	
FEB 25.....	1630	11	3780	411	4190	--	4	10	14	16	32	46	72	96	100	--	SBWC	

SALINAS RIVER BASIN

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11-1499. SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF.

LOCATION.--Lat 35°53'48", long 121°05'14", in Los Ojitos Grant, Monterey County, at gaging station at highway bridge, 0.4 mile upstream from Tule Canyon, and 3.3 miles south of Lockwood.

DRAINAGE AREA.--223 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

Sediment records: October 1965 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 6,880 mg/l Jan. 25; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 158,000 tons Jan. 25; minimum daily, 0 tons on many days.

EXTREMES, 1965-69.--Sediment concentrations: Maximum daily, 7,420 mg/l Dec. 6, 1966; minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 161,000 tons Dec. 6, 1966; minimum daily, 0 tons on many days each year.

REMARKS.--No flow Oct. 1 to Dec. 16, July 24 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	12	--	10	--	--	--	--	--	--	7	9	8	12	--	9
JANUARY..	--	--	13	--	--	--	--	12	--	--	--	--	--	11	9	9	--	--	12	13	12	11	8	10	12	12	10	9	10	10	10	
FEBRUARY.	11	13	13	10	10	9	7	--	--	--	11	10	13	--	11	9	--	12	--	9	--	--	9	10	12	8	--	9	--	--	--	
MARCH....	--	--	9	10	9	13	12	13	--	--	14	--	--	--	--	15	--	--	--	--	14	--	--	--	--	20	--	--	--	--	20	--
APRIL.....	--	16	--	--	--	13	18	--	15	--	--	--	--	19	--	--	--	21	--	--	--	--	--	--	22	--	--	--	--	25	--	--
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27	--	--	29	--	--	--	--	--	30	--	--	--	--	--	--	--	--
JUNE.....	--	--	--	--	--	--	--	--	25	--	--	--	--	--	30	--	--	--	--	--	--	--	--	29	--	31	--	--	--	30	--	--
JULY.....	--	--	--	--	--	--	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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
2							0	--	0
3							0	--	0
4							0	--	0
5							0	--	0
6							0	--	0
7							0	--	0
8							0	--	0
9							0	--	0
10							0	--	0
11							0	--	0
12							0	--	0
13							0	--	0
14							0	--	0
15							0	--	0
16							0	--	0
17							13	34	1.2
18							14	3	.11
19							14	3	.11
20							12	2	.06
21							13	2	.07
22							12	2	.06
23							12	2	.06
24							14	5	.19
25							120	162	85
26							236	346	225
27							132	97	35
28							97	39	10
29							97	78	20
30							80	38	8.2
31							71	15	2.9
TOTAL	0	--	0	0	--	0	937	--	387.96

SALINAS RIVER BASIN

11-1499, SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF.--Continued

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	63	10	1.7	666	128	230	1680	200	907
2	56	10	1.5	526	252	358	1290	150	522
3	50	10	1.4	400	158	171	1020	140	386
4	44	9	1.1	336	217	197	914	200	494
5	42	8	.91	397	420	450	792	160	342
6	40	7	.76	1570	1590	6960	722	190	370
7	38	6	.62	1090	400	1180	610	250	412
8	35	4	.38	884	150	358	562	152	231
9	33	4	.36	785	130	276	508	100	137
10	31	3	.25	694	100	187	465	150	188
11	31	3	.25	631	200	341	430	222	258
12	29	3	.23	1040	316	1070	420	210	238
13	465	928	5000	680	60	110	400	200	216
14	1020	3580	11400	562	50	76	376	190	193
15	405	366	400	1560	819	4240	350	190	180
16	259	30	21	1220	150	494	328	180	159
17	182	25	12	1010	80	218	319	180	155
18	499	191	1320	956	300	774	302	180	147
19	5500	2800	43700	836	210	474	278	190	143
20	3250	3050	27200	694	25	47	274	190	141
21	5250	4760	73600	580	25	39	266	196	141
22	2580	2650	21500	586	20	32	255	190	131
23	1360	370	1360	924	279	840	247	150	100
24	1750	470	2220	4330	2030	29100	236	130	83
25	8050	6880	158000	3040	1360	11000	225	120	73
26	7830	5760	138000	2240	280	1690	218	110	65
27	2820	2200	16800	1600	100	432	218	100	59
28	2110	1680	9570	1930	240	1250	218	90	53
29	1310	780	2760	--	--	--	208	80	45
30	1010	238	649	--	--	--	201	70	38
31	836	160	361	--	--	--	194	62	32
TOTAL	46978	--	513882.46	31767	--	62594	14526	--	6639

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	183	72	36	81	30	6.6	34	9	.83
2	176	78	37	83	30	6.7	35	9	.85
3	179	120	58	83	30	6.7	34	9	.83
4	153	100	41	80	30	6.5	32	9	.78
5	208	139	101	73	30	5.9	31	9	.75
6	298	155	125	65	30	5.3	30	8	.65
7	251	100	68	59	30	4.8	31	8	.67
8	240	100	65	58	30	4.7	28	8	.60
9	200	104	56	60	35	5.7	28	8	.60
10	170	100	46	63	35	6.0	29	8	.63
11	150	95	38	63	35	6.0	27	8	.58
12	130	90	32	66	40	7.1	27	8	.58
13	120	90	29	75	40	8.1	29	7	.55
14	115	86	27	78	40	8.4	26	7	.49
15	110	80	24	75	40	8.1	25	7	.47
16	105	70	20	71	42	8.1	24	7	.45
17	100	60	16	65	40	7.0	22	7	.42
18	96	58	15	61	40	6.6	21	7	.40
19	92	50	12	60	35	5.7	22	7	.42
20	88	50	12	57	30	4.6	20	6	.32
21	85	50	11	56	25	3.8	19	6	.31
22	84	50	11	53	20	2.9	19	5	.26
23	90	50	12	50	15	2.0	18	4	.19
24	95	100	26	49	12	1.6	17	4	.18
25	92	126	31	49	10	1.3	15	5	.20
26	85	100	23	45	10	1.2	14	6	.23
27	80	70	15	44	10	1.2	14	6	.23
28	76	50	10	44	10	1.2	14	6	.23
29	76	40	8.2	43	10	1.2	14	7	.26
30	78	31	6.5	42	10	1.1	14	8	.30
31	--	--	--	39	10	1.1	--	--	--
TOTAL	4005	--	1011.7	1890	--	147.2	713	--	14.26

11-1499. SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	14	7	.26						
2	13	7	.25						
3	13	6	.21						
4	13	6	.21						
5	12	6	.19						
6	11	5	.15						
7	12	5	.16						
8	12	5	.16						
9	11	5	.15						
10	11	5	.15						
11	11	4	.12						
12	10	4	.11						
13	9.9	4	.11						
14	9.4	4	.10						
15	8.9	4	.10						
16	8.2	3	.07						
17	7.8	3	.06						
18	7.1	3	.06						
19	6.7	3	.05						
20	6.0	3	.05						
21	5.2	3	.04						
22	3.5	3	.03						
23	.57	3	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	216.27	--	2.79	0	--	0	0	--	0

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

101032.27

TOTAL LOAD FOR YEAR (TONS)

584679.37

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 14, 1969	0835	11	1140	4240	13100	2	3	4	5	6	8	12	35	87	97	100	VBWC
JAN 15.....	0815	9	440	258	307	--	2	4	5	6	12	20	35	69	96	100	SBWC
JAN 19.....	1720	12	6340	3360	57500	12	15	20	26	33	41	59	74	85	99	100	VPWC
JAN 20.....	0845	12	2990	3630	29300	3	5	6	8	9	16	41	74	92	98	100	VBWC
JAN 21.....	1505	12	6190	4360	72900	10	12	17	22	31	42	67	84	95	100	--	VPWC
JAN 22.....	0820	10	2730	4200	31000	3	4	5	7	8	14	33	66	80	94	100	VBWC
JAN 22.....	1210	11	2420	1820	11900	5	7	9	12	16	23	46	81	92	100	--	VPWC
JAN 25.....	0900	12	8220	10700	237000	11	13	16	20	26	35	55	80	95	99	100	SPWC
JAN 26.....	1225	12	8500	5620	129000	10	13	15	21	28	38	71	89	94	99	100	VPWC
JAN 26.....	1635	12	4880	4320	56900	7	9	13	18	23	33	67	91	96	99	100	VPWC
JAN 27.....	1115	10	2480	1860	12500	5	7	8	11	15	19	39	83	98	100	--	VPWC
JAN 29.....	1320	10	1170	627	1980	2	3	6	8	9	14	28	76	95	99	100	SBWC
FEB 18.....	1440	12	964	554	1440	--	--	1	2	3	5	13	61	93	100	--	SBWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE											METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
DEC 10, 1968	1345		5	0	--	1	6	29	50	65	73	80	87	100	--	S
DEC 17.....	1515		3	14	--	--	2	25	63	89	97	98	100	--	--	S
JAN 22, 1969	1210		5	2420	--	--	1	11	33	65	83	92	98	100	--	S
JAN 26.....	1225		5	8500	--	--	1	5	30	60	79	90	100	--	--	S
JAN 26.....	1635		5	4880	--	--	--	3	24	55	74	85	100	--	--	S
JAN 27.....	1115		5	2480	--	--	1	5	29	65	85	93	100	--	--	S
JAN 29.....	1320		5	1170	--	5	23	44	63	80	87	93	100	--	--	S
FEB 11.....	1740		5	592	--	--	6	30	56	74	83	89	96	100	--	S
FEB 25.....	1700		5	2610	--	3	17	35	52	70	80	87	94	100	--	S
MAY 16.....	1340		3	70	--	--	3	30	69	88	94	98	100	--	--	S
JUN 26.....	1530		3	16	--	--	4	34	72	90	96	99	100	--	--	S

SALINAS RIVER BASIN

11-1518.7. ARROYO SECO NEAR GREENFIELD, CALIF.

LOCATION.--Lat 36°14'15", long 121°28'50", in NE¼SE¼ sec.36, T.19 S., R.4 E., Monterey County, at gaging station 0.6 mile downstream from Rocky Creek, and 14.6 miles southwest of Greenfield.

DRAINAGE AREA.--113 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1962 to September 1969.

Sediment records: October 1962 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 1,340 mg/l Jan. 25; minimum daily, 1 mg/l on many days. Sediment loads: Maximum daily, 38,200 tons Jan. 25; minimum daily, 0 tons on several days during October.

EXTREMES, 1962-69.--Water temperatures (1964-66): Minimum, 4°C Dec. 18, 20-24, 1965.

Sediment concentrations: Maximum daily, 3,040 mg/l Dec. 6, 1966; minimum daily, no flow Aug. 25-27, 1966, Aug. 17, 1968.

Sediment loads: Maximum daily, 84,800 tons Dec. 6, 1966; minimum daily, 0 tons on many days in 1966 and 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER..	19	--	--	21	--	--	17	--	--	18	--	18	17	16	14	--	--	16	--	--	14	--	17	--	--	17	--	--	--	13	--	--		
NOVEMBER.	14	14	14	14	12	13	11	14	15	15	13	14	12	10	12	13	13	12	12	--	12	11	--	--	9	10	9	7	8	9	--	12		
DECEMBER.	8	7	7	7	7	6	8	9	7	9	9	7	8	9	9	8	7	6	6	--	--	5	--	6	8	8	6	8	--	--	6	--	7	
JANUARY..	--	6	--	7	7	--	--	8	--	6	6	--	9	--	--	8	--	8	11	10	10	10	10	--	12	12	11	10	9	9	8	--	--	
FEBRUARY.	--	9	8	8	9	9	--	11	--	11	10	--	10	10	--	--	--	--	12	--	--	8	9	10	9	10	10	--	--	--	--	--	--	
MARCH....	11	--	--	9	--	10	9	--	9	--	--	8	--	--	--	10	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
APRIL....	--	--	--	--	--	--	10	--	--	12	--	--	11	--	--	--	--	--	--	11	--	--	--	--	--	13	--	--	--	15	--	--	--	
MAY.....	--	15	--	--	--	--	--	--	--	--	--	--	17	16	--	--	17	--	--	18	17	--	--	--	19	15	--	17	--	20	--	--	--	
JUNE.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16	--	--	--	--	--	--	--	
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25	--	--	27	--	--	--	27	--	--	26	--	--	--	--	
AUGUST...	25	--	--	24	--	--	--	25	--	--	26	--	--	--	--	--	--	--	26	--	--	--	25	--	--	--	--	--	25	--	--	26	--	--
SEPTEMBER	--	--	--	--	25	--	--	--	--	25	--	20	--	--	25	--	--	--	--	--	--	22	--	23	--	25	--	--	--	--	23	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	.60	3	0	4.2	1	.01	8.4	1	.02
2	.75	4	.01	4.5	1	.01	8.5	2	.05
3	.90	10	.02	14	3	.11	8.0	3	.06
4	1.0	14	.04	13	4	.14	7.8	1	.02
5	.90	5	.01	7.5	5	.10	7.7	1	.02
6	.80	3	.01	6.3	1	.02	7.8	1	.02
7	1.2	1	0	5.9	1	.02	8.0	7	.15
8	1.3	1	0	5.7	1	.02	8.5	1	.02
9	1.5	1	0	5.6	1	.02	8.2	7	.15
10	1.6	1	0	5.5	2	.03	9.5	10	.26
11	1.6	1	0	5.6	1	.02	28	7	.53
12	1.9	2	.01	5.7	1	.02	17	1	.05
13	2.5	4	.03	5.7	1	.02	13	1	.04
14	3.6	1	.01	6.3	1	.02	70	20	5.5
15	3.3	2	.02	20	3	.16	142	24	21
16	3.0	2	.02	16	1	.04	114	20	7.9
17	2.8	1	.01	12	1	.03	38	2	.21
18	2.7	1	.01	10	1	.03	26	1	.07
19	2.6	1	.01	10	2	.05	22	2	.12
20	2.5	1	.01	9.6	3	.08	20	2	.11
21	2.5	1	.01	9.3	2	.05	18	2	.10
22	2.5	1	.01	9.2	1	.02	16	2	.09
23	2.5	1	.01	9.0	2	.05	16	1	.04
24	2.5	1	.01	8.8	8	.19	25	2	.24
25	2.5	1	.01	8.8	1	.02	296	44	48
26	2.4	1	.01	8.9	1	.02	248	8	6.4
27	2.4	1	.01	9.0	1	.02	101	2	.55
28	2.5	1	.01	8.6	2	.05	95	7	2.5
29	2.7	2	.01	8.5	1	.02	88	7	1.7
30	3.3	2	.02	8.4	2	.05	60	1	.16
31	3.8	1	.01	--	--	--	48	1	.13
TOTAL	66.65	--	.34	261.6	--	1.44	1583.4	--	96.21

SALINAS RIVER BASIN

11-1518.7. ARROYO SECO NEAR GREENFIELD, CALIF.---Continued

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SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	40	1	.11	736	7	14	2120	33	189
2	35	1	.09	663	6	11	1720	26	121
3	31	1	.08	602	4	6.5	1470	26	103
4	28	1	.08	621	4	6.7	1260	27	92
5	26	1	.07	897	22	88	1090	15	44
6	24	1	.06	1580	44	191	967	5	13
7	22	1	.06	1180	21	67	869	3	7.0
8	22	1	.06	941	12	30	785	2	4.2
9	20	1	.05	811	8	18	724	2	3.9
10	20	1	.05	729	6	12	681	2	3.7
11	19	1	.05	1100	21	105	613	2	3.3
12	19	1	.05	1490	32	129	582	2	3.1
13	1560	191	1460	1070	12	35	537	2	2.9
14	775	28	59	917	8	20	494	1	1.3
15	304	1	.82	2740	101	815	459	1	1.2
16	179	1	.48	1680	21	95	430	1	1.2
17	128	1	.35	1340	10	36	409	1	1.1
18	1620	134	1750	1220	6	20	395	1	1.1
19	5890	682	11900	1140	5	15	377	2	2.0
20	3290	209	2570	999	5	13	375	2	2.0
21	6170	694	13800	904	5	12	370	2	2.0
22	2700	140	1020	841	4	9.1	342	2	1.8
23	1370	106	148	1240	40	157	323	2	1.7
24	1920	106	1190	6240	686	13700	309	2	1.7
25	9520	1340	38200	3430	115	1120	295	2	1.6
26	8590	1310	37500	2410	55	358	281	2	1.5
27	2870	150	1160	1900	29	149	270	2	1.5
28	1810	40	195	2420	64	429	260	2	1.4
29	1280	15	52	--	--	--	251	2	1.4
30	1030	10	28	--	--	--	243	2	1.3
31	846	9	21	--	--	--	236	2	1.3
TOTAL	52158	--	111055.46	41841	--	17661.3	19537	--	617.2

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	229	2	1.2	127	2	.69	63	5	.85
2	247	2	1.3	126	2	.68	64	5	.86
3	281	2	1.5	124	2	.67	63	5	.85
4	225	2	1.2	124	2	.67	62	5	.84
5	576	20	31	119	2	.64	63	5	.85
6	558	8	12	116	1	.31	63	5	.85
7	437	3	3.5	114	1	.31	61	5	.82
8	371	2	2.0	112	1	.30	61	5	.82
9	336	2	1.8	111	1	.30	64	5	.86
10	297	1	.80	108	1	.29	66	5	.89
11	271	1	.73	105	1	.28	66	5	.89
12	253	1	.68	102	1	.28	65	5	.88
13	236	1	.64	102	1	.28	60	5	.81
14	225	1	.61	102	1	.28	56	5	.76
15	215	1	.58	98	1	.26	53	5	.72
16	201	1	.54	96	1	.26	50	5	.68
17	190	1	.51	92	1	.25	49	5	.66
18	183	1	.49	90	1	.24	52	5	.70
19	176	1	.48	89	1	.24	54	5	.73
20	169	1	.46	85	1	.23	51	5	.69
21	162	1	.44	84	1	.23	49	5	.66
22	159	1	.43	82	2	.44	46	5	.62
23	184	1	.50	80	2	.43	43	5	.58
24	169	1	.46	78	1	.21	42	8	.91
25	156	1	.42	76	1	.21	41	10	1.1
26	148	1	.40	75	1	.20	41	10	1.1
27	142	1	.38	76	1	.21	39	5	.53
28	137	3	1.1	73	5	.99	39	5	.53
29	134	4	1.4	69	8	1.5	38	5	.51
30	130	3	1.1	67	5	.90	36	5	.49
31	--	--	--	64	5	.86	--	--	--
TOTAL	7197	--	68.65	2966	--	13.64	1600	--	23.04

SALINAS RIVER BASIN

11-1518.7. ARROYO SECO NEAR GREENFIELD, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	35	5	.47	13	6	.21	4.6	5	.06
2	33	5	.45	13	5	.18	4.5	4	.05
3	32	5	.43	12	4	.13	3.9	3	.03
4	31	5	.42	10	4	.11	3.6	2	.02
5	30	5	.41	9.8	4	.11	3.5	2	.02
6	29	5	.39	9.3	4	.10	3.8	2	.02
7	30	5	.41	9.2	6	.15	5.5	2	.03
8	29	5	.39	10	8	.22	6.7	2	.04
9	28	5	.38	13	7	.25	5.6	5	.08
10	27	5	.36	11	6	.18	4.8	7	.09
11	26	5	.35	8.4	6	.14	4.2	4	.05
12	25	5	.34	8.7	6	.14	4.1	1	.01
13	25	5	.34	10	6	.16	3.9	2	.02
14	24	5	.32	9.7	6	.16	3.7	4	.04
15	23	5	.31	9.3	6	.15	3.9	5	.05
16	22	5	.30	8.9	5	.12	4.1	3	.03
17	22	7	.42	8.7	5	.12	4.7	3	.04
18	21	9	.51	8.8	5	.12	5.0	2	.03
19	21	8	.45	8.7	5	.12	5.4	2	.03
20	20	7	.38	8.8	5	.12	5.5	2	.03
21	19	6	.31	8.8	4	.10	5.9	2	.03
22	18	6	.29	8.3	4	.09	6.2	2	.03
23	17	6	.28	8.8	4	.10	5.8	2	.03
24	17	12	.55	9.2	4	.10	5.5	5	.07
25	17	16	.73	7.5	4	.08	5.1	8	.11
26	17	15	.69	7.3	3	.06	4.9	7	.09
27	16	14	.60	7.3	3	.06	4.9	5	.07
28	17	14	.64	7.4	3	.06	5.2	3	.04
29	18	10	.49	6.8	3	.06	5.1	2	.03
30	16	8	.35	6.0	5	.08	4.8	1	.01
31	15	7	.28	5.7	7	.11	--	--	--
TOTAL	720	--	13.04	283.4	--	3.89	144.4	--	1.28
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									128358.45
TOTAL LOAD FOR YEAR (TONS)									129555.49

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 13, 1969	1120	9	1110	125	375	--	--	--	--	--	94	96	99	100	--	--	S	
JAN 13.....	1250	9	2460	194	1290	21	27	43	51	58	72	84	95	100	--	--	SBWC	
JAN 13.....	1425	11	3680	490	4870	18	27	37	46	52	73	85	94	98	100	--	SBWC	
JAN 19.....	1105	11	5300	536	7670	10	15	23	32	40	55	70	88	100	--	--	VBWC	
JAN 20.....	0955	10	2170	66	387	--	--	--	--	--	26	45	70	92	100	--	S	
JAN 21.....	1035	--	8900	1120	26900	7	12	18	25	33	48	66	86	98	100	--	VBWC	
JAN 25.....	0835	12	13800	1640	61100	5	8	12	16	22	32	48	73	97	100	--	VBWC	
FEB 15.....	1035	10	3450	141	1310	--	1	3	9	15	27	41	62	87	98	100	SBWC	
FEB 24.....	0925	9	8660	827	19300	7	11	16	22	27	39	54	77	96	100	--	VBWC	

SALINAS RIVER BASIN

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11-1523. SALINAS RIVER NEAR CHUALAR, CALIF.

LOCATION.--Lat 36°33'14", long 121°32'50", in Guadalupe y Llanitos de Los Correos Grant, Monterey County, at county bridge on Chualar-River Road, 2 miles southwest of Chualar, and approximately 14 miles upstream from gaging station near Spreckels.

PERIOD OF RECORD.--Water temperatures: December 1966 to September 1969.

Sediment records: December 1966 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 18,900 mg/l Feb. 25; minimum daily, 6 mg/l Dec. 5.

Sediment loads: Maximum daily, 2,790,000 tons Feb. 26; minimum daily, 0.04 ton Oct. 30, 31.

EXTREMES, 1966-69.--Sediment concentrations: Maximum daily, 18,900 mg/l Feb. 25, 1969; minimum daily, no flow for several days in February and March 1968.

Sediment loads: Maximum daily, 2,790,000 tons Feb. 26, 1969; minimum daily, 0 tons on several days in February and March 1968.

REMARKS.--Chemical-quality data published for this station in the 1967 water year are now reported as 11-1525.

Salinas River near Spreckels. Records of discharge are given for 11-1525. Salinas River near Spreckels. No appreciable inflow between sampling point and gaging station except during periods of heavy local flow.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	15	--	16	--	10	--	10	--	16	--	24	--	10	21	16	--	--	10	--	22	--	21	--	10	10	9	--	9	--	10	--	--	
NOVEMBER..	9	--	--	9	--	10	14	10	--	15	--	10	--	10	--	10	--	18	--	7	--	--	10	--	--	--	9	--	11	--	--	--	
DECEMBER..	--	15	--	10	--	7	--	9	--	9	--	--	--	--	--	--	12	--	--	9	--	9	--	4	--	7	--	10	--	--	--	--	
JANUARY..	4	--	4	--	--	--	--	14	--	--	--	10	10	15	--	--	8	10	11	9	13	11	9	8	9	14	12	8	9	9	9	--	
FEBRUARY..	--	--	11	10	9	9	10	9	9	9	9	10	10	9	10	9	9	9	8	8	8	8	7	9	9	7	7	7	10	10	10	9	
MARCH....	12	7	11	7	--	--	--	--	--	--	--	--	--	9	9	9	8	9	9	9	11	10	10	10	9	8	10	10	10	10	10	--	
APRIL....	--	--	--	15	--	--	--	--	10	9	9	9	11	15	15	15	12	--	--	12	--	17	16	15	--	15	16	--	10	--	--	--	
MAY.....	14	--	10	--	16	--	18	--	16	--	18	17	18	--	12	--	12	--	14	--	16	--	18	--	17	--	18	--	17	17	--	--	
JUNE.....	--	16	--	17	--	17	--	17	--	17	--	17	--	17	--	17	--	17	--	18	--	17	--	18	--	18	--	18	--	18	--	--	--
JULY.....	18	--	18	--	17	--	17	--	17	--	17	--	17	--	18	--	21	--	21	--	16	--	14	--	16	--	16	--	16	--	16	--	--
AUGUST....	--	16	--	23	--	23	--	24	--	16	23	16	--	14	--	15	--	17	--	17	--	16	--	17	--	18	--	16	--	16	--	--	--
SEPTEMBER	13	--	16	--	16	--	19	--	18	--	18	--	18	--	19	--	18	--	16	--	16	--	16	--	16	--	16	--	17	--	21	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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		.94	71		.95	28		.07	.49
2	1.4	50	.19	1.7	28	.13	4.4	39	.46
3	2.5	40	.27	1.7	28	.13	4.3	20	.23
4	2.1	30	.17	.60	28	.05	3.9	7	.07
5	2.0	25	.14	.72	28	.05	4.3	6	.07
6	2.0	25	.14	1.0	30	.08	3.9	10	.11
7	2.0	25	.14	1.4	26	.10	3.3	10	.09
8	2.0	25	.14	1.7	20	.09	3.3	10	.09
9	2.0	25	.14	2.2	20	.12	2.8	10	.08
10	2.0	25	.14	3.2	19	.16	3.6	10	.10
11	2.0	25	.14	2.5	19	.13	3.3	10	.09
12	2.0	25	.14	3.4	19	.17	3.0	10	.08
13	2.4	30	.19	3.6	19	.18	2.8	10	.08
14	2.7	30	.22	4.4	19	.23	3.6	10	.10
15	2.9	30	.23	6.3	19	.32	3.6	10	.10
16	3.1	30	.25	5.4	19	.28	2.6	10	.07
17	5.7	30	.46	7.2	15	.29	2.4	16	.10
18	14	35	1.3	5.0	14	.19	2.8	55	.42
19	14	35	1.3	4.3	14	.16	2.6	112	.79
20	15	35	1.4	5.6	14	.21	2.8	122	.92
21	15	35	1.4	5.9	13	.21	2.6	85	.60
22	15	38	1.5	6.2	13	.22	2.8	43	.33
23	16	30	1.3	6.6	13	.23	3.0	25	.20
24	16	20	.86	6.2	15	.25	2.8	29	.22
25	15	28	1.1	5.9	17	.27	3.6	29	.28
26	9.3	25	.63	6.2	19	.32	4.3	20	.23
27	4.9	25	.33	5.9	20	.32	2.4	13	.08
28	3.6	25	.24	5.3	18	.26	2.8	19	.14
29	.94	25	.06	5.3	16	.23	2.2	30	.18
30	.65	25	.04	5.0	25	.34	2.4	35	.23
31	.62	25	.04	--	--	--	2.4	37	.24
TOTAL	179.75	--	14.78	121.37	--	5.79	99.6	--	7.27

SALINAS RIVER BASIN

11-1523. SALINAS RIVER NEAR CHUALAR, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1	37	.10	7140	1200	23100	16600	8800	394000
2	1	34	.09	6090	1400	23000	15300	12000	496000
3	1	30	.08	5790	1590	24900	12000	8100	262000
4	1	27	.07	5200	1190	16700	10500	7200	204000
5	1	25	.07	4800	730	9460	8950	7000	169008
6	1	21	.06	5200	2450	34400	8190	6500	144000
7	2	19	.10	6890	3290	64200	7420	6000	120000
8	3	15	.12	11500	4020	128000	7000	5500	104000
9	3	13	.11	6510	1840	32300	6500	5000	87800
10	3	10	.08	4850	1320	17300	6100	4500	74100
11	2	10	.05	4680	890	11200	5700	4000	61600
12	3	802	11	4990	960	12900	5400	3000	43700
13	4	1610	19	4340	1200	14100	5000	2000	27000
14	3	450	3.6	3680	700	6960	4700	1650	20900
15	234	2830	2560	3620	1100	11600	4400	1290	15300
16	108	3010	968	5000	2980	40700	4100	1050	11600
17	26	1430	112	5540	2870	43400	3900	850	8950
18	8	260	5.6	4270	1320	15200	3720	750	7530
19	39	410	136	4380	1300	15400	3620	670	6550
20	3370	6550	63300	4680	1400	17700	3520	750	7130
21	4200	4740	54100	4230	1000	11400	3380	630	5750
22	11000	2020	57500	4110	920	10200	3300	760	6770
23	16400	3110	138000	4660	1000	12600	3100	640	5360
24	10500	1350	42100	8390	5410	158000	2900	550	4310
25	4920	429	6080	36100	18900	2090000	2700	480	3500
26	18800	12000	895000	64800	15100	2790000	2620	500	3540
27	53400	15000	2340000	26400	7750	562000	2700	530	3860
28	26900	4870	374000	18300	5700	282000	2580	500	3480
29	14500	1900	74400	--	--	--	2240	530	3210
30	11400	1400	43100	--	--	--	2100	500	2840
31	8900	1200	28800	--	--	--	2140	360	2080
TOTAL	184734	--	4120196.13	276140	--	6478720	172380	--	2309860

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	2160	400	2330	500	91	123	440	100	119
2	2000	430	2320	470	80	102	435	104	122
3	2060	670	3730	450	72	87	430	100	116
4	2460	1570	10800	440	75	89	430	96	111
5	2880	3300	25700	600	76	123	430	90	104
6	3340	2960	26400	730	100	197	435	80	94
7	3260	1200	10600	760	152	312	440	80	95
8	3000	670	5430	760	150	308	440	81	96
9	3160	630	5380	750	156	316	430	75	87
10	2800	660	4990	730	150	296	420	70	79
11	2700	480	3500	720	152	295	415	70	78
12	3180	450	3860	690	149	278	425	85	98
13	2800	440	3330	680	98	180	435	90	106
14	2400	470	3050	660	97	173	430	90	104
15	2100	450	2550	650	96	168	425	90	103
16	1900	400	2050	630	100	170	420	84	95
17	1700	350	1610	620	104	174	425	100	115
18	1500	300	1220	610	100	165	425	144	165
19	1350	300	1090	600	100	162	425	150	172
20	1250	290	979	580	90	141	420	177	201
21	1100	280	832	570	90	139	405	100	109
22	1000	280	756	560	80	121	405	88	96
23	920	180	447	540	80	117	400	80	86
24	840	150	340	530	80	114	400	73	79
25	770	150	312	520	74	104	391	90	95
26	720	80	156	500	80	108	396	102	109
27	670	80	145	490	88	116	405	80	87
28	620	80	134	480	85	110	405	62	68
29	580	70	110	470	86	109	400	64	69
30	520	70	98	460	90	112	396	66	71
31	--	--	--	450	98	119	--	--	--
TOTAL	55740	--	124249	18200	--	5128	12578	--	3129

11-1523. SALINAS RIVER NEAR CHUALAR, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	386	122	127	199	100	54	213	52	30
2	368	120	119	196	90	48	230	110	68
3	347	114	107	190	130	67	244	182	120
4	338	90	82	186	160	80	244	100	66
5	334	76	69	186	130	65	220	62	37
6	330	75	67	183	110	54	196	60	32
7	326	72	63	183	100	49	213	60	35
8	338	80	73	180	96	47	196	60	32
9	338	82	75	180	120	58	183	57	28
10	321	90	78	180	142	69	196	60	32
11	313	100	85	180	81	39	209	60	34
12	305	90	74	180	123	60	230	100	62
13	298	80	64	180	100	49	247	149	99
14	290	82	64	176	92	44	294	130	103
15	283	84	64	176	92	44	368	165	164
16	272	90	66	180	95	46	391	200	211
17	264	92	66	183	95	47	420	224	254
18	261	80	56	183	94	46	420	250	284
19	261	74	52	180	110	53	425	312	358
20	254	65	45	183	130	64	435	280	329
21	250	60	41	180	140	68	435	264	310
22	247	70	47	176	157	75	440	240	285
23	240	84	54	176	150	71	445	221	266
24	230	100	62	176	148	70	450	180	219
25	220	112	67	180	100	49	450	151	183
26	216	90	52	180	48	23	456	140	172
27	216	82	48	180	50	24	450	132	160
28	216	90	52	180	50	24	445	130	156
29	216	105	61	180	55	27	456	122	150
30	209	105	59	183	61	30	461	120	149
31	203	103	56	196	60	32	--	--	--
TOTAL	8690	--	2095	5651	--	1576	10062	--	4428
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									744575.72
TOTAL LOAD FOR YEAR (TONS)									13049408.97

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 13, 1969	1730	10	5.6	1300	20	44	53	65	75	79	84	88	98	100	--	--	SBWC
JAN 18.....	0745	9	8.6	167	3.9	62	80	88	93	94	94	96	98	100	--	--	SBWC
JAN 20.....	0700	9	2100	6700	38000	66	81	93	95	96	100	--	--	--	--	--	SPWC
JAN 21.....	1730	15	3980	3940	42300	66	81	93	95	97	97	97	98	100	--	--	SPWC
JAN 22.....	1330	11	11200	1530	46300	80	95	99	99	99	100	--	--	--	--	--	SBWC
JAN 26.....	1350	14	12800	14800	511000	54	72	88	96	96	98	98	99	100	--	--	VPWC
JAN 27.....	1600	12	42600	11700	1350000	46	60	72	79	81	82	85	95	99	100	--	VPWC
JAN 29.....	1700	9	13700	1440	53300	43	56	67	76	81	84	88	99	100	--	--	SBWC
FEB 4.....	1200	10	D5200	1260	17700	18	22	26	30	31	33	34	50	96	100	--	VPWC
FEB 16.....	0930	9	5310	3350	48000	58	69	86	93	94	100	--	--	--	--	--	SPWC
FEB 26.....	0345	--	79500	22600	4850000	46	52	69	81	87	91	94	99	100	--	--	VPWC
MAR 1.....	1330	12	16700	7960	359000	24	30	35	45	56	69	90	98	100	--	--	VPWC
MAR 3.....	1520	11	11900	7940	255000	18	19	26	33	42	54	77	94	100	--	--	VPWC
APR 4.....	1220	15	2380	1440	9250	8	10	13	15	19	26	52	92	100	--	--	VPWC

D Daily mean discharge.

SALINAS RIVER BASIN

11-1525. SALINAS RIVER NEAR SPRECKELS, CALIF.

LOCATION (revised).--Lat 36°37'52", long 121°40'17", in National Grant, Monterey County, at gaging station at bridge on Salinas-Monterey highway, 0.8 mile upstream from El Toro Creek, 1.6 miles northwest of Spreckels, and 2 miles south of Salinas.

DRAINAGE AREA.--4,156 sq mi (revised).

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV. 15...	1015	5.6	--	6.3	--	--	112	--	565	6	--	137
JAN. 15...	1045	382	8	10.0	--	--	14	--	91	0	--	11
MAR. 05...	1010	8950	12	10.9	--	--	28	--	137	0	--	19
MAY 14...	0900	740	16	9.5	51	20	32	2.4	164	0	95	25
SEPT. 03...	1020	244	20	10.0	--	--	23	--	159	0	--	18

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 15...	--	230	--	--	472	0	34	2.2	473	8.5	1420
JAN. 15...	--	90	--	--	102	27	23	.6	75	7.8	255
MAR. 05...	--	100	--	--	172	60	26	.9	112	8.2	474
MAY 14...	2.8	100	368	.50	210	75	25	1.0	135	7.9	531
SEPT. 03...	--	0	--	--	180	50	22	.7	130	7.8	437

11-1539. UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL, CALIF.

LOCATION.--Lat 37°05'34", long 121°43'02", in Las Uvas Grant, Santa Clara County, at gaging station 0.6 mile downstream from Little Uvas Creek, 0.9 mile upstream from Hay Canyon, and 4.4 miles southwest of Morgan Hill.

DRAINAGE AREA.--21.0 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

Sediment records: October 1965 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 1,940 mg/l Jan. 19; minimum daily, 1 mg/l on many days.

Sediment loads: Maximum daily, 9,980 tons Jan. 19; minimum daily, 0 tons on many days.

EXTREMES, 1965-69.--Sediment concentrations: Maximum daily, 2,400 mg/l Jan. 21, 1967; minimum daily, 1 mg/l on many days each year.

Sediment loads: Maximum daily, 22,200 tons Jan. 21, 1967; minimum daily, 0 tons on many days in 1965-68.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	23	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	--	--	13	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER..	--	--	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER..	--	--	--	5	--	--	--	--	--	--	8	--	9	--	--	7	5	--	6	5	--	--	--	8	--	9	--	--	--	--	--	--	--
JANUARY..	--	--	--	--	--	--	--	8	--	--	--	--	--	--	9	--	7	10	--	13	13	10	10	11	13	--	10	--	9	8	9	--	
FEBRUARY..	--	--	10	--	10	9	10	--	--	11	12	--	10	--	11	--	10	10	11	--	10	--	--	9	10	11	--	10	--	--	--	--	--
MARCH....	--	--	9	--	12	--	10	--	--	--	10	--	10	--	11	--	--	12	--	13	--	--	12	--	14	--	15	--	15	--	--	15	--
APRIL....	--	--	12	--	10	--	--	14	--	--	--	13	--	--	15	--	--	14	--	--	--	15	--	10	--	--	10	--	--	12	--	--	--
MAY.....	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	.14	8	0	1.0	5	.01	1.0	1	0
2	.28	8	.01	1.0	5	.01	1.2	1	0
3	.28	8	.01	4.5	10	.12	1.0	1	0
4	.23	8	0	2.0	6	.03	.92	1	0
5	.23	8	0	1.2	2	.01	.80	1	0
6	.34	8	.01	1.0	2	.01	.92	1	0
7	.34	8	.01	1.5	2	.01	.92	1	0
8	.23	8	0	1.2	2	.01	1.0	1	0
9	.28	8	.01	1.0	2	.01	1.3	4	.01
10	.18	8	0	1.0	2	.01	13	18	1.1
11	.18	8	0	1.0	2	.01	8.8	21	.54
12	.80	8	.02	1.6	2	.01	3.2	12	.10
13	2.0	10	.05	1.3	2	.01	2.2	5	.03
14	1.2	8	.03	1.3	2	.01	9.2	8	.19
15	.92	6	.01	5.9	30	.48	48	219	73
16	.80	5	.01	3.0	10	.08	17	39	2.8
17	.68	5	.01	2.0	4	.02	9.9	3	.08
18	.68	5	.01	1.3	2	.01	6.9	3	.06
19	.80	5	.01	1.3	2	.01	5.9	2	.03
20	.80	5	.01	1.3	1	0	5.1	1	.01
21	.40	5	.01	.92	1	0	4.5	1	.01
22	.58	5	.01	.48	1	0	4.2	1	.01
23	.68	5	.01	.48	1	0	4.0	1	.01
24	.68	5	.01	.80	1	0	5.6	2	.03
25	.40	5	.01	1.3	1	0	30	29	3.2
26	.58	5	.01	1.3	1	0	48	34	5.3
27	.58	5	.01	.80	1	0	14	7	.26
28	.48	5	.01	.80	1	0	23	12	.92
29	.68	5	.01	.80	1	0	16	5	.22
30	.80	5	.01	.92	1	0	9.9	5	.13
31	1.0	5	.01	--	--	--	8.8	4	.10
TOTAL	18.25	--	.32	44.00	--	.87	306.26	--	88.14

PAJARO RIVER BASIN

11-1539. UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	7.3	4	.08	121	12	3.9	362	34	36
2	6.9	4	.07	102	10	2.8	255	20	14
3	6.3	4	.07	89	8	1.9	197	13	6.9
4	5.4	4	.06	80	4	.86	160	10	4.3
5	4.8	4	.05	165	62	57	134	6	2.2
6	4.3	3	.03	378	125	145	115	5	1.6
7	3.8	3	.03	193	22	12	100	4	1.1
8	3.8	3	.03	153	18	7.4	88	4	.95
9	3.6	3	.03	134	17	6.2	79	5	1.1
10	3.4	3	.03	116	15	4.7	71	5	.96
11	3.6	4	.04	370	243	426	64	4	.69
12	3.3	3	.03	278	152	129	61	3	.49
13	357	550	790	180	18	8.7	56	2	.30
14	83	223	60	158	24	10	51	2	.28
15	27	27	2.0	898	440	1330	46	2	.25
16	18	4	.19	305	50	41	42	1	.11
17	14	3	.11	217	21	12	39	1	.11
18	515	979	3840	183	12	5.9	36	4	.39
19	1700	1940	9980	158	9	3.8	33	8	.71
20	877	386	974	132	7	2.5	36	5	.49
21	701	297	607	117	7	2.2	37	2	.20
22	293	97	80	117	6	1.9	37	2	.20
23	185	32	16	273	97	93	34	2	.18
24	304	139	342	689	376	1010	31	2	.17
25	1060	562	1830	411	75	83	30	2	.16
26	916	354	1190	253	31	21	28	3	.23
27	299	77	67	222	20	12	27	3	.22
28	238	28	18	584	241	405	26	2	.14
29	177	17	8.1	--	--	--	25	2	.14
30	201	28	16	--	--	--	23	3	.19
31	145	15	5.9	--	--	--	22	3	.18
TOTAL	8166.5	--	19826.85	7076	--	3838.76	2345	--	74.94

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	22	3	.18	13	6	.21	6.8	2	.04
2	23	3	.19	13	5	.18	6.7	2	.04
3	22	3	.18	13	5	.18	6.5	2	.04
4	20	3	.16	12	4	.13	6.4	2	.03
5	80	64	19	11	4	.12	6.1	2	.03
6	87	41	11	11	3	.09	6.6	2	.04
7	52	15	2.1	11	3	.09	6.6	2	.04
8	41	4	.44	11	3	.09	6.8	2	.04
9	37	4	.40	10	3	.08	7.0	2	.04
10	33	4	.36	10	3	.08	7.6	2	.04
11	30	4	.32	9.5	3	.08	7.2	2	.04
12	28	4	.30	9.4	3	.08	7.3	2	.04
13	27	4	.29	9.6	3	.08	6.9	2	.04
14	25	4	.27	9.0	3	.07	6.4	2	.03
15	24	5	.32	8.9	3	.07	6.2	2	.03
16	22	5	.30	8.6	3	.07	6.0	2	.03
17	21	4	.23	8.4	3	.07	5.5	2	.03
18	21	3	.17	8.3	3	.07	5.3	2	.03
19	19	3	.15	8.0	2	.04	5.1	2	.03
20	19	4	.21	7.7	2	.04	4.6	2	.02
21	18	5	.24	7.8	2	.04	4.0	2	.02
22	17	5	.23	7.6	2	.04	4.4	2	.02
23	22	20	1.2	7.3	2	.04	4.8	2	.03
24	19	10	.51	7.3	2	.04	4.5	2	.02
25	17	9	.41	7.6	2	.04	3.6	2	.02
26	16	8	.35	7.3	2	.04	3.6	2	.02
27	15	7	.28	7.5	2	.04	3.4	2	.02
28	15	7	.28	7.1	2	.04	3.4	2	.02
29	14	6	.23	6.3	2	.03	4.0	2	.02
30	14	6	.23	6.4	2	.03	3.6	2	.02
31	--	--	--	6.3	2	.03	--	--	--
TOTAL	820	--	40.53	280.9	--	2.33	166.9	--	.91

11-1539. UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	2.7	1	.01	1.2	13	.04	.17	13	.01
2	2.7	1	.01	1.1	14	.04	.35	13	.01
3	2.1	2	.01	1.1	14	.04	.43	13	.02
4	2.2	2	.01	.98	14	.04	.37	13	.01
5	2.1	3	.02	.71	14	.03	.42	13	.01
6	2.3	3	.02	.52	14	.02	.41	13	.01
7	2.1	4	.02	.80	14	.03	.57	13	.02
8	2.1	4	.02	.91	14	.03	.52	13	.02
9	1.8	5	.02	.84	14	.03	.37	13	.01
10	1.6	5	.02	.75	14	.03	.25	13	.01
11	1.8	6	.03	.29	14	.01	.36	13	.01
12	1.4	6	.02	.68	14	.03	.36	13	.01
13	1.9	7	.04	.36	14	.01	.27	13	.01
14	1.2	7	.02	.59	14	.02	.20	13	.01
15	.66	8	.01	.65	14	.02	.46	13	.02
16	.92	8	.02	.73	14	.03	.42	13	.01
17	.77	8	.02	.70	14	.03	.48	13	.02
18	.99	8	.02	.45	14	.02	.38	13	.01
19	1.5	9	.04	.95	14	.04	.41	12	.01
20	1.4	9	.03	.98	14	.04	.32	12	.01
21	.99	9	.02	.70	14	.03	.27	12	.01
22	.79	10	.02	.83	14	.03	.49	12	.02
23	.41	10	.01	.47	14	.02	.31	11	.01
24	.70	10	.02	.65	14	.02	.38	11	.01
25	.93	11	.03	.44	14	.02	.24	11	.01
26	.75	11	.02	.54	13	.02	.33	11	.01
27	1.2	12	.04	.48	13	.02	.34	10	.01
28	1.0	12	.03	.54	13	.02	.30	10	.01
29	1.1	12	.04	.61	13	.02	.40	10	.01
30	1.4	13	.05	.54	13	.02	.23	10	.01
31	1.1	13	.04	.46	13	.02	--	--	--
TOTAL	44.61	--	.73	21.55	--	.82	10.81	--	.36
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									19300.78
TOTAL LOAD FOR YEAR (TONS)									23875.56

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 18, 1969	1730	10	1100	2990	8880	44	48	58	70	82	90	98	100	--	--	--	VPWC	
JAN 20.....	1520	13	642	282	489	25	33	45	56	65	77	87	96	100	--	--	VPWC	
JAN 21.....	1625	13	735	294	583	--	--	--	--	--	70	83	96	100	--	--	V	
FEB 11.....	1630	12	710	779	1490	29	39	47	53	56	76	88	98	100	--	--	VBWC	
FEB 24.....	1130	9	904	411	1000	19	28	36	44	51	60	74	91	99	100	--	SBWC	
FEB 28.....	1100	10	876	530	1250	28	37	48	55	59	75	84	93	100	--	--	VBWC	
FEB 28.....	1500	14	610	107	176	--	--	--	--	--	73	84	95	100	--	--	V	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
				PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
				.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	128	
SEP 3, 1968	1550	5	0.28	--	1	3	8	14	20	25	32	41	54	73	100	S

PAJARO RIVER BASIN

11-1590. PAJARO RIVER AT CHITTENDEN, CALIF.

LOCATION.--Lat 36°54'01", long 121°35'48", in Salsipuedes Grant, Santa Cruz County, at gaging station on State highway bridge, 0.6 mile downstream from Pescadero Creek, 0.6 mile southeast of Chittenden, and 2.3 miles downstream from San Benito River.

DRAINAGE AREA.--1,186 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV. 15...	1345	2.5	--	11.2	--	--	287	--	455	27	--	241
JAN. 15...	0940	67	9	9.9	--	--	127	--	269	9	--	100
MAR. 05...	0850	1980	9	10.8	--	--	29	--	179	0	--	19
MAY 14...	1525	39	21	9.6	81	60	79	1.6	390	0	169	77
JULY 03...	0750	13	16	7.8	--	--	120	--	495	0	--	114

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 15...	--	1000	--	--	669	251	48	4.8	417	8.6	2310
JAN. 15...	--	590	--	--	405	169	41	2.7	235	8.5	1240
MAR. 05...	--	220	--	.25	183	36	26	2.9	147	8.2	474
MAY 14...	27	380	723	.98	451	131	28	1.6	320	8.2	1030
JULY 03...	--	760	--	--	493	87	35	2.4	406	8.3	1370

PESCADERO CREEK BASIN

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11-1625. PESCADERO CREEK NEAR PESCADERO, CALIF.

LOCATION.--Lat 37°15'39", long 122°19'40", in SW $\frac{1}{4}$ sec. 5, T. 8 S., R. 4 W., San Mateo County, temperature recorder at gaging station, on left bank at downstream side of highway bridge, 3.0 miles east of Pescadero, and 5.3 miles upstream from mouth.

DRAINAGE AREA.--45.9 sq mi.

PERIOD OF RECORD.--Water temperatures: April 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 20°C on several days in July; minimum, 4°C Dec. 20-22.

EXTREMES, 1965-69.--Water temperatures: Maximum, 22°C on several days in 1965-68; minimum (1965-66, 1967-69), 2°C Dec. 19, 1965.

REMARKS.--Recorder malfunction Aug. 8 to Sept. 9, no temperature range available.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	14	15	16	16	16	16	15	14	12	13	14	15	14	13	13	13	13	14	13	13	12	12	13	13	13	13	12	12	13	13	12	14	
MINIMUM	12	13	14	14	14	13	12	10	10	9	12	14	13	10	11	10	10	12	10	10	9	9	10	10	10	10	10	11	11	11	11	11	
NOVEMBER																																	
MAXIMUM	12	12	12	12	12	12	12	12	13	13	13	12	10	8	9	10	11	12	12	12	11	11	11	10	10	9	8	8	8	8	--	11	
MINIMUM	11	11	12	11	11	11	11	10	11	11	11	10	8	7	8	10	10	11	10	10	10	10	9	10	10	8	7	6	6	6	7	9	
DECEMBER																																	
MAXIMUM	9	7	8	7	7	8	9	10	12	12	11	9	9	10	11	10	8	7	8	6	5	6	8	9	9	8	8	10	10	9	8	9	
MINIMUM	7	6	5	6	6	7	8	8	10	11	9	8	7	9	10	8	6	6	6	4	4	4	6	8	8	8	8	8	8	9	8	7	
JANUARY																																	
MAXIMUM	8	8	8	8	9	8	8	8	7	7	8	10	12	11	10	9	8	12	12	13	13	12	10	12	12	12	11	11	10	9	9	10	
MINIMUM	7	7	7	7	8	7	7	7	6	6	8	10	10	10	9	8	8	12	12	12	10	9	10	12	11	10	9	8	8	7	9	9	
FEBRUARY																																	
MAXIMUM	10	10	9	9	10	10	10	10	11	12	12	10	10	10	11	11	10	11	10	10	10	10	10	10	10	10	10	10	10	--	--	10	
MINIMUM	8	9	7	8	9	9	9	8	10	10	10	8	8	10	10	9	9	10	10	10	10	9	9	10	10	9	9	10	--	--	--	9	
MARCH																																	
MAXIMUM	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	11	11	10	10	10	10	11	11	11	12	12	12	12	13	13	10	
MINIMUM	9	9	9	8	9	10	9	8	8	8	8	8	8	7	8	8	9	10	9	9	10	9	10	10	9	9	10	10	10	11	11	9	
APRIL																																	
MAXIMUM	12	11	10	10	10	10	10	10	11	12	12	12	11	10	11	12	12	12	12	13	12	12	12	12	11	12	12	13	13	12	--	11	
MINIMUM	11	10	9	8	10	8	8	9	10	10	10	10	11	8	10	9	10	11	11	10	10	10	12	11	10	9	8	9	10	12	11	--	
MAY																																	
MAXIMUM	12	12	12	12	13	14	14	14	14	14	14	14	13	13	14	14	15	16	16	16	16	15	14	14	16	16	16	16	16	16	16	17	
MINIMUM	10	10	10	9	10	11	12	13	12	13	13	12	12	12	12	12	13	14	14	14	14	14	14	14	13	14	14	14	14	14	14	13	
JUNE																																	
MAXIMUM	16	17	17	17	16	17	16	16	15	16	16	15	16	16	15	17	17	18	17	16	16	16	18	18	17	17	18	18	18	18	--	17	
MINIMUM	15	14	14	16	16	15	16	15	14	14	14	14	14	14	15	14	14	16	16	16	16	16	15	15	16	16	15	15	15	14	15	--	
JULY																																	
MAXIMUM	18	18	19	19	18	18	18	18	18	18	18	19	19	18	18	18	18	18	19	19	20	20	20	20	20	20	20	19	19	19	19	19	
MINIMUM	16	16	15	15	16	16	16	16	16	16	16	16	16	16	15	15	15	16	16	17	17	17	17	18	18	18	18	16	16	16	16		
AUGUST																																	
MAXIMUM	18	18	18	18	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	15	15	15	16	15	14	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	18	17	17	18	17	17	16	18	18	18	18	18	17	17	18	17	17	17	17	18	17	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	14	16	16	15	14	14	14	14	16	16	16	16	16	14	13	14	14	14	15	14	14	--	

COLMA CREEK BASIN

11-1627.2. COLMA CREEK AT SOUTH SAN FRANCISCO, CALIF.

LOCATION.--Lat 37°39'14", long 122°25'31", in Buri Buri Grant, San Mateo County, at gaging station in Orange Memorial Park, and 1.0 mile southwest of South San Francisco Post Office.

DRAINAGE AREA.--10.9 sq mi.

PERIOD OF RECORD.--Sediment records: October 1965 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 6,370 mg/l Jan. 20; minimum daily, 2 mg/l Dec. 3.

Sediment loads: Maximum daily, 4,290 tons Feb. 23; minimum daily, 0 tons May 29, June 2.

EXTREMES, 1965-69.--Sediment concentrations: Maximum daily, 19,800 mg/l (corrected) Jan. 21, 1967; minimum daily, 2 mg/l Dec. 3, 1968.

Sediment loads: Maximum daily, 26,900 tons Jan. 21, 1967; minimum daily, 0 tons Nov. 11-13, 1967, May 29, June 2, 1969.

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	.80	40	.09	1.2	60	.19	8.3	440	35
2	1.2	40	.13	21	941	163	1.6	15	.06
3	1.6	40	.17	20	918	165	1.2	2	.01
4	1.6	40	.17	.80	60	.13	2.1	20	.11
5	1.6	40	.17	1.2	40	.13	1.2	20	.06
6	2.1	40	.23	4.0	97	2.7	1.2	10	.03
7	2.1	40	.23	1.2	40	.13	3.6	74	2.9
8	2.1	40	.23	.60	40	.06	8.9	232	7.7
9	2.6	40	.28	.60	40	.06	29	1160	234
10	2.1	40	.23	.60	40	.06	69	3090	1490
11	2.1	40	.23	11	513	86	3.8	40	.41
12	14	556	47	3.7	362	9.5	1.6	40	.17
13	13	1160	175	.60	40	.06	35	1410	663
14	4.4	279	9.4	44	2200	764	12	364	22
15	1.6	80	.35	16	613	153	75	2200	1540
16	1.6	70	.30	3.8	100	1.0	2.1	100	.57
17	2.1	60	.34	1.6	60	.26	1.2	60	.19
18	2.1	50	.28	7.4	230	12	5.1	458	48
19	2.1	50	.28	1.2	50	.16	1.6	130	.56
20	2.1	40	.23	1.2	40	.13	1.2	40	.13
21	2.6	40	.28	1.2	40	.13	1.2	40	.13
22	3.2	40	.35	1.2	40	.13	2.1	60	.34
23	2.6	40	.28	1.2	30	.10	1.2	40	.13
24	1.6	40	.17	3.3	87	2.1	21	648	98
25	1.6	40	.17	1.9	66	.53	96	3580	2440
26	2.1	40	.23	1.2	40	.13	29	1310	333
27	2.1	40	.23	1.2	30	.10	5.9	90	1.4
28	1.6	40	.17	1.6	20	.09	30	1440	307
29	7.7	207	12	16	902	282	2.1	80	.45
30	3.3	87	1.0	4.1	219	3.6	1.6	50	.22
31	1.6	80	.35	--	--	--	1.6	40	.17
TOTAL	92.90	--	250.57	174.60	--	1646.48	456.4	--	7225.74

11-1627.2. COLMA CREEK AT SOUTH SAN FRANCISCO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1.6	40	.17	19	1050	110	19	250	13
2	1.2	40	.13	5.9	100	1.6	29	1220	258
3	1.2	39	.13	3.8	80	.82	8.2	150	3.3
4	1.2	38	.12	4.4	70	.83	6.6	80	1.4
5	1.2	37	.12	138	5090	3570	5.2	50	.70
6	1.2	36	.12	83	3340	1790	4.4	31	.37
7	1.6	36	.16	12	400	13	4.4	31	.37
8	1.6	36	.16	7.4	200	4.0	3.8	30	.31
9	1.6	35	.15	6.6	100	1.8	3.2	30	.26
10	2.1	50	.28	5.2	60	.84	2.1	30	.17
11	14	437	31	136	6250	3570	1.2	30	.10
12	37	1780	611	13	200	7.0	36	1620	478
13	127	5330	3080	8.2	100	2.2	2.6	80	.56
14	5.2	500	7.0	96	3280	2240	2.1	50	.28
15	2.6	400	2.8	82	3820	1730	2.1	30	.17
16	2.1	350	2.0	17	300	14	5.4	209	20
17	1.6	333	1.4	29	1450	311	11	906	54
18	123	4210	3590	15	440	25	2.6	80	.56
19	162	5490	4170	5.9	100	1.6	2.1	30	.17
20	143	6370	3400	5.2	60	.84	20	966	150
21	98	4050	1720	34	1220	290	2.1	80	.45
22	18	354	18	27	750	389	1.6	60	.26
23	22	743	141	112	4790	4290	1.6	40	.17
24	68	2370	1020	131	5470	3630	2.1	40	.23
25	109	3190	2410	57	2600	636	2.1	40	.23
26	105	3300	3550	25	1220	128	2.6	35	.25
27	44	1470	475	36	1410	305	2.1	35	.20
28	35	1500	220	94	4220	1680	1.6	35	.15
29	43	1170	1180	--	--	--	2.1	30	.17
30	46	2870	981	--	--	--	2.1	30	.17
31	8.2	400	8.9	--	--	--	2.1	30	.17
TOTAL	1228.2	--	26620.64	1208.6	--	24742.53	193.1	--	984.17

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.1	30	.17	2.1	29	.16	.80	6	.01
2	31	1670	634	1.2	29	.09	.21	6	0
3	1.6	78	.34	1.2	29	.09	.60	6	.01
4	5.4	251	17	.80	29	.06	.80	6	.01
5	100	5000	2240	1.2	29	.09	1.6	15	.06
6	26	1610	441	1.2	29	.09	2.6	20	.14
7	3.2	111	.96	1.2	29	.09	2.1	20	.11
8	2.6	80	.56	1.2	29	.09	2.6	20	.14
9	19	953	127	1.2	29	.09	2.6	20	.14
10	2.6	120	.84	1.6	29	.13	2.1	20	.11
11	2.6	100	.70	1.6	29	.13	1.6	20	.09
12	2.1	70	.40	1.6	29	.13	1.6	20	.09
13	1.6	60	.26	1.6	29	.13	1.2	20	.06
14	1.6	40	.17	1.2	29	.09	1.2	20	.06
15	2.6	40	.28	.31	6	.01	1.2	20	.06
16	2.6	40	.28	.31	6	.01	1.2	20	.06
17	3.2	35	.30	.31	6	.01	1.2	20	.06
18	2.6	35	.25	.31	6	.01	1.6	20	.09
19	3.2	30	.26	.31	6	.01	1.6	20	.09
20	3.8	30	.31	.31	6	.01	2.6	20	.14
21	3.2	30	.26	.43	6	.01	2.1	21	.12
22	3.8	40	.41	.80	6	.01	2.1	21	.12
23	15	1160	161	1.2	6	.02	1.6	21	.09
24	3.8	80	.82	1.6	6	.03	2.1	21	.12
25	2.1	70	.40	1.6	6	.03	2.1	22	.12
26	2.6	60	.42	1.2	6	.02	2.1	22	.12
27	3.2	50	.43	.80	6	.01	1.6	22	.10
28	2.6	40	.28	.31	6	.01	1.6	22	.10
29	2.6	35	.25	.21	6	0	1.6	23	.10
30	2.6	30	.21	.31	6	.01	1.2	23	.07
31	--	--	--	.60	6	.01	--	--	--
TOTAL	260.9	--	3629.56	29.82	--	1.68	49.11	--	2.59

COLMA CREEK BASIN

11-1627.2. COLMA CREEK AT SOUTH SAN FRANCISCO, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1.6	23	.10	3.8	23	.24	2.0	23	.12
2	1.6	23	.10	3.8	23	.24	1.8	23	.11
3	1.2	23	.07	3.2	23	.20	2.2	23	.14
4	1.2	23	.07	3.2	23	.20	2.1	23	.13
5	1.2	23	.07	2.6	23	.16	1.2	23	.07
6	1.2	23	.07	2.1	23	.13	1.6	23	.10
7	.43	23	.03	2.1	40	.23	1.2	23	.07
8	1.2	23	.07	2.1	30	.17	1.2	23	.07
9	2.1	23	.13	2.6	23	.16	.80	23	.05
10	2.1	23	.13	2.6	23	.16	1.2	23	.07
11	1.6	23	.10	2.1	23	.13	.80	23	.05
12	2.1	23	.13	3.2	23	.20	.80	23	.05
13	2.6	23	.16	2.1	23	.13	1.2	23	.07
14	1.2	23	.07	2.1	23	.13	1.2	23	.07
15	3.2	23	.20	3.2	23	.20	.80	23	.05
16	2.6	23	.16	3.8	23	.24	.80	23	.05
17	2.6	23	.16	2.6	23	.16	1.6	23	.10
18	3.8	23	.24	3.2	23	.20	2.1	23	.13
19	3.8	23	.24	2.1	23	.13	1.6	23	.10
20	3.8	23	.24	2.0	23	.12	1.5	23	.09
21	2.6	23	.16	1.9	23	.12	1.4	23	.09
22	2.6	23	.16	1.8	23	.11	1.5	23	.09
23	3.8	23	.24	1.6	23	.10	1.9	23	.12
24	2.6	23	.16	1.4	23	.09	2.1	23	.13
25	3.8	23	.24	1.8	23	.11	2.1	23	.13
26	2.6	23	.16	1.6	23	.10	2.1	23	.13
27	2.6	23	.16	1.6	23	.10	2.1	23	.13
28	3.8	23	.24	1.6	23	.10	1.6	23	.10
29	2.6	23	.16	2.2	23	.14	1.6	23	.10
30	3.8	23	.24	2.0	23	.12	2.1	23	.13
31	3.8	23	.24	1.8	23	.11	--	--	--
TOTAL	75.73	--	4.70	73.8	--	4.73	46.20	--	2.84
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									3889.36
TOTAL LOAD FOR YEAR (TONS)									65116.23

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCENT- RATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
DEC 10, 1968	1330	14	180	7480	3640	22	23	28	39	51	69	89	98	100	--	--	VPWC
JAN 13, 1969	1135	12	424	12500	14300	10	12	17	22	30	46	81	94	99	100	--	VPWC
JAN 13.....	1245	12	307	9560	7920	12	13	20	27	37	61	91	98	100	--	--	VPWC
JAN 13.....	1310	12	187	10500	5300	11	12	18	25	36	60	94	98	99	100	--	VPWC
JAN 20.....	1105	13	109	3600	1060	--	--	--	--	--	66	89	99	100	--	--	V
JAN 20.....	1500	13	63	1370	233	16	20	25	30	33	46	63	98	100	--	--	VBWC
JAN 20.....	1540	13	210	6370	3610	--	--	--	--	--	53	83	95	100	--	--	V
JAN 20.....	1625	13	320	10800	9330	8	10	13	18	27	52	89	97	100	--	--	VPWC
JAN 20.....	1735	13	87	9920	2330	--	--	--	--	--	65	89	99	100	--	--	V
FEB 11.....	1025	12	289	9840	7680	7	8	11	19	23	51	91	98	100	--	--	VPWC
FEB 11.....	1100	12	452	13800	16800	12	12	15	19	27	49	90	99	100	--	--	VPWC
FEB 11.....	1125	12	536	17500	25300	9	11	16	21	30	53	89	97	99	100	--	VPWC
FEB 11.....	1220	12	210	8610	4880	13	17	23	32	42	58	92	98	100	--	--	VPWC
FEB 18.....	0910	12	22	531	32	--	--	--	--	--	85	90	99	100	--	--	S
FEB 24.....	1340	11	63	5140	874	--	--	--	--	--	70	77	100	--	--	--	V

11-1627.22. SPRUCE BRANCH AT SOUTH SAN FRANCISCO, CALIF.

LOCATION.--Lat 37°38'46", long 122°25'15", in Buri Buri Grant, San Mateo County, at gaging station 0.5 mile upstream from mouth, and 1.0 mile southwest of South San Francisco Post Office.

DRAINAGE AREA.--0.70 sq mi (revised).

PERIOD OF RECORD.--Sediment records: October 1965 to September 1969 (discontinued).

EXTREMES, 1965-67.--Sediment concentrations: Maximum daily, 6,350 mg/l Jan. 21, 1967; minimum daily, no flow for many days in 1965-67.

Sediment loads: Maximum daily, 2,320 tons Jan. 21, 1967; minimum daily, 0 tons on many days in 1965-67.

MONTHLY AND ANNUAL SUMMARY OF SUSPENDED-SEDIMENT DISCHARGE,
WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DISCHARGE (CFS)	SEDIMENT DISCHARGE (TONS)
OCTOBER 1968.....	5.80	29
NOVEMBER.....	15.57	305
DECEMBER.....	33.50	1,260
JANUARY 1969.....	109.62	14,490
FEBRUARY.....	105.80	9,910
MARCH.....	13.50	199
APRIL.....	15.42	807
MAY.....	.47	0
JUNE.....	.53	.03
JULY.....	1.09	.42
AUGUST.....	1.44	.51
SEPTEMBER.....	1.48	0
TOTAL FOR YEAR.....	304.22	27,000.96

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	1400	14	13	12800	449	14	15	17	24	34	58	97	100	--	--	--	VPWC	
JAN 13, 1969	1105	11	46	33900	4210	20	25	32	41	52	65	88	98	100	--	--	VPWC	
JAN 13.....	1435	12	6.7	9910	179	18	23	31	40	51	69	97	100	--	--	--	VPWC	
JAN 20.....	1125	14	6.2	4510	75	19	20	27	37	47	62	98	100	--	--	--	VPWC	
JAN 20.....	1515	14	19	13400	687	5	5	7	12	18	43	94	100	--	--	--	VPWC	
JAN 25.....	1355	14	2.5	6040	41	14	15	20	27	34	50	89	99	100	--	--	VPWC	
JAN 29.....	0930	7	.70	8720	16	--	--	--	--	--	10	74	92	95	99	100	V	
FEB 6.....	1020	9	20	36400	1970	8	8	11	17	29	53	84	93	98	100	--	VPWC	
FEB 11.....	0945	12	29	14300	1120	--	--	--	--	--	38	93	99	100	--	--	V	
FEB 11.....	1200	13	42	103000	11700	14	14	19	26	38	61	96	99	100	--	--	VPWC	
FEB 11.....	1400	12	12	12100	392	--	--	--	--	--	64	93	99	100	--	--	V	
FEB 24.....	1400	12	1.8	2470	12	--	--	--	--	--	80	99	100	--	--	--	V	

COYOTE CREEK BASIN

11-1698. COYOTE CREEK NEAR GILROY, CALIF.

LOCATION.--Lat 37°04'40", long 121°29'36", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.10 S., R.4 E., Santa Clara County, at gaging station 0.7 mile downstream from Bear Creek, 5.0 miles upstream from Coyote Creek Dam, and 6.4 miles northeast of Gilroy.

DRAINAGE AREA.--109 sq mi.

PERIOD OF RECORD.--Water temperatures: December 1964 to September 1969.

Sediment records: December 1964 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 3,220 mg/l Jan. 19; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 41,600 tons Jan. 19; minimum daily, 0 tons on many days.

EXTREMES, 1965-69.--Sediment concentrations: Maximum daily, 3,220 mg/l Jan. 19, 1969; minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 41,600 tons Jan. 19, 1969; minimum daily, 0 tons on many days each year.

REMARKS.--No flow Oct. 1 to Dec. 15, Sept. 26-30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	6	--	8	--	7	--	--	--	9	7	7	8	13	--	10	--
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY..	--	10	--	--	11	--	7	--	6	--	--	--	9	--	8	9	--	8	11	12	11	8	10	--	12	11	8	8	7	6	7	--	
FEBRUARY.	8	8	--	--	9	8	8	8	11	15	10	9	9	9	10	12	11	10	9	--	9	8	8	8	8	8	8	8	--	--	--	9	--
MARCH....	10	9	9	11	--	10	--	--	9	--	--	9	--	--	13	--	--	11	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL....	--	--	8	--	--	13	--	--	16	--	--	11	--	--	--	16	--	--	17	--	--	--	17	--	--	16	--	--	--	15	--	--	
MAY.....	--	--	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	--	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23	--	--	--
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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
2							0	--	0
3							0	--	0
4							0	--	0
5							0	--	0
6							0	--	0
7							0	--	0
8							0	--	0
9							0	--	0
10							0	--	0
11							0	--	0
12							0	--	0
13							0	--	0
14							0	--	0
15							0	--	0
16							6.1	3	.09
17							2.2	3	.02
18							.74	3	.01
19							.61	3	0
20							.51	3	0
21							.38	5	.01
22							.31	4	0
23							.28	3	0
24							.51	5	.01
25							60	20	7.7
26							167	37	18
27							54	8	1.2
28							37	5	.50
29							42	4	.45
30							24	3	.19
31							15	3	.12
TOTAL	0	--	0	0	--	0	410.64	--	28.30

COYOTE CREEK BASIN

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11-1698. COYOTE CREEK NEAR GILROY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	2	.06	239	5	3.2	1520	312	1390
2	8.0	1	.02	230	5	3.1	809	86	197
3	6.2	4	.07	176	5	2.4	543	29	43
4	4.9	8	.11	139	5	1.9	396	14	15
5	4.0	9	.10	162	32	26	298	11	8.9
6	3.3	15	.13	1250	599	2170	237	9	5.8
7	2.8	25	.19	707	123	267	197	13	6.9
8	2.4	15	.10	391	21	22	165	14	6.2
9	2.1	11	.06	266	10	7.2	146	15	5.9
10	1.8	10	.05	199	6	3.2	128	17	5.9
11	1.7	10	.05	365	134	303	108	19	5.5
12	2.1	10	.06	701	167	359	110	26	7.7
13	61	30	8.9	368	35	37	99	20	5.3
14	170	40	23	273	8	5.9	84	20	4.5
15	50	5	.68	1400	1130	5710	77	19	4.0
16	27	2	.15	890	232	653	71	20	3.8
17	18	2	.10	509	42	58	67	20	3.6
18	442	482	2370	392	22	23	63	21	3.6
19	4340	3220	41600	375	20	20	58	22	3.4
20	2020	1340	8110	313	18	15	62	24	4.0
21	2590	1790	13500	262	15	11	73	24	4.7
22	1540	753	4620	308	16	13	59	23	3.7
23	437	48	64	723	129	275	52	23	3.2
24	469	110	598	2580	1830	16000	48	22	2.9
25	3890	2910	39700	1820	1380	7080	45	22	2.7
26	2610	1730	16500	1490	618	2910	44	22	2.6
27	800	151	366	831	110	247	41	22	2.4
28	650	129	229	1330	539	2500	39	22	2.3
29	425	35	40	--	--	--	37	22	2.2
30	343	26	24	--	--	--	36	22	2.1
31	274	10	7.4	--	--	--	35	22	2.1
TOTAL	21206.3	--	127722.23	18689	--	38725.9	5747	--	1760.9

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	35	22	2.1	18	7	.34	5.4	5	.07
2	35	22	2.1	17	8	.37	5.3	5	.07
3	38	22	2.3	17	8	.37	5.1	5	.07
4	34	20	1.8	17	8	.37	5.1	5	.07
5	56	15	2.3	16	8	.35	5.1	5	.07
6	133	25	9.0	15	8	.32	4.9	5	.07
7	80	8	1.7	15	8	.32	4.7	5	.06
8	58	4	.63	14	8	.30	4.9	5	.07
9	51	2	.28	14	8	.30	5.5	5	.07
10	47	4	.51	13	8	.28	6.1	5	.08
11	42	6	.68	13	8	.28	6.2	5	.08
12	38	10	1.0	12	7	.23	6.2	5	.08
13	36	10	.97	13	7	.25	5.8	5	.08
14	35	9	.85	12	7	.23	5.6	5	.08
15	34	9	.83	12	7	.23	5.6	5	.08
16	31	8	.67	11	7	.21	5.7	5	.08
17	30	8	.65	11	7	.21	5.5	5	.07
18	29	7	.55	9.9	7	.19	5.3	5	.07
19	28	7	.53	9.4	7	.18	4.8	5	.06
20	27	7	.51	8.9	7	.17	4.5	5	.06
21	26	7	.49	8.6	6	.14	4.1	5	.06
22	25	6	.41	8.2	6	.13	3.7	5	.05
23	27	6	.44	8.0	6	.13	3.6	5	.05
24	29	6	.47	7.7	6	.12	3.3	5	.04
25	25	5	.34	7.3	6	.12	3.1	5	.04
26	23	5	.31	7.1	6	.12	2.5	5	.03
27	21	5	.28	7.2	6	.12	2.3	5	.03
28	20	6	.32	6.9	6	.11	2.1	5	.03
29	19	6	.31	6.6	6	.11	1.9	5	.03
30	19	7	.36	6.1	6	.10	1.8	5	.02
31	--	--	--	5.7	5	.08	--	--	--
TOTAL	1131	--	33.69	347.6	--	6.78	135.7	--	1.82

COYOTE CREEK BASIN

11-1698. COYOTE CREEK NEAR GILROY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1.7	5	.02	.36	5	0	.13	7	0
2	1.5	5	.02	.34	5	0	.15	7	0
3	1.4	5	.02	.33	5	0	.05	7	0
4	1.3	5	.02	.35	5	0	.03	7	0
5	1.3	5	.02	.39	5	.01	.03	7	0
6	1.4	5	.02	.36	5	0	.03	7	0
7	1.3	5	.02	.34	5	0	.06	7	0
8	1.2	5	.02	.27	5	0	.07	7	0
9	1.2	5	.02	.27	5	0	.05	7	0
10	1.2	5	.02	.26	5	0	.05	7	0
11	1.1	5	.01	.21	6	0	.03	7	0
12	1.1	5	.01	.19	6	0	.03	7	0
13	1.0	5	.01	.18	6	0	.03	7	0
14	.98	5	.01	.18	6	0	.03	7	0
15	.86	5	.01	.18	6	0	.03	7	0
16	.84	5	.01	.18	6	0	.03	7	0
17	.72	5	.01	.15	6	0	.03	7	0
18	.70	5	.01	.17	6	0	.03	7	0
19	.60	5	.01	.12	6	0	.03	7	0
20	.58	5	.01	.11	6	0	.03	7	0
21	.67	5	.01	.11	6	0	.03	7	0
22	.59	5	.01	.09	6	0	.02	7	0
23	.59	5	.01	.08	6	0	.02	7	0
24	.57	5	.01	.09	6	0	.01	7	0
25	.51	5	.01	.13	6	0	.01	7	0
26	.50	5	.01	.18	6	0	0	--	0
27	.49	5	.01	.19	6	0	0	--	0
28	.47	5	.01	.20	6	0	0	--	0
29	.45	5	.01	.36	6	.01	0	--	0
30	.39	5	.01	.32	6	.01	0	--	0
31	.37	5	0	.18	6	0	--	--	--
TOTAL	27.58	--	.40	6.87	--	.03	1.04	--	0
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									47702.73
TOTAL LOAD FOR YEAR (TONS)									168280.05

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 19, 1969	0900	11	7650	5170	107000	--	--	--	--	--	77	89	98	100	--	--	V
JAN 19.....	1700	12	2880	2470	19200	16	20	30	39	50	60	70	82	92	100	--	VPWC
JAN 20.....	1330	12	1480	606	2420	22	31	44	56	68	77	84	91	98	100	--	VPWC
JAN 23.....	1130	10	414	42	47	7	12	30	34	40	53	60	67	79	93	100	SBWC
JAN 25.....	0700	11	5740	4070	63100	14	18	26	34	45	57	71	88	97	100	--	VPWC
FEB 15.....	1400	10	2310	1570	9790	15	22	30	38	42	62	67	74	82	95	100	VBWC
FEB 24.....	1800	9	2880	1770	13800	14	21	28	35	39	62	70	80	93	99	100	VBWC

ALAMEDA CREEK BASIN

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11-1765. ARROYO VALLE NEAR LIVERMORE, CALIF.

LOCATION.--Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, Alameda County, temperature recorder at gaging station on right bank, 900 ft downstream from highway bridge, 1.1 miles upstream from Dry Creek, 1.3 miles downstream from Del Valle Dam, 4.1 miles south of Livermore, and 6.9 miles southeast of Pleasanton.

DRAINAGE AREA.--147 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1958 to July 1966.

Water temperatures: October 1959 to September 1961, October 1962 to September 1969.

Sediment records: October 1962 to September 1967.

EXTREMES, 1968-69.--Water temperatures: Maximum, 23°C Sept. 10; minimum, 7°C on several days during December to February.

EXTREMES, 1963-69.--Water temperatures: Maximum, 31°C June 14, 1966; minimum, 4°C Jan. 2, Dec. 28, 1966, Dec. 13-15, 1967.

REMARKS.--No flow Oct. 1 to Dec. 24, Jan. 1-17. No record Feb. 14, 15.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	7	7	8	8	7	8	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7	7	7	7	7	7	--
JANUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	10	11	11	10	10	10	10	10	10	10	10	8	8	8	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	8	10	10	10	10	10	10	10	10	10	8	8	8	8	--
FEBRUARY																																	
MAXIMUM	9	9	10	10	10	10	11	10	10	12	10	10	10	--	--	11	9	9	9	9	10	10	9	9	10	9	8	8	--	--	--	10	
MINIMUM	8	8	7	8	9	9	8	8	10	8	10	8	8	--	--	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	--	8	
MARCH																																	
MAXIMUM	9	8	9	9	9	9	10	9	9	10	10	9	9	10	10	10	10	13	10	12	13	14	14	14	15	15	16	15	15	14	11		
MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	10	10	8	
APRIL																																	
MAXIMUM	14	10	13	14	10	12	14	14	11	12	13	11	12	11	12	13	12	12	13	13	14	16	12	15	15	16	17	16	16	14	--	13	
MINIMUM	8	8	8	8	10	9	9	9	8	8	9	9	8	8	8	8	8	9	10	9	9	9	10	9	8	8	8	9	8	10	9	--	9
MAY																																	
MAXIMUM	15	16	13	15	16	16	13	13	13	13	12	13	13	17	18	15	14	14	14	14	14	14	14	14	14	14	14	15	16	17	16	14	
MINIMUM	8	9	8	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	12	10
JUNE																																	
MAXIMUM	16	16	16	15	14	16	13	13	14	16	16	16	17	17	20	21	21	21	20	18	18	19	19	18	18	19	18	19	20	21	--	18	
MINIMUM	12	11	11	12	12	12	12	12	12	12	12	12	12	12	12	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	--	13
JULY																																	
MAXIMUM	21	20	20	21	20	20	20	20	21	20	20	20	19	18	19	20	20	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
MINIMUM	14	15	15	16	15	15	16	16	16	16	16	16	16	16	15	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	15	15	16
AUGUST																																	
MAXIMUM	20	20	20	20	20	20	20	20	20	20	20	21	21	21	21	20	20	19	20	21	21	20	20	19	20	20	20	20	20	21	21	20	
MINIMUM	14	15	15	16	16	15	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	17	17	16	17	16	17	16	17	18	16
SEPTEMBER																																	
MAXIMUM	22	22	21	21	21	20	22	22	22	23	21	21	20	20	21	20	20	20	19	19	22	20	20	21	21	21	21	21	21	21	--	21	
MINIMUM	18	18	18	18	18	19	19	18	18	18	18	18	18	18	18	18	17	18	18	17	17	16	19	19	19	20	20	19	20	19	--	18	

ALAMEDA CREEK BASIN

11-1790. ALAMEDA CREEK NEAR NILES, CALIF.

LOCATION.--Lat 37°35'14", long 121°57'35", in NW¼ sec.15, T.4 S., R.1 W., Alameda County, at gaging station 0.3 mile downstream from railroad bridge, and 1.2 miles northeast of Niles.

DRAINAGE AREA.--633 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1952 to September 1967, October 1968 to September 1969.

Water temperatures: July 1956 to September 1969.

Sediment records: January 1957 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C on several days during May, July to September; minimum, 6°C Dec. 22.

Sediment concentrations: Maximum daily, 4,280 mg/l Jan. 26; minimum daily, 5 mg/l Oct. 13, Nov. 12, 13, 29.

Sediment loads: Maximum daily, 32,900 tons Jan. 26; minimum daily, 0.20 ton Nov. 22.

EXTREMES, 1956-69.--Water temperatures: Maximum (1956-62, 1964-69), 31°C June 1, 1960; minimum, 3°C Jan. 5, 1961, Jan. 14, 1963.

Sediment concentrations (1957-69): Maximum daily, 5,340 mg/l Apr. 3, 1958; minimum daily, no flow for many days in 1957, 1959-61.

Sediment loads (1957-69): Maximum daily, 285,000 tons Apr. 3, 1958; minimum daily, 0 tons on many days in 1957, 1959-61.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
16...	0900	48	14	10.4	--	--	50	--	129	0	--	68
NOV.												
07...	1115	40	13	10.1	--	--	54	--	126	0	--	71
DEC.												
10...	1345	11	12	12.2	36	--	68	--	152	0	--	88
JAN.												
08...	1027	39	7	11.4	32	--	59	--	127	0	--	72
FEB.												
06...	1230	2020	8	11.1	27	--	27	--	130	0	--	23
MAR.												
12...	1115	326	10	11.6	40	--	29	--	162	0	--	31
APR.												
08...	1330	174	15	12.2	34	21	37	1.7	178	0	52	38
MAY												
01...	1030	30	16	11.4	66	31	69	3.1	273	0	105	74
JUNE												
04...	0645	29	18	8.1	54	--	60	--	235	0	--	65
AUG.												
13...	0700	26	18	8.0	48	--	53	--	221	8	--	52

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
16...	--	230	--	--	131	25	45	1.9	106	8.0	509
NOV.											
07...	--	320	--	--	132	29	47	2.0	103	8.0	529
DEC.											
10...	14	420	--	--	172	47	62	3.1	125	8.3	686
JAN.											
08...	--	470	--	--	168	64	62	2.9	104	7.7	619
FEB.											
06...	5.1	330	--	--	111	4	47	1.4	107	8.1	344
MAR.											
12...	--	310	--	--	183	50	39	1.3	133	8.3	492
APR.											
08...	3.7	310	290	.39	171	25	32	1.2	146	8.2	517
MAY											
01...	9.6	--	510	.69	293	69	34	1.8	224	8.3	861
JUNE											
04...	6.8	540	--	--	258	65	49	2.2	193	8.3	720
AUG.											
13...	7.7	490	--	--	236	41	49	2.1	194	8.4	667

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	20	20	20	19	20	20	17	19	19	20	20	20	18	17	17	17	20	20	20	20	20	20	20	20	20	20	20	18	20	18	17	19
NOVEMBER.	17	18	18	17	18	15	18	15	18	16	17	18	18	16	18	16	16	16	16	16	17	17	17	17	17	17	17	17	17	17	17	17
DECEMBER.	18	18	18	18	16	16	16	15	15	15	14	9	9	10	10	9	7	7	7	7	6	8	9	8	7	10	9	10	10	10	10	11
JANUARY..	10	10	10	9	9	8	--	8	8	8	9	10	10	11	9	9	8	9	8	12	12	10	8	8	11	11	8	7	7	8	8	9
FEBRUARY.	9	9	10	10	9	8	9	9	12	13	12	10	10	9	10	10	8	9	8	8	9	10	10	9	10	10	9	--	--	--	--	10
MARCH....	10	10	10	10	11	11	11	11	10	12	12	11	12	13	13	14	14	14	12	13	15	15	16	16	17	18	18	17	18	17	13	13
APRIL.....	17	13	15	15	13	13	15	17	15	17	18	16	15	16	17	18	16	18	18	19	20	18	16	17	17	19	19	20	20	16	--	17
MAY.....	16	19	18	19	21	21	21	20	22	22	20	20	20	20	21	23	21	22	22	22	22	22	21	21	20	22	22	23	22	24	25	21
JUNE.....	23	23	23	21	19	22	18	17	17	17	18	18	20	18	20	23	22	24	24	22	21	22	23	23	22	22	22	19	21	24	--	21
JULY.....	23	21	24	21	23	22	23	23	24	24	24	25	25	24	24	25	25	25	25	25	25	25	25	24	24	25	24	24	24	23	24	24
AUGUST....	24	25	25	25	20	21	20	20	20	23	24	21	23	20	20	23	20	23	23	24	24	24	24	22	23	22	22	22	22	20	23	22
SEPTEMBER	24	25	24	24	24	21	24	25	24	20	20	22	19	19	20	20	21	19	19	21	22	17	17	18	18	18	18	20	18	18	--	21

ALAMEDA CREEK BASIN

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11-1790. ALAMEDA CREEK NEAR NILES, CALIF.--Continued

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	5	.23	47	13	1.6	47	12	1.5
2	17	9	.41	49	25	3.4	42	14	1.6
3	25	5	.34	50	21	3.0	31	13	1.1
4	24	7	.45	45	67	6.9	30	11	.89
5	26	9	.63	14	148	5.6	30	11	.89
6	25	8	.54	20	75	3.6	30	12	.97
7	27	19	1.5	40	29	3.1	31	17	1.4
8	63	22	3.7	38	16	1.6	31	12	1.0
9	58	19	3.0	35	10	.95	31	18	1.5
10	50	11	1.5	33	15	1.3	12	10	.32
11	56	17	2.6	25	12	.81	31	33	3.2
12	54	13	1.9	24	5	.32	22	87	5.2
13	54	14	2.0	26	5	.35	12	59	1.9
14	56	15	2.3	24	24	1.7	13	297	11
15	56	12	1.8	22	39	2.3	41	385	43
16	47	8	1.0	24	55	3.6	84	445	101
17	46	10	1.2	13	56	2.2	25	303	20
18	43	11	1.3	11	18	.53	14	130	4.9
19	42	7	.79	11	12	.36	36	45	4.8
20	42	8	.91	7.6	10	.21	93	39	9.8
21	41	10	1.1	9.1	10	.25	74	40	8.0
22	40	11	1.2	7.3	10	.20	48	14	1.8
23	40	11	1.2	35	26	2.5	48	18	2.3
24	39	8	.84	48	34	4.4	38	22	2.3
25	40	10	1.1	47	18	2.3	53	107	35
26	40	6	.65	45	13	1.6	176	746	361
27	41	9	1.0	42	18	2.0	48	333	50
28	41	12	1.3	47	19	2.4	27	191	14
29	41	13	1.4	45	5	.61	27	88	6.4
30	43	11	1.3	47	7	.89	56	42	6.4
31	44	8	.95	--	--	--	54	38	5.5
TOTAL	1278	--	40.14	931.0	--	60.58	1335	--	708.67

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	52	32	4.5	132	110	39	3670	2110	22000
2	45	26	3.2	103	80	22	2420	780	5100
3	35	19	1.8	83	48	11	2050	620	3430
4	41	15	1.7	67	27	4.9	1800	490	2380
5	41	15	1.7	106	67	21	1530	460	1900
6	40	18	1.9	1270	2430	9370	794	351	787
7	41	24	2.7	430	972	1370	615	220	365
8	39	19	2.0	195	175	92	445	165	198
9	39	14	1.5	133	110	40	370	114	114
10	38	12	1.2	97	70	18	332	98	88
11	37	19	1.9	299	343	636	299	85	69
12	12	37	1.2	783	1300	3160	326	114	100
13	16	48	2.6	227	330	217	369	225	224
14	44	84	10	161	160	70	304	162	133
15	19	72	3.7	514	622	1180	271	192	140
16	42	65	7.4	455	655	917	248	174	117
17	41	34	3.8	238	240	158	240	210	136
18	43	132	17	472	485	658	178	114	55
19	696	1030	3080	321	367	332	164	91	40
20	568	1020	1610	194	220	115	166	332	164
21	655	786	1430	155	120	50	193	338	185
22	400	180	212	259	457	336	139	116	44
23	148	105	42	590	1610	3040	121	95	31
24	107	65	19	878	1840	4530	107	95	27
25	2010	2900	20200	1720	1630	7750	104	95	27
26	2220	4280	32900	2130	1440	8280	102	95	26
27	608	1080	1910	1770	780	3730	99	95	25
28	684	693	1600	2440	1320	11400	96	95	25
29	378	352	414	--	--	--	111	95	28
30	419	734	917	--	--	--	111	288	87
31	268	276	211	--	--	--	91	180	44
TOTAL	9826	--	64614.8	16222	--	57546.9	17865	--	38089

ALAMEDA CREEK BASIN

11-1790. ALAMEDA CREEK NEAR NILES, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE. WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	90	115	28	29	12	.94	39	26	2.7
2	96	75	19	27	20	1.5	31	17	1.4
3	121	66	22	23	20	1.2	29	10	.78
4	93	39	9.8	27	21	1.5	31	10	.84
5	131	53	20	28	14	1.1	30	10	.81
6	229	119	74	28	17	1.3	30	15	1.2
7	195	79	42	47	22	2.8	31	12	1.0
8	172	49	23	67	28	5.1	31	12	1.0
9	154	31	13	78	38	8.0	28	9	.68
10	146	26	10	79	68	15	19	7	.36
11	158	40	17	79	56	12	16	8	.35
12	142	36	14	79	43	9.2	16	7	.30
13	129	40	14	64	38	6.6	17	9	.41
14	119	30	9.6	43	37	4.3	17	9	.41
15	111	35	10	24	32	2.1	18	17	.83
16	100	30	8.1	18	25	1.2	14	29	1.1
17	94	34	8.6	42	39	4.4	11	28	.83
18	88	27	6.4	48	37	4.8	8.6	20	.46
19	84	28	6.4	46	28	3.5	8.6	13	.30
20	79	34	7.3	46	24	3.0	7.9	15	.32
21	74	19	3.8	45	21	2.6	21	24	1.5
22	71	14	2.7	44	17	2.0	25	13	.88
23	65	16	2.8	43	23	2.7	27	14	1.0
24	65	22	3.9	45	27	3.3	27	11	.80
25	54	22	3.2	50	28	3.8	24	13	.84
26	51	15	2.1	49	22	2.9	23	9	.56
27	45	18	2.2	40	13	1.4	18	9	.44
28	41	19	2.1	39	16	1.7	16	12	.52
29	40	22	2.4	36	19	1.8	28	15	1.1
30	36	14	1.4	32	18	1.6	29	31	2.4
31	--	--	--	39	35	3.7	--	--	--
TOTAL	3073	--	388.8	1384	--	117.04	671.1	--	26.12

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	23	25	1.6	27	20	1.5	50	23	3.1
2	19	20	1.0	26	28	2.0	56	24	3.6
3	12	23	.75	25	25	1.7	51	20	2.8
4	11	13	.39	25	29	2.0	53	18	2.6
5	18	9	.44	26	27	1.9	49	18	2.4
6	18	12	.58	25	23	1.6	42	23	2.6
7	14	22	.83	26	28	2.0	42	24	2.7
8	14	14	.53	27	30	2.2	45	17	2.1
9	15	11	.45	27	30	2.2	39	16	1.7
10	15	10	.41	26	25	1.8	43	31	3.6
11	20	15	.81	25	23	1.6	37	29	2.9
12	26	15	1.1	25	36	2.4	36	18	1.7
13	27	17	1.2	25	26	1.8	36	29	2.8
14	30	19	1.5	25	30	2.0	38	19	1.9
15	23	22	1.4	26	35	2.5	36	12	1.2
16	21	23	1.3	32	37	3.2	38	10	1.0
17	21	31	1.8	35	35	3.3	38	11	1.1
18	21	25	1.4	34	28	2.6	37	21	2.1
19	22	18	1.1	34	30	2.8	37	16	1.6
20	23	26	1.6	33	28	2.5	41	8	.89
21	22	27	1.6	37	29	2.9	48	9	1.2
22	23	24	1.5	48	32	4.1	46	22	2.7
23	21	28	1.6	45	25	3.0	38	19	1.9
24	23	24	1.5	37	27	2.7	37	19	1.9
25	27	38	2.8	39	26	2.7	38	18	1.8
26	27	29	2.1	39	18	1.9	41	19	2.1
27	28	29	2.2	38	19	1.9	38	17	1.7
28	25	24	1.6	39	17	1.8	39	11	1.2
29	27	29	2.1	40	17	1.8	44	20	2.4
30	26	25	1.8	46	24	3.0	38	19	1.9
31	27	26	1.9	49	25	3.3	--	--	--
TOTAL	669	--	40.89	1011	--	72.7	1251	--	63.19

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)55516.1
161768.83

ALAMEDA CREEK BASIN

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11-1790. ALAMEDA CREEK NEAR NILES, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 14, 1968	1630	9	11	442	13	74	85	92	94	96	99	100	--	--	--	--	SBWC	
DEC 17.....	1610	9	22	282	17	72	82	85	96	98	100	--	--	--	--	--	SBWC	
DEC 26.....	1745	8	146	689	272	--	--	--	--	--	99	99	100	--	--	--	S	
JAN 14, 1969	0940	10	53	84	12	74	91	97	98	99	99	100	--	--	--	--	SBWC	
JAN 20.....	1245	12	472	629	802	72	78	89	96	97	99	100	--	--	--	--	SPWC	
JAN 25.....	1615	11	2290	3020	18700	50	58	71	81	90	95	99	100	--	--	--	VPWC	
JAN 26.....	1330	11	2230	5090	30600	62	66	78	89	96	98	100	--	--	--	--	VPWC	
FEB 15.....	1830	10	914	1250	3080	52	64	75	83	87	99	100	--	--	--	--	VBWC	
FEB 24.....	1730	8	1250	2230	7530	45	53	67	79	90	96	98	100	--	--	--	VPWC	
FEB 28.....	1730	9	4170	3130	35200	41	48	60	71	86	94	100	--	--	--	--	VPWC	
MAR 4.....	1610	10	1780	403	1940	45	56	65	72	76	88	95	100	--	--	--	VBWC	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE											METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
SEP 9, 1968	1130		5	68	7	16	32	47	61	77	88	94	100	--	--	S

BUENA VISTA LAKE BASIN

11-1853.5, KERN RIVER NEAR QUAKING ASPEN CAMP, CALIF.

LOCATION.--Lat 36°08'04", long 118°25'49", in SW¹/₄SW¹/₄ sec.32, T.20 S., R.33 E., Tulare County, temperature recorder at gaging station on right bank, 0.4 mile upstream from Little Kern River, and 6.8 miles east of Quaking Aspen Camp.

DRAINAGE AREA.--530 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 17°C on several days during July and August; minimum, freezing point on several days during February and March.

EXTREMES, 1965-69.--Water temperatures: Maximum, 21°C July 26, 28, 1966, July 21, 1968; minimum, freezing point on several days during January and February 1966, and February and March 1969.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																																
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE	
OCTOBER																																		
	MAXIMUM	13	13	13	13	13	13	13	13	12	12	12	11	12	11	10	11	11	11	11	11	11	9	10	11	11	11	11	11	10	9		11	
	MINIMUM	10	10	10	10	11	11	11	11	10	10	11	9	9	9	11	9	8	8	8	8	8	8	7	7	8	8	8	8	8	9	7		9
NOVEMBER																																		
	MAXIMUM	8	8	8	8	7	7	8	7	8	8	8	8	8	8	7	6	6	6	6	6	6	6	6	6	6	5	4	3	3	3	--	6	
	MINIMUM	7	7	7	6	4	4	6	6	6	6	7	7	7	7	4	2	4	4	4	4	4	4	4	4	3	2	2	2	2	3	--	5	
DECEMBER																																		
	MAXIMUM	4	4	3	3	3	4	4	4	4	4	4	3	2	3	4	4	4	4	2	2	2	2	1	1	1	1	2	1	1	1	2	3	
	MINIMUM	3	3	2	2	2	2	2	2	2	3	3	2	1	2	3	4	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	
JANUARY																																		
	MAXIMUM	2	1	2	2	3	3	3	3	3	2	2	2	3	3	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	1	1	1	1	2	1	1	2	2	1	1	1	2	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																		
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0	0	1	1	2	2	2	2	3	1	2	2	1	--	--	--		
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0	0	0	1	1	2	2	0	0	0	1	1	0	--	--	--		
MARCH																																		
	MAXIMUM	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	2		
	MINIMUM	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	2	3	2	1	2	2	2	2	2	2		
APRIL																																		
	MAXIMUM	5	5	4	6	4	4	6	6	6	7	7	7	7	7	7	8	10	10	10	10	10	10	10	10	8	9	10	11	10	8	--	8	
	MINIMUM	3	3	2	3	4	2	3	3	4	4	4	4	5	5	5	5	5	6	7	7	7	7	7	6	6	6	6	7	6	6	--	5	
MAY																																		
	MAXIMUM	8	8	8	7	7	8	8	8	8	8	8	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	MINIMUM	6	6	6	6	6	7	7	7	6	6	6	6	6	6	5	5	6	6	5	5	5	6	6	6	6	6	6	6	6	6	6	6	
JUNE																																		
	MAXIMUM	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	8	9	9	9	9	9	9	10	10	10	10	9	9	10	10	11	--	9
	MINIMUM	6	6	5	6	6	7	7	7	7	7	7	8	8	8	8	7	7	8	8	8	8	8	8	8	8	8	7	8	8	8	9	--	7
JULY																																		
	MAXIMUM	11	11	12	12	12	12	13	13	13	13	13	14	14	14	15	15	16	16	16	17	17	16	16	16	16	16	16	16	16	16	16	14	
	MINIMUM	9	9	9	9	10	11	11	11	12	12	12	13	14	14	14	14	13	14	14	14	15	16	15	15	15	15	15	15	16	15	16	16	13
AUGUST																																		
	MAXIMUM	17	16	17	17	16	16	15	16	17	17	17	16	16	16	17	17	16	16	15	14	14	15	15	15	16	15	14	14	13	13	14	15	
	MINIMUM	16	16	16	16	15	13	14	14	15	16	16	14	14	14	14	14	14	13	12	12	12	12	13	13	13	12	11	11	11	11	11	13	
SEPTEMBER																																		
	MAXIMUM	14	15	14	14	14	13	14	15	14	15	14	13	12	13	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	--	13	
	MINIMUM	12	13	12	12	12	12	13	13	12	12	11	11	10	11	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	11

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LOCATION.--Lat 35°54'20", Long 118°28'00", in NE 1/4 sec.25, T.23 S., R.32 E., Kern County, temperature recorder
at gauging station on left bank, 4 miles downstream from intake, and 12 miles north of Kernville.
PRECIP. RECORD.--Water temperatures: October 1964 to September 1969 (discontinued).
EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C Aug. 4, 5, 22; minimum, 1°C on many days during Decem-
ber to March.
EXTREMES, 1962-69.--Water temperatures: Maximum, 22°C on several days in 1964, 1965, and 1968; minimum
(1962-66, 1967-69), freezing point on several days during December and January of most years.
REMARKS.--No flow Oct. 1-18, Jan. 26.

		DAY																															AVER- AGE		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	11	11	10	10	10	10	11	11	11	10	10	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	10	10	9	9	9	9	10	10	10	9	9	--	
NOVEMBER	MAXIMUM	9	8	8	8	8	7	8	8	8	8	9	9	9	9	6	7	7	7	7	7	7	7	8	8	8	8	7	7	6	6	6	--	8	
	MINIMUM	8	8	8	8	6	7	7	7	7	7	8	9	7	6	4	4	6	6	5	6	6	6	6	7	6	6	6	4	4	4	4	--	6	
DECEMBER	MAXIMUM	6	6	6	6	6	6	6	6	6	6	6	6	5	4	4	4	5	6	4	4	4	3	2	2	2	3	3	3	2	2	2	3	4	
	MINIMUM	4	5	4	3	3	3	3	3	3	3	3	4	3	2	2	3	4	3	2	2	1	1	1	1	1	1	1	2	1	1	2	1	1	2
JANUARY	MAXIMUM	3	3	3	3	3	3	3	4	4	5	4	4	4	4	4	4	4	5	5	4	4	4	4	4	5	--	--	4	3	3	3	4		
	MINIMUM	1	2	2	3	3	3	3	3	4	4	3	4	4	4	4	4	4	3	2	3	4	4	4	4	4	--	--	3	2	2	2	3		
FEBRUARY	MAXIMUM	2	3	3	3	4	3	3	3	3	3	3	3	3	3	4	4	4	3	4	4	4	4	3	3	3	2	3	3	2	--	--	3		
	MINIMUM	2	2	2	2	3	2	1	1	2	2	2	2	2	3	3	3	3	2	3	3	3	3	3	3	1	1	1	1	1	1	--	--	2	
MARCH	MAXIMUM	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	5	5	3	6	5	6	6	6	5	6	7	7	7	7	7	4	
	MINIMUM	1	1	2	1	1	2	3	1	3	2	3	2	3	2	3	3	3	3	3	3	3	3	4	4	4	3	3	4	4	4	4	5	3	
APRIL	MAXIMUM	7	7	7	7	7	7	7	7	7	8	8	9	8	8	8	8	9	9	9	9	9	10	11	9	10	10	11	11	10	--	--	9		
	MINIMUM	5	4	4	5	6	5	4	4	5	6	6	6	6	6	6	5	6	7	7	7	7	7	8	8	8	7	7	7	8	8	9	--	6	
MAY	MAXIMUM	12	12	12	11	10	11	11	11	11	11	11	11	11	11	12	11	11	11	11	10	10	11	11	11	11	11	11	11	11	10	9	9	11	
	MINIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	7	8	8	8	7	8	8	7	7	8	7	7	7	8	
JUNE	MAXIMUM	10	10	10	11	11	11	10	10	10	10	9	9	9	9	9	9	9	10	11	11	11	11	11	11	11	11	11	11	11	11	11	--	10	
	MINIMUM	7	8	8	8	8	6	8	8	7	7	8	8	8	8	8	8	8	8	9	9	10	10	10	11	10	10	1							

BUENA VISTA LAKE BASIN

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11-1875, BOREL CANAL BELOW ISABELLA DAM, CALIF.

LOCATION.--Lat 35°38'32", long 118°28'09", in NE¼ sec.30, T.26 S., R.33 E., Kern County, temperature recorder at gaging station on right bank, 500 ft downstream from Isabella Dam, and 3 miles upstream from point where canal crosses Erskine Creek.

PERIOD OF RECORD.--Water temperatures: October 1958 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 23°C on several days during September; minimum, 4°C on several days during February and March.

EXTREMES, 1958-69.--Water temperatures: Maximum, 27°C July 31 to Aug. 1, 1959; minimum, 1°C Jan. 17, 18, 1960.

REMARKS.--No flow Oct. 22 to Nov. 13.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER-	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER	MAXIMUM	19	21	19	19	20	19	19	19	19	19	19	18	18	18	17	19	19	18	19	18	18	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	19	19	19	19	19	19	18	18	18	18	18	18	18	17	15	14	14	16	15	16	16	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	13	13	13	13	13	13	13	13	13	12	12	12	12	11	11	11	11	11	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	13	13	13	13	13	13	13	13	13	12	12	12	11	11	11	11	11	10	--	
DECEMBER	MAXIMUM	10	9	9	9	9	9	11	10	8	8	8	7	7	10	9	7	8	7	7	7	7	7	7	7	7	7	7	7	6	6	6	8	
	MINIMUM	9	9	9	9	9	9	9	8	7	7	6	5	6	6	7	6	7	7	7	7	7	7	7	7	7	7	7	7	6	6	6	7	
JANUARY	MAXIMUM	7	7	7	7	7	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	MINIMUM	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	7	
FEBRUARY	MAXIMUM	6	6	6	6	6	6	6	6	7	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	4	4	4	4	4	--	--	6	
	MINIMUM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	4	4	4	4	4	--	--	6	
MARCH	MAXIMUM	4	4	4	5	6	5	5	6	6	6	6	6	7	7	8	7	7	7	9	10	9	9	10	11	13	14	15	14	14	14	11	8	
	MINIMUM	4	4	4	4	5	5	5	5	6	6	6	6	6	7	7	7	7	7	7	8	9	9	9	9	11	12	12	12	11	11	10	7	
APRIL	MAXIMUM	10	11	11	13	12	12	13	13	11	11	13	12	12	12	12	12	13	12	13	13	14	13	12	12	12	12	13	14	14	13	12	--	12
	MINIMUM	10	10	11	11	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12	12	12	12	12	11	12	13	12	12	--	11
MAY	MAXIMUM	12	12	12	12	12	15	13	14	15	15	17	17	14	13	16	17	16	16	14	14	15	16	16	15	14	14	14	15	16	16	16	15	
	MINIMUM	12	12	12	12	12	12	11	12	13	13	14	13	12	12	12	13	15	14	13	13	14	14	14	13	13	13	13	13	13	14	14	14	13
JUNE	MAXIMUM	16	16	16	16	16	16	16	16	15	16	15	16	16	16	16	16	16	16	16	16	16	16	17	17	17	17	17	17	16	17	17	--	16
	MINIMUM	15	14	14	14	14	14	14	14	14	14	15	15	15	15	16	16	15	16	16	15	15	15	15	15	15	16	17	16	16	16	17	--	15
JULY	MAXIMUM	17	17	17	17	17	17	17	17	17	18	18	18	18	18	18	17	18	18	18	18	19	18	18	19	18	19	19	19	19	20	21	18	
	MINIMUM	17	16	16	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	18	18	17	
AUGUST	MAXIMUM	21	21	20	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	21	
	MINIMUM	19	18	19	18	19	19	19	18	19	20	20	20	21	21	21	21	22	22	21	22	22	22	22	22	22	22	21	21	21	22	22	22	20
SEPTEMBER	MAXIMUM	22	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	--	22	
	MINIMUM	22	22	22	23	23	22	23	22	22	23	23	23	23	22	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	21	21	--	22

MISCELLANEOUS ANALYSES OF STREAMS IN BUENA VISTA LAKE BASIN

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE	TEMP-ERATURE	DISS-OLVED	CAL-CIUM	MAG-NE-SIUM	SODIUM	PO-TAS-SIUM	BICAR-BONATE	CAR-BONATE	SULFATE	CHLO-RIDE
		(CFS)	(DEG C)	(MG/L)	(CA)	(MG)	(NA)	(K)	(HCO3)	(CO3)	(SO4)	(CL)
11-1860, KERN RIVER NEAR KERNVILLE, CALIF. (LAT 35°56'43", LONG 118°28'36")												
JAN. 07...	0945	44	3	11.5	--	--	13	--	65	0	--	5.4
MAY 20...	0900	6780	9	10.0	5.1	1.3	3.1	1.0	23	0	.5	.8
JULY 07...	1315	3340	15	--	--	--	2.9	--	19	0	--	1.1
DATE	NITRATE	BORON	DIS-SOLVED	DIS-SOLVED	HARD-NESS	NON-CAR-BONATE	PERCENT SODIUM	SODIUM AD-SORP-TION	ALKA-LINITY	PH	SPECI-FIC	
	(NO3)	(B)	RESI-DUE AT	SOLIDS	(CA, MG)	HARD-NESS		RATIO	AS CACO3		COND-UCTANCE	
	(MG/L)	(UG/L)	(MG/L)	(TONS PER AC-FT)	(MG/L)	(MG/L)			(MG/L)	(UNITS)	(MICRO-MHOS)	
JAN. 07...	--	70	--	--	52	0	35	.8	53	7.9	146	
MAY 20...	1.0	--	50	.07	18	0	26	.3	19	8.2	46	
JULY 07...	--	20	--	--	15	0	30	.3	16	7.2	40	

Note.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

TULARE LAKE BASIN

11-2032, TULE RIVER NEAR SPRINGVILLE, CALIF.

LOCATION (revised).--Lat 36°06'02", long 118°52'07", in NE¼SW¼ sec.17, T.21 S., R.29 E., Tulare County, temperature recorder at gaging station 10 ft downstream from highway bridge, 3.5 miles southwest of Springville, and 4.1 miles upstream from Success Dam.

DRAINAGE AREA.--247 sq mi (revised).

PERIOD OF RECORD.--Chemical analyses: November 1963 to July 1966.

Water temperatures: October 1965 to September 1967, October 1968 to September 1969.

EXTREMES, 1965-67.--Water temperatures: Maximum, 23°C Aug. 19, 20, and sometime during period Aug. 21-31, 1967;
minimum (1966-67), 3°C Dec. 28, 1966.

REMARKS.--No thermograph record Jan. 20 to Sept. 1. Where no maximum or minimum is shown, once-daily temperatures are reported. Prior to Mar. 20, 1968, gage was located 1.9 miles upstream.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

11-2049. TULE RIVER BELOW SUCCESS DAM, CALIF.

LOCATION.--Lat 36°03'23", long 118°55'22", in SW¼ sec.35, T.21 S., R.26 E., Tulare County, at gaging station 1,000 ft downstream from Success Dam, and 5 miles east of Porterville.

DRAINAGE AREA.--393 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1961 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 08...	0910	17	18	8.5	--	--	17	--	184	0	--	7.4
NOV. 04...	1325	18	17	9.8	--	--	18	--	188	5	--	8.7
DEC. 17...	1405	97	10	11.1	--	--	19	--	199	0	--	9.5
JAN. 06...	1050	28	8	12.5	--	--	18	--	185	0	--	9.7
FEB. 10...	1445	810	8	12.7	--	--	7.0	--	66	0	--	3.8
MAR. 04...	1000	3200	8	12.7	--	--	7.3	--	70	0	--	3.6
APR. 07...	1000	1520	12	11.9	--	--	6.4	--	67	0	--	3.6
MAY 05...	1120	570	14	11.5	13	2.8	6.7	1.6	59	0	3.0	2.8
JUNE 03...	0945	1060	16	10.6	--	--	5.2	--	53	0	--	3.4
JULY 07...	1115	607	18	9.7	--	--	5.1	--	55	0	--	2.0
AUG. 04...	1000	639	21	8.4	--	--	5.1	--	57	0	--	2.4

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 08...	--	0	--	--	137	0	21	.6	151	8.1	310
NOV. 04...	--	170	--	--	142	0	22	.7	162	8.4	352
DEC. 17...	--	70	--	--	141	0	23	.7	163	8.3	364
JAN. 06...	--	30	--	--	137	0	22	.7	152	8.3	325
FEB. 10...	--	20	--	--	52	0	23	.4	54	7.6	131
MAR. 04...	--	20	--	--	63	6	20	.4	57	8.1	139
APR. 07...	--	20	--	--	55	0	20	.4	55	7.8	137
MAY 05...	.3	--	93	.13	44	0	24	.4	48	8.0	115
JUNE 03...	--	10	--	--	38	0	23	.4	43	7.4	100
JULY 07...	--	0	--	--	40	0	22	.4	45	7.5	102
AUG. 04...	--	0	--	--	44	0	20	.3	47	7.5	107

LOCATION.--Lat 36°31'08", long 118°48'03", in SE $\frac{1}{4}$ sec.23, T.16 S., R.29 E., Tulare County, temperature recorder at gaging station on left bank, 0.1 mile north of Potwisha Camp, and 0.3 mile upstream from confluence with Middle Fork Kaweah River.

PERIOD OF RECORD.--Water temperatures: January 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 20°C Sept. 8, 10; minimum, 2°C Dec. 22, Jan. 29, 31, Feb. 7.

EXTREMES, 1962-69.--water temperatures: Maximum, 28°C on several days during 1964, 1966, and 1968; minimum (1963-69), 1°C on several days during 1965 and 1967.

[illegible]

LOCATION.--Lat 36°26'44", long 118°35'38", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.17 S., R.31 E., Tulare County, on right bank 0.5 mile downstream from Eagle Creek, and 15.5 miles east of Hammond.

DRAINAGE AREA.--9.92 sq mi.

PERIOD OF RECORD.--Chemical analyses: August 1968 to September 1969.

DATE	TIME	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI02)	DISSOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HC03)	CARBONATE (CC3)
AUG. 27...	1615 0830	8.0 --	13 7	7.2 7.4	0.00 0.08	26 27	1.2 1.2	1.3 1.6	.5 .6	80 78	0 0
DATE	SULFATE (SO4)	CHLORIDE (CL)	FLUORIDE (F)	NITRATE (NO3)	BORON (B)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	CIS-SOLVED SOLIDS (TCNS PER AC-FT)
AUG. 27...	7.0 8.0	.4 .4	.2 .1	1.5 .1	0.00 0.03	84 85	70 72	4 8	143 147	7.6 7.8	.11 .12
DATE	PERCENT SODIUM	SODIUM AC-SORPTION RATIO	ALKALINITY AS CaCO3	DISSOLVED OXYGEN	AMMONIA (NH4)	ORGANIC NITROGEN (N)	ORTHO PHOSPHATE (PO4)	PHOSPHATE (PO4)	COLIFORM (CCLO-NIES PER 100 FL)		
AUG. 27...	4 5	.1 .1	66 64	7.4 9.0	-- .12	-- .91	-- .02	-- .05	68 75		

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE (GFS)	TEMP-ERATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	CAL-CIUM (CA) (MG/L)	MAG-NE-SIUM (MG)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
OCT. 01...	0720	3.0	5	--	8.4	10	31	1.7	2.0	.9	96	0
JUNE 18...	1630	140	5	12	6.6	20	13	.6	.7	.3	37	0
JULY 29...	0950	85	9	21	4.2	20	12	.5	.3	.3	32	0
AUG. 25...	1350	27	13	21	4.7	0	15	.6	.7	.4	42	0

DATE	SULFATE (SC4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DIS-SOLVED SOLIDS (TENS PER AC-FT)
CCT. 01...	9.0	.5	.1	1.0	0	102	84	5	172	7.5	.14
JUNE 18...	6.0	.3	.1	.6	30	46	35	5	78	7.1	.06
JULY 29...	3.0	.2	.1	.2	0	37	32	6	68	6.5	.05
AUG. 25...	6.0	.2	.1	.1	0	49	40	6	87	7.2	.07

	PERCENT SODIUM	SCDIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PC4) (MG/L)	COLI- FORM (CCL- ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT. 01...	5	.1	79	9.9	1.1	.02	.23	--	.01	.04	35	--
JUNE 18...	4	.1	30	10.7	1.2	.00	--	.08	.02	.06	3	--
JULY 29...	2	.0	26	10.0	1.7	.04	--	.03	.00	.01	7	--
AUG. 25...	4	.0	34	9.8	1.4	.13	--	.09	.04	.04	19	.0

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

TULARE LAKE BASIN

11-2086.07. EAST FORK KAWEAH RIVER ABOVE MONARCH CREEK, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'01", long 118°35'40", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.15, T.17 S., R.31 E., Tulare County, at bridge at Mineral King, 1,000 ft upstream from Monarch Creek, and 14.9 miles east of Hammond.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)
JULY 26...	0725	--	9	8.7	.00	26	1.1	1.1	.6	76	0
AUG. 27...	0740	7.1	7	7.4	.00	27	1.2	2.1	.6	80	0

DATE	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 26...	9.0	.4	.2	1.0	.00	85	70	8	141	7.9	.12
AUG. 27...	9.0	.2	.1	.1	.00	87	72	6	151	8.1	.12

DATE	PERCENT SODIUM	SGDIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03	DISS- OLVED OXYGEN	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 26...	3	.1	62	--	--	--	--	.00	--
AUG. 27...	6	.1	66	9.2	.01	1.3	.02	.00	175

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
JULY 29...	1130	85	9	15	4.3	20	12	.6	.2	.3	34	0

DATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM
JULY 29...	4.0	.2	.1	.2	0	39	32	4	70	6.5	.05	1

DATE	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 29...	.0	28	9.8	1.0	.05	.20	.24	.00	.00	20

TULARE LAKE BASIN

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11-2086.07. EAST FORK KAWEAH RIVER ABOVE MONARCH CREEK, NEAR HAMMOND, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
AUG 1, 1968			8.0	1	.02	--	--	--	--	--	--	--	--	--	--	--	--
AUG 27.....	0730	7	7.1	5	.10	--	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE										METHOD OF ANALY- SIS	
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JUL 29, 1969	1130	9	85	7	1.6	--	--	--	--	--	--	--	--	--	--	--	--

11-2086.1. MONARCH CREEK NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'09", long 118°35'37", in SE1/4 sec.15, T.17 S., R.31 E., Tulare County, at gaging station on right bank 0.2 mile upstream from mouth, 0.3 mile northeast of Mineral King, and 14.9 miles east of Hammond.
DRAINAGE AREA.--1.89 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

Water temperatures: October 1968 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 13°C on several days in August.

REMARKS.--Clock stopped Nov. 2-30; temperature range, 2°C to 6°C. No record for period Dec. 1 to May 20, June 17, 18.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SiO2)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	CARBONATE (CO3)
JULY 26...	0740	2.7	9	7.1	.00	11	.3	1.0	.2	33	0
AUG. 27...	0900	1.8	8	7.8	.15	13	.6	1.5	.3	38	0

DATE	SULFATE (SO4)	CHLORIDE (CL)	FLUORIDE (F)	NITRATE (NO3)	BORON (B)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	DIS-SOLVED SOLIDS (TONS PER AC-FT)
JULY 26...	3.0	.8	.2	.8	.00	40	28	1	65	7.1	.05
AUG. 27...	5.0	.4	.1	.1	.03	48	35	4	76	7.3	.07

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	ALKALINITY AS CaCO3	DISSOLVED OXYGEN	AMMONIA (NH4)	ORGANIC NITROGEN (N)	ORTHO PHOSPHATE (PO4)	PHOSPHATE (PO4)	COLIFORM (COLONIES PER 100 ML)
JULY 26...	6	.1	27	8.6	.18	.00	.00	.02	17
AUG. 27...	9	.1	31	9.7	.00	.93	.03	.02	74

TULARE LAKE BASIN

11-2086.1. MONARCH CREEK NEAR HAMMOND, CALIF.--Continued
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FF) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BCNATE (CO ₃) (MG/L)
OCT.												
01...	0900	1.0	4	3	9.5	0	16	.6	1.8	.3	48	0
29...	0930	.98	4	8	8.6	0	16	.7	1.7	.3	47	0
DEC.												
07...	1055	1.5	1	11	7.2	10	11	.4	1.5	.3	32	0
JAN.												
18...	0930	2.0	2	5	7.1	0	14	.4	1.3	.3	43	0
FEB.												
08...	1600	2.2	0	-2	6.5	0	12	.5	1.1	.2	36	0
MAR.												
25...	1100	2.4	4	10	7.8	0	22	.7	1.5	.4	66	0
APR.												
22...	0830	16	3	11	5.9	20	14	.5	.8	.3	40	0
MAY												
21...	0900	52	4	15	5.2	40	8.6	.3	.9	.3	24	0
JUNE												
18...	1250	29	6	19	6.4	10	7.0	.3	.7	.2	20	0
JULY												
29...	1330	25	10	22	4.0	10	4.9	.3	.4	.2	14	0
AUG.												
25...	1440	6.0	12	18	5.2	0	7.6	.4	.9	.2	23	0

DATE	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SCLTUM
OCT.												
01...	6.0	.9	.1	.8	20	60	42	3	96	7.5	.08	9
29...	6.0	2.7	.1	.3	0	55	43	4	92	7.5	.08	7
DEC.												
07...	4.0	1.0	.2	.6	0	42	29	3	69	6.8	.06	11
JAN.												
18...	5.0	.7	.1	.5	0	50	36	1	81	7.7	.07	7
FEB.												
08...	5.0	.4	.0	.1	0	44	32	2	72	7.1	.06	7
MAR.												
25...	5.0	.4	.1	1.2	10	72	58	4	119	7.4	.10	5
APR.												
22...	3.0	.4	.1	.4	0	46	37	4	79	7.1	.06	4
MAY												
21...	3.0	.3	.0	.6	40	31	22	2	51	6.8	.04	8
JUNE												
18...	3.0	.4	.1	.4	30	28	18	2	44	7.1	.04	7
JULY												
29...	2.0	.4	.1	.2	0	19	13	2	32	6.3	.03	6
AUG.												
25...	3.0	.2	.1	.2	20	29	20	1	47	7.2	.04	9

DATE	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO ₃ (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH ₄) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO ₄) (MG/L)	PHOS- PHATE (PO ₄) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)
OCT.										
01...	.1	39	10.1	--	.00	.32	.42	.04	.04	53
29...	.1	39	10.3	1.0	.00	.46	--	.03	.03	36
DEC.										
07...	.1	26	11.5	.6	.05	.04	.11	.03	.04	10
JAN.										
18...	.1	35	11.7	.7	.08	.48	.54	.02	.11	1
FEB.										
08...	.1	30	11.6	--	--	--	--	--	--	--
MAR.										
25...	.1	54	12.2	.6	--	--	--	--	--	--
APR.										
22...	.1	33	11.2	2.9	.06	.68	.74	.02	--	1
MAY										
21...	.1	20	11.5	3.1	.06	.12	.17	.00	.04	1
JUNE										
18...	.1	16	12.0	2.4	.10	.03	.11	.02	.04	1
JULY										
29...	.0	11	9.5	2.8	.08	.00	.06	.04	.04	1
AUG.										
25...	.1	19	8.4	3.3	.10	.36	.44	.09	.09	6

TULARE LAKE BASIN

11-2086.15, EAST FORK KAWEAH RIVER BELOW MONARCH CREEK, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'09", long 118°35'56", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.15, T.17 S., R.31 E., Tulare County, at gaging station on right bank, 250 ft downstream from Monarch Creek, and 14.6 miles east of Hammond.

DRAINAGE AREA.--12.1 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER. JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	CAR- BONATE (C03)
JULY 25...	--	11	15	7.3	.01	24	1.0	1.3	.5	72	0
SEPT. 30...	1630	3.9	10	32	.01	31	1.5	2.5	.9	101	0

DATE	SULFATE (S04)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 25...	7.0	.4	.1	.8	.00	77	64	5	130	7.6	.10
SEPT. 30...	8.0	.7	.1	.8	.02	128	84	1	184	7.6	.17

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03	DISS- OLVED OXYGEN	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 25...	4	.1	59	6.8	.18	.00	.03	.03	--
SEPT. 30...	6	.1	83	8.8	2.6	.41	.13	.20	48

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)
JUNE 17...	1615	168	5	11	6.6	20	11	.6	.9	.4	32	0
JULY 29...	1450	110	11	27	4.4	20	10	.5	.3	.3	30	0
AUG. 25...	1545	33	12	29	5.7	0	16	.8	.9	.4	49	0

DATE	SULFATE (S04) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM
JUNE 17...	4.0	.3	.1	.5	30	40	30	4	74	7.0	.05	6
JULY 29...	3.0	.4	.1	.1	0	34	27	2	61	6.5	.05	2
AUG. 25...	4.0	.3	.0	.1	20	52	44	4	94	7.3	.07	4

DATE	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)
JUNE 17...	.1	26	12.0	2.5	.01	.06	.07	.01	.05	1
JULY 29...	.0	25	9.7	2.4	.04	.00	.03	.00	.00	10
AUG. 25...	.1	40	7.6	.0	.04	.41	.44	.04	.04	12

TULARE LAKE BASIN

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11-2086.15. EAST FORK KAWEAH RIVER BELOW MONARCH CREEK, NEAR HAMMOND, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
AUG 2, 1968	0745	8	10	1	.03	--	--	--	--	--	--	--	--	--	--	--	
AUG 27.....	1230	13	9.0	29	.70	--	--	--	--	--	--	--	--	--	--	--	
SEP 30.....	1630	10	3.9	1	.01	--	--	--	--	--	--	--	--	--	--	--	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
OCT 15, 1968	1550	8	10	2	.05	--	--	--	--	--	--	--	--	--	--	--	
JUN 17, 1969	1615	5	168	4	1.8	--	--	--	--	--	--	--	--	--	--	--	
JUL 29.....	1450	11	110	2	.59	--	--	--	--	--	--	--	--	--	--	--	
AUG 25.....	1545	12	33	2	.18	--	--	--	--	--	--	--	--	--	--	--	

11-2086.2. EAST FORK KAWEAH RIVER BELOW MOSQUITO CREEK, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'05", long 118°37'04", in SW1/4 sec.16, T.17 S., R.13 E., Tulare County, at gaging station on right bank, 300 ft downstream from Mosquito Creek, and 13.2 miles east of Hammond.

DRAINAGE AREA.--16.0 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

Water temperatures: August 1968 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 16°C Aug 22-24; minimum, freezing point on many days during December and January.

EXTREMES, August 1968 to September 1969.--Water temperatures: Maximum, 16°C Aug. 22-24, 1969; minimum, freezing point on many days during December 1968 and January 1969.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)
JULY 26...	0830	13	10	7.3	.00	24	1.1	1.6	.5	74	0
AUG. 27...	1345	9.6	12	8.3	.01	27	1.3	2.1	.7	80	0

DATE	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 26...	7.0	.6	.1	1.0	.00	79	64	3	135	7.5	.11
AUG. 27...	11	.8	.1	.1	.04	90	73	7	152	7.7	.12

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03	DISS- OLVED OXYGEN	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 26...	5	.1	61	8.5	.09	.00	.04	.05	--
AUG. 27...	6	.1	66	7.9	.00	.46	.01	.00	24

TULARE LAKE BASIN

11-2086.2. EAST FORK KAWEAH RIVER BELOW MOSQUITO CREEK, NEAR HAMMOND, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)
OCT.												
01...	1100	4.4	7	10	27	0	31	1.8	2.8	.9	104	0
29...	1100	5.4	6	---	10	0	36	2.0	2.8	.8	115	0
DEC.												
07...	1330	7.4	2	1	9.1	10	32	1.7	2.7	.8	99	0
JAN.												
18...	1115	10	2	2	8.8	10	30	1.5	2.3	.9	95	0
MAR.												
25...	1400	17	4	10	9.3	0	26	1.4	2.0	.7	82	0
APR.												
22...	1200	96	4	10	7.3	10	19	.9	1.2	.6	57	0
MAY												
21...	1230	280	5	9	5.6	10	12	.6	1.1	.6	34	0
JUNE												
18...	1545	205	7	16	6.2	20	13	.6	1.1	.3	34	0
JULY												
29...	1600	116	10	19	4.5	20	10	.5	.4	.3	30	0
AUG.												
25...	1700	41	15	18	6.0	0	17	.9	1.1	.4	51	0

DATE	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)
OCT.											
01...	8.0	.8	.1	.8	0	124	85	0	182	7.8	.17
29...	8.0	1.9	.1	.3	0	119	98	4	196	8.1	.16
DEC.											
07...	8.0	1.0	.3	.2	0	105	87	6	181	7.7	.14
JAN.											
18...	9.0	.7	.2	.5	0	101	81	3	168	8.0	.14
MAR.											
25...	7.0	.3	.1	.4	30	88	71	4	148	7.8	.12
APR.											
22...	5.0	.4	.1	.5	0	63	51	4	109	7.8	.09
MAY											
21...	5.0	.2	.0	.7	10	43	32	4	73	6.8	.06
JUNE											
18...	6.0	.5	.1	.3	20	45	35	7	73	6.9	.06
JULY											
29...	3.0	.2	.1	.1	0	34	27	2	61	6.5	.05
AUG.											
25...	4.0	.2	.1	.1	0	55	46	4	96	7.6	.07

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO ₃ (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH ₄) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO ₄) (MG/L)	PHOS- PHATE (PO ₄) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.												
01...	7	.1	85	9.8	.0	---	---	---	---	---	4	---
29...	6	.1	94	10.2	.7	---	---	---	---	---	18	---
DEC.												
07...	6	.1	81	11.4	.8	.04	.00	.04	.00	.04	2	---
JAN.												
18...	6	.1	78	11.8	1.1	.04	.16	.29	.00	.04	1	---
MAR.												
25...	6	.1	67	10.9	.0	.12	.61	.80	.00	.08	---	---
APR.												
22...	5	.1	47	11.3	3.1	.22	.19	.46	.05	---	3	---
MAY												
21...	7	.1	28	13.4	2.7	.05	.20	.44	.02	.14	1	---
JUNE												
18...	6	.1	28	11.4	3.2	.30	.29	.22	.18	.26	2	---
JULY												
29...	3	.0	25	9.8	1.5	.01	.00	.03	.01	.03	21	---
AUG.												
25...	5	.1	42	7.6	1.5	.06	.18	.23	.18	.27	20	.0

TULARE LAKE BASIN

11-2086.25. EAST FORK KAWEAH RIVER AT SEQUOIA NATIONAL PARK BOUNDARY, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'30", long 118°39'11", in SW¼SW¼ sec.7, T.17 S., R.31 E., Tulare County, at gaging station on right bank, 0.6 mile southwest of Silver City, and 11.4 miles east of Hammond.

DRAINAGE AREA.--23.7 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

Water temperatures: August 1968 to September 1969.

EXTREMES, August to September 1968.--Water temperatures: Maximum, 17°C Aug. 3.

EXTREMES, 1968-69.--Water temperatures: Maximum, 14°C July 31, Aug. 3, 4, 10; minimum, freezing point on many days during winter months.

EXTREMES, August 1968 to September 1969.--Water temperatures: Maximum, 17°C Aug. 3, 1968; minimum, freezing point on many days during winter months.

REMARKS.--Clock stopped Nov. 27 to Dec. 6, Feb. 9 to Mar. 25, June 19 to July 29, Aug. 25 to Sept. 30; temperature ranges, 2°C to 3°C, 0°C to 2°C, 5°C to 10°C and 5°C to 13°C, respectively. No record Dec. 7-10.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)
JULY 25...	1445	12	16	8.7	.00	22	1.0	1.8	.7	69	0
AUG. 27...	1615	6.9	15	9.5	.01	24	1.2	2.4	.7	74	0

DATE	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 25...	7.0	.6	.2	.8	.00	77	59	2	126	7.6	.10
AUG. 27...	7.0	.3	.1	.1	.04	81	65	4	138	7.7	.11

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	DISS- OLVED OXYGEN	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 25...	6	.1	57	8.0	.04	.00	.04	.08	--
AUG. 27...	7	.1	61	8.7	.00	.51	.00	.03	60

TULARE LAKE BASIN

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11-2086.25. EAST FORK KAWEAH RIVER AT SEQUOIA NATIONAL PARK BOUNDARY, NEAR HAMMOND, CALIF --Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SiO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT.												
01...	1400	5.4	8	10	11	0	26	1.6	3.3	1.0	90	0
29...	1330	6.4	6	--	11	0	30	1.6	3.3	.8	98	0
DEC.												
07...	1550	9.4	1	2	11	10	26	1.5	2.7	.8	85	0
FEB.												
08...	1130	23	0	5	11	0	17	1.1	2.1	.7	54	0
MAR.												
26...	1000	30	2	9	11	10	15	1.0	2.1	.7	52	0
APR.												
22...	1600	169	4	6	8.1	20	12	.7	1.3	.7	39	0
MAY												
29...	1615	528	9	23	5.4	10	8.2	.4	.9	.5	23	0
JUNE												
18...	0900	282	5	9	8.2	20	8.5	.5	.9	.3	26	0
JULY												
30...	0900	155	10	16	5.4	20	9.1	.5	.5	.4	28	0
AUG.												
25...	1200	39	13	22	7.2	0	14	.8	1.3	.5	44	0

DATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM
OCT.												
01...	7.0	.8	.1	.2	20	96	72	0	162	7.7	.13	9
29...	5.0	.8	.1	.0	0	101	82	2	169	7.9	.14	8
DEC.												
07...	7.0	1.0	.3	.2	0	93	71	1	154	7.5	.13	8
FEB.												
08...	5.0	.4	.0	.6	40	64	47	3	102	7.5	.09	9
MAR.												
26...	4.0	.2	.2	.4	30	61	42	0	97	7.5	.08	10
APR.												
22...	4.0	.4	.1	.2	0	47	33	1	78	6.8	.06	8
MAY												
29...	3.0	.3	.0	.4	10	30	22	3	49	6.8	.04	8
JUNE												
18...	3.0	.2	.1	.3	0	35	23	2	55	7.1	.05	8
JULY												
30...	3.0	.2	.1	.1	0	33	24	1	56	6.5	.04	4
AUG.												
25...	4.0	.2	.0	.1	0	50	38	2	85	7.5	.07	7

DATE	SODIUM AD- SORP- TION RATIO	ALKA- LINIT- Y AS CaCO3 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.											
01...	.2	74	9.9	.7	.00	.51	.51	.05	.02	44	--
29...	.2	80	10.7	.7	.02	.78	.80	.08	.07	27	--
DEC.											
07...	.1	70	12.7	1.4	.51	1.7	2.4	.00	.12	--	--
FEB.											
08...	.1	44	13.6	.8	.80	.13	.85	.03	.06	--	--
MAR.											
26...	.1	43	--	.2	.41	1.1	1.6	.02	.09	--	--
APR.											
22...	.1	32	12.1	2.9	.09	.63	.70	.02	--	9	--
MAY											
29...	.1	19	11.4	3.8	.05	.12	.26	.03	.26	1	--
JUNE											
18...	.1	21	12.1	3.7	.01	.08	.19	.02	.07	1	--
JULY											
30...	.0	23	10.8	2.5	.04	.03	.06	.00	.04	7	1.0
AUG.											
25...	.1	36	9.9	1.7	.04	.17	.20	.04	.04	26	.0

11-2086.3. ATWELL CREEK ABOVE MINERAL KING HIGHWAY, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'57", long 118°40'30", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.17 S., R.30 E., Tulare County, at gaging station on right bank, 750 ft west of Atwell Mills Ranger Station, and 10.4 miles east of Hammond.

DRAINAGE AREA.--0.66 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	CAR- BONATE (C03)
JULY 25...	1230	.10	11	26	.02	5.0	.8	4.3	1.4	32	0
AUG. 28...	0800	.08	9	26	.02	5.5	.9	4.3	1.3	30	0
SEPT. 30...	1905	.04	9	9.2	.01	5.1	.9	4.8	1.6	32	0

DATE	SULFATE (S04)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 25...	1.0	.6	.1	1.2	.00	56	16	0	55	7.3	.08
AUG. 28...	2.0	.3	.1	.2	.01	56	17	0	55	7.4	.08
SEPT. 30...	1.0	.6	.1	.7	.00	40	16	0	61	7.1	.05

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03	DISS- OLVED OXYGEN	BIO- CHEM- ICAL OXYGEN DEMAND	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (P04)	PHOS- PHATE (P04)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 25...	35	.5	26	8.2	--	.04	.00	.06	.24	--
AUG. 28...	34	.5	25	8.4	--	.00	1.7	.07	.07	156
SEPT. 30...	37	.5	26	8.6	.0	.18	.45	.09	.10	118

11-2086.3. ATWELL CREEK ABOVE MINERAL KING HIGHWAY, NEAR HAMMOND, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DIS-CHARGE	TEMP-ERATURE	AIR TEMP-ERATURE	SILICA	DIS-SOLVED IRON	CAL-CIUM	MAG-NE-SIUM	SODIUM	PO-TAS-SIUM	BICAR-BONATE	CAR-BONATE
DATE	TIME	(CFS)	(DEG C)	(DEG C)	(MG/L)	(UG/L)	(MG/L)	(MG)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
MAY 05...	1045	3.4	4	6	18	20	3.4	.6	3.0	1.1	19	0
JUNE 19...	1000	5.6	7	17	17	30	2.5	.5	2.2	.6	16	0
JULY 29...	1740	1.4	12	22	20	40	3.4	.6	2.8	1.3	20	0
AUG. 26...	0750	.67	11	15	22	10	4.0	.8	3.6	1.3	25	0

DATE	SULFATE	CHLO-	FLUO-	NITRATE	BORON	DIS-	HARD-	NON-	SPECI-	PH	DIS-	PERCENT
	(SO4) (MG/L)	RIDE (CL) (MG/L)	RIDE (F) (MG/L)	(NO3) (MG/L)	(B) (UG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)		CAR- BONATE HARD- NESS (MG/L)	FIC COND- UANCE (MICRO- MHOS)		SOLVED SOLIDS (TONS PER AC-FT)	
MAY 05...	1.0	.3	.0	.0	40	36	11	0	37	7.1	.05	35
JUNE 19...	1.0	.9	.1	.1	40	33	8	0	30	7.0	.04	36
JULY 29...	1.0	.4	.1	.0	0	40	11	0	39	6.4	.05	33
AUG. 26...	.0	.2	.0	.1	0	44	14	0	43	7.2	.06	35

	SODIUM AD- SORP- TION RATIO	ALKA- LINIT- Y AS CaCO3 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
DATE											
MAY 05...	.4	16	11.4	.0	.27	.75	.93	.10	--	3	--
JUNE 19...	.4	13	10.8	3.3	.06	.22	.29	.03	.18	20	--
JULY 29...	.4	16	9.6	1.7	.04	.00	.03	.01	.08	10	--
AUG. 26...	.4	21	9.5	2.8	.04	.36	.41	.12	.16	35	1.5

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

TULARE LAKE BASIN

161

11-2086.5. REDWOOD CREEK ABOVE MINERAL KING HIGHWAY, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°27'14", long 118°42'10", in NE¼NW¼ sec.15, T.17 S., R.30 E., Tulare County, at gaging station on right bank, 50 ft upstream from Mineral King Road, and 8.9 miles east of Hammond.

DRAINAGE AREA.--1.38 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)
JULY 25...	1110	.30	13	22	.01	5.6	.7	3.9	1.0	32	0
AUG. 28...	1300	.12	9	22	.01	6.6	.9	4.5	1.1	33	0
SEPT. 30...	1400	.09	11	22	.00	6.6	.9	4.8	1.5	35	0

DATE	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 25...	1.0	.4	.2	.8	.00	52	17	0	54	7.6	.07
AUG. 28...	1.0	.2	.0	.1	.00	52	20	0	59	7.3	.07
SEPT. 30...	1.0	.8	.1	.8	.00	56	20	0	62	7.0	.08

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3	DISS- OLVED OXYGEN	BIO- CHEM- ICAL OXYGEN DEMAND	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 25...	31	.4	26	8.2	--	.91	.00	.02	.05	--
AUG. 28...	32	.4	27	7.6	--	.00	.49	.02	.02	170
SEPT. 30...	32	.5	29	9.0	1.0	.00	1.2	.01	.01	115

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

TULARE LAKE BASIN

163

11-2086.8. SQUIRREL CREEK BELOW MINERAL KING HIGHWAY, NEAR HAMMOND, CALIF.

LOCATION.--Lat 36°26'36", long 118°46'00", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.13, T.17 S., R.29 E., Tulare County, at gaging station on right bank, 300 ft upstream from old Mineral King Road, at Sequoia National Park boundary, and 5.4 miles east of Hammond.

DRAINAGE AREA.--5.80 sq mi.

PERIOD OF RECORD: Chemical analyses: July 1968 to September 1969.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO ₂)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO ₃)	CAR- BONATE (CO ₃)
JULY 25...	--	.12	19	31	.08	8.5	1.7	8.7	2.0	52	0
AUG. 28...	1420	.14	20	29	.09	7.7	1.5	8.4	1.9	46	0
SEPT. 30...	1205	.07	14	13	.06	9.2	1.9	10	2.1	62	0

DATE	SULFATE (SO ₄)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO ₃)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 25...	1.0	1.4	.2	2.3	.00	83	28	0	92	7.5	.11
AUG. 28...	2.0	1.2	.1	1.6	.02	77	25	0	87	7.3	.10
SEPT. 30...	1.0	1.8	.2	.8	.00	71	31	0	105	7.4	.10

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO ₃	DISS- OLVED OXYGEN	AMMONIA (NH ₄)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO ₄)	PHOS- PHATE (PO ₄)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 25...	38	.7	43	8.0	.10	.05	.05	.16	--
AUG. 28...	40	.7	38	8.4	.00	2.4	.11	.13	--
SEPT. 30...	40	.8	51	9.3	.19	.58	.14	.15	3200

TULARE LAKE BASIN

11-2086.8. SQUIRREL CREEK BELOW MINERAL KING HIGHWAY, NEAR HAMMOND, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DIS- SOLVED IRON (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)				
DATE	TIME	DISE- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SIO2) (MG/L)							
MAY 05...	1330	19	11	18	20	20	4.2	.8	3.9	1.5	24	0
JUNE 19...	1230	13	16	28	24	40	4.7	.9	4.1	1.3	30	0
JULY 30...	1240	3.6	20	29	27	100	5.7	1.2	5.0	1.9	34	0
AUG. 26...	0950	1.4	15	19	28	60	6.0	1.2	5.5	1.7	37	0

DATE	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM
MAY 05...	1.0	1.0	.0	.1	30	44	14	0	48	6.8	.06	35
JUNE 19...	1.0	.8	.2	.0	100	52	15	0	52	6.8	.07	34
JULY 30...	1.0	1.2	.0	.0	0	60	19	0	65	6.5	.08	34
AUG. 26...	.0	.8	.1	.1	20	61	20	0	68	7.3	.08	35

DATE	SODIUM AD- SORP- TION RATIO	ALKA- LINIT Y AS CACO3 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)
MAY 05...	.5	20	11.1	2.6	.09	.54	.63	.08	--	1
JUNE 19...	.5	25	10.1	1.9	.13	.17	.27	.07	.12	26
JULY 30...	.5	28	8.7	1.8	.04	.00	.03	.07	.08	--
AUG. 26...	.5	30	8.7	1.7	.03	.27	.31	.06	.10	75

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

TULARE LAKE BASIN

11-2087.3. EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CALIF.

LOCATION.--Lat 36°27'05", long 118°47'15", in NW¼ sec.14, T.17 S., R.29 E., Tulare County, at gaging station on left bank just downstream from diversion dam, and 6.6 miles east of Three Rivers.

DRAINAGE AREA.--85.8 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1969.

Water temperatures: June 1968 to September 1969.

EXTREMES, June to September 1968.--Water temperatures: Maximum, 22°C Aug. 3, 4.

EXTREMES, 1968-69.--Water temperatures: Maximum, 18°C on several days during July and August; minimum, 1°C on several days during December and January.

EXTREMES, June 1968 to September 1969.--Water temperatures: Maximum, 22°C Aug. 3, 4, 1968; minimum, 1°C on several days during December 1968 and January 1969.

REMARKS.--Records of water temperatures furnished by Southern California Edison Company. Discharge reported is combined flow of East Fork Kaweah River and East Fork Kaweah River No. 1 conduit near Three Rivers, Calif.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, JULY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)
JULY 25...	0745	25	18	12	.00	15	1.0	3.0	1.1	52	0
AUG. 26...	1600	16	16	12	.01	17	1.2	3.9	1.2	60	0
SEPT. 30...	0930	10	15	13	.00	18	1.3	5.0	1.6	66	0

DATE	SULFATE (SO4)	CHLO- RIDE (CL)	FLUD- RIDE (F)	NITRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED SOLIDS (TONS PER AC-FT)
JULY 25...	5.0	1.0	.1	.8	.00	65	41	0	98	7.5	.09
AUG. 26...	5.0	.7	.1	.2	.06	71	48	0	111	7.7	.10
SEPT. 30...	6.0	1.3	.0	.7	.00	80	50	0	121	7.5	.11

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3	DISS- OLVED OXYGEN	BIO- CHEM- ICAL OXYGEN DEMAND	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	COLI- FORM (COL- ONIES PER 100 ML)
JULY 25...	13	.2	43	8.4	--	.00	.00	.00	.09	--
AUG. 26...	15	.2	49	8.9	--	1.2	.55	.03	.03	402
SEPT. 30...	17	.3	54	9.9	.7	.01	.26	.07	.08	88

11-2087.3. EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	SILICA (SiO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT. 31...	1000	20	10	11	15	10	14	1.3	4.7	1.1	56	0
DEC. 11...	1400	31	5	6	15	20	11	1.0	4.2	1.1	42	0
JAN. 14...	1130	88	6	11	14	40	7.3	.5	3.4	.9	32	0
MAR. 20...	1130	110	7	18	23	40	6.6	.9	4.8	1.2	34	0
MAY 05...	1525	378	10	24	13	20	7.1	.6	2.6	.8	26	0
29...	1045	1170	10	22	7.7	20	4.6	.4	1.3	.6	16	0
JUNE 19...	1500	745	12	33	9.3	20	4.5	.4	1.4	.5	17	0
JULY 30...	1500	266	18	28	9.1	30	6.5	.5	1.2	.6	24	0
AUG. 26...	1040	79	15	30	13	10	10	.8	2.6	.8	37	0

DATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHQS)	PH (UNITS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)
OCT. 31...	3.0	1.5	.1	.3	0	69	40	0	102	7.7	.09
DEC. 11...	3.0	1.2	.3	.6	0	58	32	0	87	6.9	.08
JAN. 14...	3.0	.6	.2	.7	30	46	20	0	58	7.3	.06
MAR. 20...	1.0	.6	.2	.3	30	56	20	0	64	7.3	.08
MAY 05...	3.0	.4	.0	.0	20	41	20	0	53	6.8	.06
29...	2.0	.3	.0	.2	40	25	13	0	33	6.6	.03
JUNE 19...	2.0	.5	.1	.1	20	27	12	0	35	6.8	.04
JULY 30...	1.0	.4	.0	.0	0	31	18	0	46	6.5	.04
AUG. 26...	3.0	.4	.0	.1	0	49	28	0	73	7.4	.07

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	PHOS- PHATE (PC4) (MG/L)	COLLI- FORM (COL- LIDIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT. 31...	20	.3	46	9.0	1	--	--	--	--	--	208	--
DEC. 11...	22	.3	34	12.6	1	.05	.13	.26	.02	.09	--	--
JAN. 14...	26	.3	26	12.2	0	.01	.30	.47	.07	.19	14	--
MAR. 20...	32	.5	28	13.1	0	.32	--	--	.12	.21	--	--
MAY 05...	21	.3	21	11.7	0	.23	.38	.56	.01	--	1	--
29...	17	.2	13	12.3	3	.00	.24	.29	.03	.19	--	--
JUNE 19...	18	.2	14	--	2	.03	.11	.15	.04	.07	14	--
JULY 30...	12	.1	20	10.2	4	.04	.00	.03	.00	.03	20	--
AUG. 26...	16	.2	30	8.9	3	.04	.15	.20	.03	.04	18	.0

TULARE LAKE BASIN

169

11-2099, KAWEAH RIVER AT THREE RIVERS, CALIF.

LOCATION.--Lat 36°26'38", long 118°54'09", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13, T.17 S., R.28 E., Tulare County, temperature recorder at gaging station on right bank, opposite schoolhouse in Three Rivers, and 0.2 mile downstream from North Fork Kaweah River.

DRAINAGE AREA.--418 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1963 to July 1966.

Water temperatures.--October 1965 to December 1966, January 1968 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 26°C Sept. 3, 8; minimum, 3°C Dec. 22.

EXTREMES, 1965-66, January 1968 to September 1969.--Water temperatures: Maximum, 28°C Aug. 18, 1966; minimum

(1965-66, 1968-69), 3°C Dec. 22, 1968.

REMARKS.--Recorder malfunctioned Oct. 1 to Nov. 6, Mar. 10-14, 20-28, Apr. 19 to June 1, July 4-31, Sept. 9-15; temperature ranges, 12°C to 16°C, 8°C to 10°C, 8°C to 13°C, 9°C to 17°C, 14°C to 24°C, and 19°C to 22°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER-	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER	MAXIMUM	--	--	--	--	--	--	14	14	14	14	14	14	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	12	11	--	12	
	MINIMUM	--	--	--	--	--	--	12	11	10	10	11	12	10	10	9	10	10	8	8	10	9	10	11	10	10	10	8	8	8	8	9	--	10
DECEMBER	MAXIMUM	10	11	10	10	10	10	10	11	10	10	10	9	8	8	10	10	8	7	6	6	6	6	6	6	6	6	6	6	6	8	7	8	
	MINIMUM	9	8	6	7	7	7	8	8	8	8	8	6	6	6	8	8	7	5	5	4	4	3	4	6	6	6	4	4	4	5	6	4	6
JANUARY	MAXIMUM	7	6	7	8	7	8	8	7	6	7	6	7	7	8	8	7	8	8	7	8	7	8	7	6	6	--	--	7	6	6	6	7	
	MINIMUM	4	5	5	6	6	6	6	6	5	5	5	5	6	7	7	7	6	6	7	7	7	6	6	6	--	--	6	6	6	6	6	6	
FEBRUARY	MAXIMUM	6	7	7	7	6	6	7	7	7	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	--	--	8	
	MINIMUM	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	8	8	8	6	6	6	6	7	7	7	7	7	6	--	--	7	
MARCH	MAXIMUM	8	7	7	8	8	8	8	8	8	--	--	--	--	--	12	12	13	12	12	--	--	--	--	--	--	--	--	--	--	14	14	12	--
	MINIMUM	6	7	6	6	7	7	8	8	8	--	--	--	--	--	6	7	8	8	8	--	--	--	--	--	--	--	--	--	--	9	9	10	--
APRIL	MAXIMUM	11	10	8	12	10	9	10	12	11	12	14	13	11	11	10	12	13	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	9	8	7	6	6	6	6	7	8	8	9	10	9	6	6	8	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE	MAXIMUM	--	16	16	16	16	16	14	13	12	12	14	14	17	17	17	16	16	18	18	18	16	18	18	17	16	16	16	16	16	16	18	--	16
	MINIMUM	--	12	12	12	12	12	12	12	11	10	12	12	12	13	13	12	12	12	13	14	13	13	14	13	12	12	12	12	12	12	12	--	12
JULY	MAXIMUM	18	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	14	14	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST	MAXIMUM	21	21	22	23	22	22	22	22	22	23	22	23	24	24	24	24	24	23	23	24	24	24	24	23	23	23	23	23	23	22	23	24	23
	MINIMUM	18	18	18	18	18	18	18	18	18	18	19	18	18	18	18	19	19	19	18	18	18	18	17	18	18	17	17	17	17	17	16	17	18
SEPTEMBER	MAXIMUM	24	25	26	24	24	23	24	26	--	--	--	--	--	--	--	22	22	22	22	19	20	22	23	23	23	24	24	23	24	22	--	--	--
	MINIMUM	18	18	19	18	18	18	18	20	--	--	--	--	--	--	--	16	16	16	16	16	15	15	16	18	18	18	18	18	18	19	19	--	--

TULARE LAKE BASIN

11-2109.5. KAWEAH RIVER BELOW TERMINUS DAM, CALIF.

LOCATION.--Lat 36°24'51", long 119°00'42", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.17 S., R.27 E., Tulare County, at gaging station 0.6 mile downstream from Terminus Dam, and 2.2 miles northeast of Lemoncove.

DRAINAGE AREA.--561 sq mi.

PERIOD OF RECORD.--Chemical analyses; December 1961 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 07...	0920	5.0	20	7.3	--	--	5.7	--	63	0	--	4.1
NOV. 04...	0840	46	16	8.6	--	--	6.3	--	68	0	--	5.0
DEC. 09...	0940	66	10	10.4	--	--	5.9	--	61	0	--	4.4
JAN. 06...	0910	240	7	11.8	--	--	5.6	--	56	0	--	4.1
FEB. 06...	1320	2110	7	11.7	--	--	3.3	--	35	0	--	2.0
MAR. 05...	0810	1780	7	11.2	--	--	4.2	--	49	0	--	2.2
APR. 07...	0925	1830	10	9.3	--	--	4.4	--	43	0	--	1.8
MAY 05...	1025	2980	12	11.2	8.1	1.9	3.4	1.2	33	0	2.1	1.3
JUNE 03...	0840	5160	12	9.8	--	--	1.4	--	16	0	--	1.5
JULY 07...	0830	2940	8	8.0	--	--	1.9	--	18	0	--	1.0
AUG. 04...	0815	1460	17	8.6	--	--	1.4	--	16	0	--	.8

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 07...	--	0	--	--	50	0	20	.4	52	7.5	125
NOV. 04...	--	90	--	--	59	3	19	.4	56	7.4	168
DEC. 09...	--	0	--	--	56	6	19	.3	50	7.7	129
JAN. 06...	--	0	--	--	52	6	19	.3	46	7.7	118
FEB. 06...	--	0	--	--	31	2	19	.3	29	7.4	74
MAR. 05...	--	10	--	--	38	0	19	.3	40	7.8	99
APR. 07...	--	0	--	--	31	0	24	.3	35	7.8	89
MAY 05...	.5	--	66	.09	28	1	20	.3	27	7.8	66
JUNE 03...	--	0	--	--	12	0	20	.2	13	6.8	33
JULY 07...	--	0	--	--	14	0	23	.2	15	7.1	36
AUG. 04...	--	0	--	--	13	0	19	.2	13	7.4	34

11-2135. KINGS RIVER ABOVE NORTH FORK, NEAR TRIMMER, CALIF.

LOCATION.--Lat 36°51'48", long 119°07'24", in NE¼ sec.27, T.12 S., R.26 E., Fresno County, temperature recorder at gaging station on right bank at Rogers Crossing, 0.9 mile upstream from North Fork, 2.9 miles south of Balch Camp, and 9.6 miles southeast of Trimmer.

DRAINAGE AREA.--952 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1955.

Water temperatures: December 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 20°C Sept. 2, 3, 8-10; minimum, 2°C Dec. 21, 22, Jan. 29, 30.

EXTREMES, 1966-69.--Water temperatures: Maximum (1967-69), 23°C on several days during July and August 1968; minimum, freezing point Dec. 14, 15, 1967.

REMARKS.--Clock stopped Oct. 1-7, no temperature range available; Oct. 25 to Nov. 26, temperature range, 8°C to 15°C.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	--	--	--	--	--	--	--	18	17	17	17	16	16	17	15	15	14	14	14	14	14	14	14	14	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	16	15	15	15	15	16	14	13	13	13	13	12	13	13	13	12	12	--	--	--	--	--	--	--	--	
NOVEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	6	6	7	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	5	4	6	--	--	
DECEMBER																																	
MAXIMUM	8	7	6	6	6	6	7	7	7	7	8	8	7	6	8	8	8	8	6	6	5	4	4	6	7	8	7	5	6	6	6	7	
MINIMUM	7	6	5	4	4	4	5	6	6	6	7	5	4	6	8	8	8	6	5	4	4	2	2	4	6	7	6	4	5	6	5	5	
JANUARY																																	
MAXIMUM	6	6	7	8	8	8	8	7	7	7	7	6	8	7	8	8	6	6	8	8	8	7	6	7	8	8	7	6	4	4	4	7	
MINIMUM	5	5	6	6	6	7	6	7	6	6	5	6	6	7	7	6	5	5	7	7	7	6	5	6	7	7	7	6	4	2	2	3	
FEBRUARY																																	
MAXIMUM	5	6	6	6	6	6	5	6	6	6	6	8	8	8	8	8	8	8	7	7	8	8	8	8	7	10	9	8	8	--	--	7	
MINIMUM	4	5	4	4	4	4	4	4	4	4	5	6	8	7	7	7	6	6	6	6	6	7	7	6	6	6	6	7	7	8	--	--	
MARCH																																	
MAXIMUM	8	10	10	9	10	9	10	9	8	8	10	9	8	8	10	10	10	10	10	10	10	10	11	11	10	10	11	11	11	12	11	10	
MINIMUM	7	7	8	7	7	8	8	7	8	8	8	8	6	6	6	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
APRIL																																	
MAXIMUM	11	10	10	10	10	8	9	10	10	12	12	12	12	10	9	10	11	11	11	11	11	12	11	10	10	10	10	11	11	11	11	--	
MINIMUM	8	8	7	8	7	6	6	7	8	9	9	9	9	8	8	8	9	9	8	9	9	10	8	8	8	7	8	8	8	8	--		
MAY																																	
MAXIMUM	11	10	10	10	12	12	12	12	12	11	10	12	11	10	11	11	11	11	11	11	11	11	10	12	12	12	12	11	12	12	12	12	
MINIMUM	8	8	8	7	8	9	9	8	8	8	8	8	8	8	7	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
JUNE																																	
MAXIMUM	12	12	12	12	12	13	12	12	11	11	11	12	13	13	13	12	11	13	13	13	13	14	14	14	13	13	12	12	12	13	14	--	
MINIMUM	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	10	9	10	10	10	10	10	10	10	10	10	9	10	9	10	10	--	
JULY																																	
MAXIMUM	14	14	14	14	14	14	14	14	14	14	14	15	15	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	17	15	
MINIMUM	10	10	10	10	10	11	11	12	12	12	12	12	12	12	13	12	13	13	13	14	14	14	14	14	14	14	14	15	14	15	15	16	
AUGUST																																	
MAXIMUM	17	17	18	18	18	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
MINIMUM	15	16	16	16	16	16	15	16	16	16	16	17	16	16	16	16	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
SEPTEMBER																																	
MAXIMUM	19	20	20	19	19	18	19	20	20	20	18	18	18	18	18	18	18	18	18	18	17	18	18	18	18	18	18	18	18	19	18	--	
MINIMUM	16	17	17	16	16	16	16	17	17	17	17	17	16	16	16	16	16	16	16	16	16	14	15	15	16	16	16	16	16	17	16	--	

TULARE LAKE BASIN

11-2165. NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CALIF.

LOCATION.--Lat 36°54'12", long 119°07'14", in NW $\frac{1}{4}$ sec.10, T.12 S., R.26 E., Fresno County, Sierra National Forest, temperature recorder at gaging station on left bank, 100 ft downstream from bridge at Balch Camp, 200 ft upstream from Dinkey Creek, and 9.3 miles east of Trimmer.

DRAINAGE AREA.--250 sq mi.

PERIOD OF RECORD.--Water temperatures: September 1967 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C July 29-31; minimum, 2°C sometime during period Dec. 3-23.

EXTREMES, 1967-69.--Water temperatures: Maximum, 26°C June 22, 23, 25-27, 1968; minimum, freezing point Dec. 14-16, 21, 1967.

REMARKS.--Recorder stopped Oct. 3 to Nov. 21, Dec. 3-23, Jan. 4-20, Feb. 11-25, Mar. 9 to Apr. 24, Apr. 30 to June 2, June 8-24; temperature ranges, 5°C to 16°C, 2°C to 10°C, 5°C to 9°C, 6°C to 10°C, 5°C to 18°C, 4°C to 10°C, and 8°C to 14°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER																																
MAXIMUM	17	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	12	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	12	10	10	9	8	8	8	8	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	10	10	8	7	6	6	6	7	--	--
DECEMBER																																
MAXIMUM	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7	7	6	6	8	7	7
MINIMUM	8	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	7	6	4	5	5	5	5	--
JANUARY																																
MAXIMUM	7	6	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	8	8	9	8	7	6	6	5	6	6
MINIMUM	5	4	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	7	6	5	5	4	3	3	4
FEBRUARY																																
MAXIMUM	8	8	8	8	7	5	5	6	8	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	9	11	--	--	--	--
MINIMUM	5	6	5	5	4	4	3	3	4	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	7	9	--	--	--	--
MARCH																																
MAXIMUM	12	13	12	12	14	11	12	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	10	9	10	8	8	10	9	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	6	6	6	6	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	3	4	4	4	--	--	--
MAY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE																																
MAXIMUM	--	--	10	10	10	9	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	10	10	9	10	10	--	--
MINIMUM	--	--	8	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9	8	9	8	9	9	--	--
JULY																																
MAXIMUM	12	12	12	12	12	12	12	12	13	13	13	13	13	13	14	14	15	15	14	14	18	16	14	15	15	15	15	13	19	21	21	14
MINIMUM	10	11	11	11	11	11	11	11	12	12	12	12	13	12	13	12	13	12	12	13	13	12	12	12	11	11	11	11	15	15	15	12
AUGUST																																
MAXIMUM	20	18	20	20	20	20	19	19	19	18	20	20	20	20	20	20	19	19	19	19	19	19	19	19	19	19	19	19	18	18	19	19
MINIMUM	14	14	14	15	14	14	13	13	13	14	15	15	14	14	14	15	15	14	14	14	14	14	13	14	14	13	13	13	13	13	13	14
SEPTEMBER																																
MAXIMUM	19	20	19	19	19	18	19	20	19	19	18	18	18	18	18	17	18	18	17	16	17	17	18	18	18	17	18	17	18	18	--	18
MINIMUM	14	14	14	14	14	14	14	14	15	15	14	14	14	14	14	14	13	13	14	14	14	12	13	13	13	14	13	14	13	15	14	--

11-2185. KINGS RIVER-BELOW NORTH FORK, NEAR TRIMMER, CALIF.

LOCATION.--Lat 36°53'04", long 119°09'07", in NW $\frac{1}{4}$ sec.16 T.12 S., R.26 E., Fresno County, on right bank 1 mile downstream from gaging station, 1.8 miles downstream from North Fork, 2.2 miles southwest of Balch Camp, and 7.7 miles southeast of Trimmer.

DRAINAGE AREA.--1,342 sq mi (at gaging station).

PERIOD OF RECORD.--Chemical analyses: October 1955 to July 1963, October 1967 to September 1969.

Water temperatures: October 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C Sept. 7, 8; minimum, 2°C Jan. 28-30.

EXTREMES, 1966-67, 1968-69.--Water temperatures: Maximum, 21°C Sept. 7, 8, 1969; minimum, freezing point on several days in December 1966 and January 1967.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Temperature subject to fluctuation because of powerplant operation upstream. Clock stopped Oct. 18-25, May 22-25; temperature range, 11°C to 14°C, and 8°C to 10°C, respectively. Thermograph malfunction May 26 to June 18, Aug. 10-25; no recorded temperature range.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
14...	1145	540	15	10.1	--	--	4.0	--	27	0	--	2.1
NOV.												
12...	1120	381	12	11.5	--	--	3.1	--	20	0	--	1.8
DEC.												
09...	--	244	--	--	--	--	3.4	--	23	0	--	2.0
JAN.												
13...	1100	500	7	12.0	--	--	3.0	--	21	0	--	1.8
FEB.												
10...	1130	1150	6	12.0	--	--	3.5	--	31	0	--	1.4
MAR.												
10...	1200	1430	6	11.8	--	--	3.9	--	38	0	--	1.4
APR.												
14...	1145	4500	8	12.0	--	--	2.7	--	21	0	--	.8
MAY												
12...	1210	13600	10	11.0	2.7	.4	1.3	.6	12	0	.8	.6
JUNE												
10...	1100	12000	7	12.0	--	--	1.0	--	9	0	--	1.2
JULY												
14...	1110	10600	13	10.2	--	--	.8	--	8	0	--	.5
AUG.												
04...	--	4460	--	--	--	--	.8	--	9	0	--	.5
SEPT.												
08...	1350	1030	12	12.0	--	--	1.7	--	16	0	--	.8

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
14...	--	20	--	--	22	0	28	.4	22	7.3	62
NOV.											
12...	--	10	--	--	15	0	31	.3	16	7.3	47
DEC.											
09...	--	0	--	--	19	0	28	.3	19	7.5	52
JAN.											
13...	--	0	--	--	19	2	26	.3	17	7.5	43
FEB.											
10...	--	0	--	--	27	2	22	.3	25	7.2	67
MAR.											
10...	--	0	--	--	30	0	22	.3	31	7.7	78
APR.											
14...	--	--	--	--	16	0	27	.3	17	7.0	44
MAY											
12...	.4	--	31	.04	8	0	24	.2	10	7.3	25
JUNE											
10...	--	0	--	--	6	0	27	.2	7	6.9	19
JULY											
14...	--	0	--	--	7	0	20	.1	7	6.8	15
AUG.											
04...	--	0	--	--	6	0	22	.1	7	7.6	18
SEPT.											
08...	--	0	--	--	12	0	24	.2	13	7.2	33

TULARE LAKE BASIN

11-2185. KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																			
MAXIMUM		13	14	12	13	15	18	14	14	13	13	13	14	14	13	12	13	13	--	--	--	--	--	--	--	--	--	16	16	14	12	12	12	--	
MINIMUM		11	11	11	11	11	13	11	11	11	11	11	11	13	11	11	11	11	--	--	--	--	--	--	--	--	--	10	10	10	10	10	10	--	
NOVEMBER																																			
MAXIMUM		12	12	11	12	11	10	11	11	11	12	10	10	10	10	11	10	10	10	10	10	10	10	10	10	9	9	10	10	8	10	8	--	10	
MINIMUM		10	10	10	9	10	8	8	8	8	8	8	9	9	9	9	8	8	8	8	8	8	8	8	8	7	7	7	7	5	4	6	--	8	
DECEMBER																																			
MAXIMUM		7	9	9	9	8	8	8	9	8	8	9	9	7	7	8	8	7	6	6	6	6	6	6	6	6	6	6	4	5	7	6	6	7	
MINIMUM		6	6	6	4	4	6	6	6	6	8	7	6	6	6	7	6	6	6	5	4	4	4	4	4	6	6	6	4	4	4	5	4	4	5
JANUARY																																			
MAXIMUM		8	6	6	6	8	8	8	6	6	6	6	6	8	7	8	7	6	6	8	8	8	8	7	6	6	8	8	8	6	5	4	4	6	7
MINIMUM		4	4	4	6	6	6	6	6	5	5	4	5	6	6	6	6	5	5	8	8	7	5	5	6	8	6	6	5	2	2	2	4	5	
FEBRUARY																																			
MAXIMUM		6	6	7	7	6	6	6	6	7	8	6	6	7	7	6	7	6	6	6	8	8	8	8	8	9	9	8	8	--	--	--	--	7	
MINIMUM		5	6	5	6	6	5	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	8	8	8	--	--	--	6	
MARCH																																			
MAXIMUM		8	8	8	8	8	8	8	8	8	8	8	7	6	7	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	8	
MINIMUM		7	8	7	6	7	8	7	7	7	8	7	6	6	5	6	5	7	6	6	6	6	6	6	6	6	6	6	5	5	5	5	6	6	
APRIL																																			
MAXIMUM		6	5	4	6	5	4	4	6	5	7	8	7	7	4	5	6	7	6	7	7	6	5	6	5	7	7	8	8	8	--	--	--	6	
MINIMUM		4	4	3	3	3	2	2	3	4	4	4	6	6	4	2	3	4	5	4	4	4	5	4	4	4	4	5	4	5	5	5	7	--	4
MAY																																			
MAXIMUM		7	8	7	8	8	8	8	8	9	9	8	8	8	8	8	9	10	9	9	9	10	--	--	--	--	--	9	9	--	--	--	--	--	
MINIMUM		5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	7	--	--	--	7	7	--	--	--	--	--	--	
JUNE																																			
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	13	13	14	13	13	13	13	13	13	12	13	--	--	
MINIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	13	13	13	12	12	12	12	12	11	11	12	--	--	
JULY																																			
MAXIMUM		13	13	14	14	13	14	14	14	14	14	14	15	15	15	15	15	15	16	16	16	16	16	16	16	17	17	17	17	18	18	18	18	15	
MINIMUM		12	12	12	12	12	13	13	13	13	13	13	14	14	14	14	14	14	14	15	15	15	15	15	16	16	16	16	16	17	17	18	18	14	
AUGUST																																			
MAXIMUM		18	18	18	18	19	19	19	19	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	18	18	18	19	19	--
MINIMUM		18	18	18	18	18	19	19	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	18	17	17	18	18	--
SEPTEMBER																																			
MAXIMUM		19	19	20	19	19	20	21	21	18	17	15	16	15	15	15	15	14	14	14	14	13	13	14	14	13	13	12	12	12	12	--	--	16	
MINIMUM		18	18	19	18	18	18	20	17	16	14	13	14	13	13	14	13	13	13	13	13	12	12	12	12	11	11	10	10	10	10	--	--	14	

11-2227. KINGS RIVER AT PEOPLES WEIR, NEAR KINGSBURG, CALIF.

LOCATION.--Lat 36°29'06", long 119°32'22", in NW¼ sec.1, T.17 S., R.22 E., Fresno County, approximately 0.2 mile downstream from gaging station located on diversion weir, 2 miles south of Kingsburg, and approximately 12 miles northeast of Hanford.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	DISS-OLVED OXYGEN (MG/L)	CAL-CIUM (CA) (MG/L)	MAG-NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO-TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
JAN. 06...	1330	19	8	10.7	--	--	6.7	--	54	0	--	3.7
MAY 06...	0850	6400	13	13.5	5.6	1.4	2.7	.9	24	0	2.0	1.1
JULY 07...	0940	3820	17	10.0	--	--	1.3	--	13	0	--	.7
SEPT. 08...	1005	1210	18	9.7	--	--	2.4	--	23	0	--	1.2
DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CA CO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	
JAN. 06...	--	0	--	--	41	0	26	.5	44	7.8	114	
MAY 06...	.2	--	55	.07	20	0	22	.3	20	8.1	51	
JULY 07...	--	0	--	--	12	1	19	.2	11	7.0	28	
SEPT. 08...	--	0	--	--	17	0	24	.3	19	7.4	47	

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LOCATION.--Lat 37°13'19", long 119°12'43", in SW¼NW¼ sec.23, T.8 S., R.25 E., Fresno County, temperature recorder at gaging station on right bank 1,200 ft upstream from Grouse Creek, and 1 mile downstream from Huntington Lake.

DRAINAGE AREA.--81.1 sq mi.

EXTREMES, 1968-69.--Water temperatures: Maximum, 18°C on several days in August; minimum, freezing point on many days during December to March.

EXTREMES, 1961-69.--Water temperatures: Maximum, 18°C on several days in August 1969; minimum (1961-63, 1965-69), freezing point on several days during winter period.

		DAY																														AVER-		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																		
	MAXIMUM	13	13	13	13	13	13	13	12	12	12	12	12	12	11	11	11	12	12	11	11	11	11	11	11	11	11	11	11	11	11	10	10	12
	MINIMUM	11	12	12	12	11	11	11	10	11	11	11	12	11	11	9	10	10	10	10	10	10	9	9	9	10	10	10	10	10	9	9	9	10
NOVEMBER																																		
	MAXIMUM	9	9	9	8	8	8	8	8	8	8	8	8	7	6	6	6	7	7	6	6	6	6	6	6	6	4	5	5	4	5	5	--	7
	MINIMUM	8	8	7	7	7	7	7	7	7	7	7	6	6	5	4	6	6	6	6	6	5	6	5	4	4	4	4	4	4	4	4	6	
DECEMBER																																		
	MAXIMUM	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	2	2	1	1	1	1	0	0	0	1	1	0	0	0	0	1	1	2
	MINIMUM	3	3	3	3	3	3	3	3	3	3	3	1	2	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
JANUARY																																		
	MAXIMUM	1	1	1	1	2	1	1	2	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
	MINIMUM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	0	1	1	1	1	1	1
FEBRUARY																																		
	MAXIMUM	2	2	2	2	2	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	--	--	--	1
	MINIMUM	1	1	1	1	1	0	0	1	1	2	2	2	2	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	--	--	--	1
MARCH																																		
	MAXIMUM	1	1	1	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2	3	3	3	3	3	3	2
	MINIMUM	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1
APRIL																																		
	MAXIMUM	3	3	2	3	2	2	2	3	3	3	3	3	3	2	3	3	3	3	4	4	3	3	2	4	4	4	4	4	4	4	4	--	3
	MINIMUM	2																																

11-2645. MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CALIF.
(Hydrologic bench-mark station)

LOCATION.--Lat 37°43'54", long 119°33'28", (unsurveyed), Mariposa County, at gaging station on right bank, 10 ft downstream from footbridge at Happy Isles, 0.4 mile downstream from Illilouette Creek, and 2.0 miles southeast of Yosemite National Park headquarters.

DRAINAGE AREA.--181 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1968 to September 1969.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 17°C on several days during July and August; minimum, freezing point on many days during December to February.

EXTREMES, 1965-69.--Water temperatures: Maximum (1966-69), 17°C on many days during June to August of most years; minimum, freezing point on many days during winter months each year.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph malfunction Feb. 20 to Mar. 24, May 12-15, 18, 28-30, June 2-4, June 22 to July 3, July 30 to Aug. 1, Aug. 8-11, 24, Aug. 30 to Sept. 1, 8-10, 24, 29, 30; no temperature ranges available.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT.												
16...	1200	15	7	20	9.0	3.4	10	2.4	.1	2.0	.4	7
NOV.												
19...	1030	137	4	1	12.0	4.8	--	1.2	.3	1.5	.3	7
DEC.												
18...	1030	78	--	--	--	6.5	--	2.5	.1	2.4	.5	7
FEB.												
20...	1400	118	0	--	11.6	8.3	10	2.5	.3	2.4	.2	8
MAR.												
25...	1145	177	1	2	11.6	8.1	--	2.1	.3	2.0	.4	8
APR.												
29...	1400	1230	5	23	12.0	5.9	20	1.0	.2	1.0	.3	9
JUNE												
11...	1145	1320	7	15	11.0	4.5	30	.8	.1	.7	.2	4
JULY												
30...	1600	626	16	34	11.0	2.8	10	.6	.1	.4	.1	2
SEPT.												
26...	1130	24	10	13	11.0	5.8	30	2.1	.1	1.7	.3	7

DATE	CAR- BONATE (CO3) (MG/L)	SULFATE (SU4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
16...	0	2.0	3.1	.0	.0	0	17	.02	6	0	6.9	28
NOV.												
19...	0	1.0	2.8	.1	.2	0	12	.02	4	0	6.7	21
DEC.												
18...	0	.0	4.5	.2	.3	10	20	.03	6	0	6.5	31
FEB.												
20...	0	1.0	2.3	.0	.3	30	21	.03	7	0	6.1	28
MAR.												
25...	0	3.0	1.7	.1	.1	30	22	.03	6	0	6.9	24
APR.												
29...	0	.0	.4	.1	.3	0	13	.02	4	0	6.3	14
JUNE												
11...	0	.0	.3	.0	.0	20	9	.01	2	0	6.3	10
JULY												
30...	0	.0	.4	.0	.0	0	5	.01	2	0	6.2	9
SEPT.												
26...	0	1.0	2.6	.1	.0	0	17	.02	6	0	6.2	24

SAN JOAQUIN RIVER BASIN

11-2645. MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO ₃ (MG/L)	PHOS- PHATE (PO ₄) (MG/L)	ORTHO PHOS- PHATE (PO ₄) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	AMMONIA (NH ₄) (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)
OCT. 16...	39	.4	6	.09	.17	.46	.03	10	1.2
NOV. 19...	44	.4	6	.08	.03	.09	.08	13	.7
DEC. 18...	42	.4	6	.02	.00	.06	.08	--	--
FEB. 20...	40	.4	7	.13	.05	.79	.15	6	2.1
MAR. 25...	41	.3	7	.06	.02	.84	.13	1	.0
APR. 29...	33	.2	7	--	--	--	--	1	.7
JUNE 11...	33	.2	3	.05	.00	.09	.01	2	.0
JULY 30...	33	.1	2	.10	.07	.08	.04	0	1.4
SEPT. 26...	37	.3	6	.02	.02	.08	.08	21	.7

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	12	13	12	13	13	12	12	13	13	12	11	11	10	9	8	8	8	8	8	8	8	8	8	8	9	9	9	9	8	8	7	10	
MINIMUM	9	9	9	9	9	9	9	8	8	8	8	9	10	8	7	7	7	8	8	8	8	8	7	7	8	8	8	8	8	8	7	6	8
NOVEMBER																																	
MAXIMUM	6	8	8	6	7	6	7	7	8	8	8	7	3	3	3	4	6	6	5	5	5	6	6	5	2	2	2	2	2	2	--	5	
MINIMUM	6	6	5	4	5	4	5	5	6	6	6	6	3	2	2	2	3	4	4	4	4	4	4	4	2	2	2	2	1	1	--	4	
DECEMBER																																	
MAXIMUM	2	2	2	2	2	2	3	3	4	4	3	2	2	2	3	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	
MINIMUM	1	1	1	1	1	2	2	3	3	3	1	1	1	2	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	
JANUARY																																	
MAXIMUM	2	2	3	3	3	3	3	3	2	1	1	2	4	3	3	1	2	1	3	3	4	3	3	2	3	4	3	1	1	0	0	2	
MINIMUM	1	1	2	2	3	2	2	1	1	1	1	2	2	1	1	1	1	1	2	3	2	1	1	2	3	1	1	0	0	0	0	1	
FEBRUARY																																	
MAXIMUM	0	0	1	1	1	1	0	0	0	1	1	2	1	1	1	1	0	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	4	4	5	5	5	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	2	2	2	2	2	--	--
APRIL																																	
MAXIMUM	5	4	4	6	4	3	4	5	5	7	7	6	5	3	5	6	6	5	7	7	6	6	4	4	6	6	7	7	6	6	--	5	
MINIMUM	2	2	1	2	1	1	0	2	2	3	3	3	3	2	1	1	2	2	3	2	3	3	3	2	2	1	2	2	3	2	2	--	2
MAY																																	
MAXIMUM	6	5	5	5	7	7	8	8	7	7	7	--	--	--	--	8	7	--	7	8	8	8	8	8	8	9	9	--	--	--	9	--	
MINIMUM	2	3	3	3	4	4	4	4	4	4	4	--	--	--	--	4	4	--	3	4	5	5	5	5	5	5	5	5	--	--	6	--	
JUNE																																	
MAXIMUM	9	--	--	--	10	10	10	8	7	8	8	9	10	9	10	8	8	9	10	10	10	10	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	6	--	--	--	7	7	7	7	6	6	7	6	6	7	7	7	7	6	6	7	7	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																	
MAXIMUM	--	--	--	12	12	12	12	12	12	13	13	14	14	14	14	15	15	15	16	16	17	17	17	17	17	17	17	17	17	--	--	15	
MINIMUM	--	--	--	8	8	8	9	10	10	10	11	12	13	12	12	11	12	13	14	14	15	15	16	16	16	16	16	15	16	16	--	--	13
AUGUST																																	
MAXIMUM	--	17	17	17	17	17	16	--	--	--	--	16	16	16	17	17	17	17	16	16	16	16	16	--	16	15	15	14	14	--	--	--	
MINIMUM	--	15	15	15	13	12	12	--	--	--	--	14	14	14	14	14	16	13	13	14	14	14	14	--	13	12	12	12	11	--	--	--	
SEPTEMBER																																	
MAXIMUM	--	15	15	15	15	15	16	--	--	--	--	14	14	14	13	12	12	12	11	12	11	11	11	--	11	11	11	10	--	--	--	--	
MINIMUM	--	13	13	12	12	13	14	--	--	--	--	12	12	11	11	10	10	10	10	11	9	10	10	--	10	10	10	9	--	--	--	--	

SAN JOAQUIN RIVER BASIN

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11-2831. LILY CREEK NEAR PINECREST, CALIF.

LOCATION.--Lat 38°08'41", long 119°53'59", in T.3 N., R.14 E., Tuolumne County, temperature recorder at gaging station on left bank, 1,500 ft downstream from Mud Lake, and 5.7 miles southeast of Pinecrest.

DRAINAGE AREA.--11.9 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1964 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 19°C on many days during July to September; minimum, freezing point on many days during winter months.

EXTREMES, 1964-69.--Water temperatures: Maximum, 25°C Aug. 17, 1966; minimum, freezing point on many days during winter months.

REMARKS.--Stream frozen during most of winter.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
MAXIMUM		16	16	15	16	15	13	13	12	11	11	11	10	10	8	7	9	10	10	9	9	9	9	9	9	9	9	9	9	9	8	6	11	
MINIMUM		13	13	13	13	12	11	10	10	10	10	10	10	8	7	6	7	8	9	8	8	8	8	8	8	8	8	8	8	8	8	6	6	9
NOVEMBER																																		
MAXIMUM		5	5	5	4	5	5	5	5	7	7	6	5	4	3	2	2	2	2	3	3	3	3	3	2	2	1	1	1	0	0	--	3	
MINIMUM		5	5	4	4	4	3	4	4	5	5	5	3	3	2	1	2	2	2	2	2	2	2	2	2	1	1	1	0	0	0	--	3	
DECEMBER																																		
MAXIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MINIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JANUARY																																		
MAXIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MINIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FEBRUARY																																		
MAXIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	0	
MINIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	0	
MARCH																																		
MAXIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MINIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
APRIL																																		
MAXIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	--	0	
MINIMUM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	
MAY																																		
MAXIMUM		1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	
MINIMUM		0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	
JUNE																																		
MAXIMUM		3	3	3	4	4	5	4	3	3	3	3	4	5	4	5	4	4	5	7	7	7	8	6	9	8	9	9	9	10	11	--	6	
MINIMUM		2	2	2	2	2	2	2	3	2	2	3	2	3	3	3	3	4	4	4	4	4	4	5	5	5	5	4	5	5	6	7	--	4
JULY																																		
MAXIMUM		11	11	11	12	12	10	12	12	13	13	14	14	13	14	15	15	16	16	17	17	18	18	17	18	18	19	18	18	19	19	18	15	
MINIMUM		7	7	7	7	8	8	7	9	9	9	9	10	11	10	11	11	12	12	13	13	14	14	16	14	14	14	15	14	15	14	15	16	11
AUGUST																																		
MAXIMUM		18	18	19	19	19	18	18	17	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	17	18	19	
MINIMUM		16	16	16	16	16	16	16	16	17	17	17	17	17	17	17	17	18	17	16	16	16	16	17	17	17	17	17	16	16	16	15	15	16
SEPTEMBER																																		
MAXIMUM		18	19	19	18	18	18	18	18	18	18	17	18	18	17	17	16	16	16	16	14	14	14	14	15	15	15	14	14	13	13	--	16	
MINIMUM		16	16	16	16	16	16	16	16	16	16	15	15	14	14	14	14	13	13	13	13	12	12	12	12	12	12	11	11	11	12	--	14	

SAN JOAQUIN RIVER BASIN

11-2900. TUOLUMNE RIVER AT MODESTO, CALIF.

LOCATION.--Lat 37°37'38", long 120°59'11", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.3 S., R.9 E., Stanislaus County, temperature recorder at gaging station on left bank, at bridge on Ninth Street in Modesto, and 0.2 mile downstream from Dry Creek.

DRAINAGE AREA.--1,884 sq mi.

PERIOD OF RECORD.--Water temperatures: July 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 29°C Aug. 17, 21; minimum, 8°C on many days during December to February.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-67, 1968-69), 29°C on several days in 1966, 1967 and 1969; minimum, 8°C on many days during winter months of most years.

REMARKS.--Recorder inoperative Oct. 1-21. Clock stopped Feb. 6 to Mar. 5; temperature range, 8°C to 9°C.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	18	18	18	18	18	18	18	17	17	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	17	17	17	17	17	17	17	17	16	16	--	
NOVEMBER																																		
MAXIMUM	17	17	17	17	17	17	16	16	16	16	16	16	15	14	14	15	15	15	15	15	15	15	15	15	15	14	13	13	13	13	12	--	15	
MINIMUM	16	16	16	16	16	16	16	15	15	16	16	15	13	12	12	14	14	14	14	14	14	15	15	15	14	13	12	12	12	12	12	--	14	
DECEMBER																																		
MAXIMUM	13	12	12	11	11	11	12	12	11	12	12	12	11	11	10	11	11	11	10	10	10	9	9	9	9	10	10	9	8	9	8	8	10	
MINIMUM	12	11	11	11	11	11	11	11	11	11	12	11	11	10	9	10	10	10	9	9	9	8	8	9	9	9	9	9	8	8	8	8	10	
JANUARY																																		
MAXIMUM	8	8	8	9	9	9	9	9	9	9	9	9	9	10	10	9	8	8	8	9	10	10	10	10	10	10	11	10	10	9	9	9	9	
MINIMUM	8	8	8	8	8	9	9	8	8	9	8	8	9	9	9	9	8	8	8	8	9	9	10	10	10	10	10	9	9	8	9	8	9	
FEBRUARY																																		
MAXIMUM	9	9	9	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	8	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MARCH																																		
MAXIMUM	--	--	--	--	--	10	10	10	10	10	10	10	10	9	9	10	10	10	11	11	11	10	10	10	11	11	11	11	11	11	12	12	10	
MINIMUM	--	--	--	--	--	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	9	9	9	9	9	10	10	10	10	10	11	11	
APRIL																																		
MAXIMUM	12	11	11	12	12	11	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	14	13	13	13	13	13	13	13	13	--	12	
MINIMUM	10	10	10	11	11	10	11	11	11	11	11	11	11	11	11	11	11	11	12	12	12	12	12	13	13	12	12	12	12	12	12	--	11	
MAY																																		
MAXIMUM	13	13	14	14	14	16	16	15	15	15	16	16	15	15	15	15	15	14	14	16	15	15	16	16	16	16	16	16	15	15	15	15	15	
MINIMUM	12	12	12	13	13	14	15	14	14	14	15	14	14	14	13	13	13	13	13	14	14	14	14	15	14	14	14	14	14	14	14	14	14	
JUNE																																		
MAXIMUM	16	16	16	16	16	16	16	16	15	15	15	15	15	15	15	15	15	15	15	16	16	16	17	16	17	17	17	17	18	19	19	--	16	
MINIMUM	15	15	15	15	15	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14	15	15	15	15	15	16	16	16	16	17	18	--	
JULY																																		
MAXIMUM	21	22	23	24	24	24	23	23	23	23	20	21	21	21	22	21	20	21	23	24	23	23	24	25	25	25	25	25	25	25	26	27	23	
MINIMUM	18	20	21	21	22	22	21	21	21	20	19	19	20	20	20	18	18	19	21	22	22	21	21	22	23	23	23	23	23	23	23	23	21	
AUGUST																																		
MAXIMUM	27	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	29	28	28	28	28	29	28	28	27	27	27	27	27	26	27	26	28	
MINIMUM	24	25	25	25	24	25	25	25	25	26	26	25	25	25	25	24	25	24	24	24	24	25	25	25	24	24	24	24	24	24	23	25		
SEPTEMBER																																		
MAXIMUM	26	26	26	26	26	25	25	26	26	27	26	26	26	25	24	23	23	24	24	24	24	24	24	24	24	24	24	24	22	21	21	--	24	
MINIMUM	23	24	24	24	24	23	24	23	23	23	24	23	23	22	22	21	21	21	22	22	22	21	22	22	22	22	22	22	20	20	20	--	22	

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LOCATION.--Lat 38°14'49", long 120°01'51", in SW 1/4 sec.31, T.5 N., R.18 E., Tuolumne County, temperature recorder at gaging station on left bank, 200 ft upstream from Donnell powerhouse, 800 ft downstream from Hells Half Acre Bridge, 1.1 miles upstream from Cow Creek, and 4.7 miles northwest of Pinecrest.

DRAINAGE AREA.--287 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C July 29, 30; minimum, freezing point on several days during December, February, and March.

EXTREMES, 1965-69.--Water temperatures: Maximum (1966-69), 22°C sometime during period June 7-26, and on June 27, 1968; minimum, freezing point on several days during December to March of each year.

REMARKS.--Clock stopped Apr. 23, 24, Aug. 26 to Sept. 30; temperature ranges, 3°C to 8°C, and 12°C to 18°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER	MAXIMUM	14	14	14	15	15	14	14	13	12	13	13	12	12	12	12	12	12	13	13	13	13	12	12	13	13	13	13	13	12	12	11	13		
	MINIMUM	11	12	12	12	12	12	12	11	11	11	11	12	11	11	9	9	10	11	11	11	11	10	10	11	11	11	11	11	11	11	10	9	11	
NOVEMBER	MAXIMUM	11	10	10	8	10	8	9	10	10	10	10	9	10	7	5	5	6	7	8	7	7	7	8	8	7	6	5	5	5	4	5	--	8	
	MINIMUM	9	9	8	7	8	7	8	8	8	8	9	9	7	5	4	4	5	6	7	6	6	6	6	6	6	4	4	4	3	3	4	--	6	
DECEMBER	MAXIMUM	4	3	3	3	3	4	4	5	5	5	4	2	3	4	4	2	2	2	2	1	1	1	2	2	2	2	1	1	1	2	2	2	3	
	MINIMUM	2	2	2	2	2	2	3	4	4	4	4	2	1	2	3	2	1	1	1	1	0	0	0	1	2	2	1	0	0	1	1	1	2	
JANUARY	MAXIMUM	2	3	4	4	4	4	4	5	4	3	3	4	4	5	5	5	4	5	5	5	5	5	5	5	5	6	6	4	3	3	3	4		
	MINIMUM	1	2	2	3	3	3	3	4	3	2	2	3	3	3	4	4	4	3	3	4	5	4	4	3	4	3	3	3	2	1	2	1	3	
FEBRUARY	MAXIMUM	4	4	4	3	3	2	3	3	4	5	4	5	3	3	3	4	4	3	4	4	4	4	4	4	3	2	2	3	3	3	--	--	3	
	MINIMUM	3	2	3	2	2	1	1	1	3	3	3	3	3	1	3	1	1	1	2	3	3	3	2	3	2	0	1	1	1	2	--	--	2	
MARCH	MAXIMUM	4	3	3	4	4	3	3	2	3	2	3	3	4	4	5	5	5	5	7	6	4	5	7	7	7	7	7	7	7	7	7	7	5	
	MINIMUM	1	1	1	1	1	2	1	1	1	1	1	1	2	1	0	1	2	3	3	3	2	2	3	3	3	3	3	3	3	3	4	4	2	
APRIL	MAXIMUM	7	5	6	7	5	4	6	7	6	8	9	8	7	5	7	8	8	7	9	10	9	10	9	--	--	7	8	8	9	10	9	--	7	
	MINIMUM	3	3	3	3	2	2	2	3	4	4	4	4	3	3	2	3	3	3	4	4	5	5	5	5	--	--	3	4	4	6	5	5	--	4
MAY	MAXIMUM	9	7	7	8	10	10	10	10	10	9	8	9	8	8	9	9	9	8	8	8	8	8	9	9	9	8	8	8	9	9	10	9	9	
	MINIMUM	4	4	4	4	6	5	5	5	5	7	6	6	6	5	5	6	6	5	6	6	5	6	6	6	6	6	6	6	7	7	7	7	8	
JUNE	MAXIMUM	10	11	9	9	10	9	10	9	9	9	9	11	11	11	11	11	11	12	11	12	12	12	15	12	13	11	11	12	12	12	13	14	--	11
	MINIMUM	8	7	7	8	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	9	9	8	8	9	10	9	9	8	8	8	9	10	--	8
JULY	MAXIMUM	15	15	14	15	15	15	15	16	15	16	16	16	16	16	15	16	17	17	17	18	18	18	19	19	19	19	19	19	18	19	21	21	20	17
	MINIMUM	10	11	10	10	11	11	11	11	12	12	12	12	12	12	12	12	13	13	13	14	14	14	14	14	14	14	14	14	15	16	16	17	16	13
AUGUST	MAXIMUM	19	19	20	19	19	19	18	18	18	18	18	19	19	19	19	19	19	19	19	18	18	19	19	19	18	18	--	--	--	--	--	--	--	19
	MINIMUM	16	15	15	15	15	15	14	14	14	15	15	15	15	15	15	15	15	16	15	15	14	14	15	15	15	15	14	--	--	--	--	--	--	15
SEPTEMBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SAN JOAQUIN RIVER BASIN

11-3020. STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CALIF.

LOCATION (revised).--Lat 37°51'06", long 120°38'13", in Rancheria Del Rio Estanislao Grant, Calaveras County, temperature recorder at gaging station on right bank, 250 ft upstream from Owl Creek, 0.9 mile downstream from Goodwin Dam, and 2.9 miles northeast of Knights Ferry.

DRAINAGE AREA.--986 sq mi.

PERIOD OF RECORD.--Water temperatures: February 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C on several days in September.

EXTREMES, 1966-69.--Water temperatures: Maximum, 27°C June 25, 1968; minimum (1966-68), 6°C sometime during period Jan. 13-31, 1968.

REMARKS.--Clock stopped Oct. 11 to Nov. 1, Nov. 12 to Dec. 3, May 27 to June 2, June 3 to July 1, July 2 to Aug. 14; temperature ranges, 17°C to 19°C, 12°C to 17°C, 12°C to 13°C, 12°C to 16°C, and 16°C to 23°C, respectively. Recorder malfunctioned Jan. 9-21, Jan. 24 to Feb. 4, Feb. 6 to Mar. 4, Mar. 9 to Apr. 2.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY																																AVER- AGE		
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	--	--	21	21	21	21	21	21	20	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	21	21	21	21	21	20	19	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVEMBER																																		
MAXIMUM	--	16	17	17	17	17	17	17	17	17	17	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	16	16	16	16	16	16	16	16	16	16	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DECEMBER																																		
MAXIMUM	--	--	--	13	13	12	12	13	13	13	13	13	12	12	12	12	12	12	12	11	11	10	10	10	10	10	10	9	9	9	9	9	11	
MINIMUM	--	--	--	12	12	12	12	12	12	13	12	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	9	9	9	9	9	11		
JANUARY																																		
MAXIMUM	9	9	9	9	9	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	10	10	--	--	--	--	--	--	--	--	--	--	
MINIMUM	9	9	9	9	9	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	9	9	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																		
MAXIMUM	--	--	--	--	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MARCH																																		
MAXIMUM	--	--	--	--	8	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
APRIL																																		
MAXIMUM	--	--	11	11	10	10	10	10	9	9	9	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	10	10	--	10	
MINIMUM	--	--	11	10	10	10	10	10	9	9	9	9	10	10	10	10	10	10	10	11	11	11	11	11	11	11	10	10	10	10	10	--	10	
MAY																																		
MAXIMUM	10	10	11	11	11	11	11	11	11	11	12	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	--	--	--	--	--	12	
MINIMUM	10	10	10	11	11	10	10	11	11	11	11	12	12	12	12	12	12	12	11	12	11	11	11	11	12	12	12	--	--	--	--	--	11	
JUNE																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JULY																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUGUST																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23	22	22	22	22	22	22	22	23	23	23	23	23	22	22	22	23	23	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	22	22	21	22	22	22	22	22	22	22	22	22	21	21	21	21	21	--
SEPTEMBER																																		
MAXIMUM	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	23	24	23	23	23	24	24	24	23	21	20	20	20	20	20	20	--	23	
MINIMUM	21	23	23	23	22	22	23	23	24	24	24	23	23	23	23	22	22	22	22	22	22	22	22	22	21	20	20	20	20	20	19	--	22	

11-3035. SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 37°40'34", long 121°15'55", in El Pescadero Grant, San Joaquin County, at gaging station on left bank 12 ft downstream (revised) from Durham Ferry highway bridge, 2.6 miles downstream from Stanislaus River, and 3.2 miles northeast of Vernalis.

DRAINAGE AREA.--13,540 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1969.

Water temperatures: March 1951 to September 1969.

Sediment records: November 1956 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C Aug. 20; minimum, 6°C Jan. 10.

Sediment concentrations: Maximum daily, 365 mg/l Jan. 27; minimum daily, 34 mg/l Dec. 4, 5.

Sediment loads: Maximum daily, 41,100 tons Jan. 27; minimum daily, 136 tons Nov. 14.

EXTREMES, 1951-69.--Water temperatures: Maximum, 29°C June 14, Aug. 9, Sept. 2, 1966; minimum, 3°C Jan. 24, 1962.

Sediment concentrations (1956-69): Maximum daily, 1,590 mg/l Dec. 25, 1964; minimum daily, 9 mg/l Jan. 4, 1960,

Nov. 18, 1961.

Sediment loads (1956-69): Maximum daily, 54,100 tons Dec. 25, 1964; minimum daily, 2 tons Aug. 10, 1961.

REMARKS.--Chemical-quality samples collected by California Department of Water Resources.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	LITHIUM (LI) (UG/L)	STRON- TIUM (SR) (UG/L)	BICAR- BONATE (HCO ₃) (MG/L)
OCT. 09...	1130	16	8.1	26	0	48	23	115	5.0	10	460	190
NOV. 06...	2020	14	7.9	13	40	28	14	67	4.4	10	320	133
DEC. 11...	2080	11	8.6	--	10	23	14	73	2.8	--	--	75
JAN. 17...	7560	8	--	12	--	12	5.7	22	2.5	10	90	58
FEB. 13...	32400	--	9.5	14	40	15	6.4	24	2.0	20	120	62
MAR. 19...	26700	12	--	14	40	18	7.9	32	1.8	20	210	72
APR. 02...	25300	--	7.4	11	20	17	6.9	29	1.5	--	--	64
MAY 07...	16700	--	8.7	14	20	11	4.0	14	1.3	10	100	48
JUNE 04...	33600	--	8.6	11	90	6.5	2.3	7.5	.9	10	70	26
JULY 09...	7650	22	7.9	12	10	18	6.1	24	1.7	10	150	62
AUG. 07...	2220	23	5.8	17	20	35	16	73	3.6	10	440	140
SEPT. 17...	3090	22	8.2	18	160	30	13	57	2.9	10	390	121

DATE	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	PHOS- PHATE (PO ₄) (MG/L)	BORON (B) (UG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	0	79	150	.2	8.6	--	300	214	58	549	7.8	946
NOV. 06...	0	53	84	.1	3.9	--	180	128	119	334	7.4	574
DEC. 11...	6	65	94	.3	.6	.05	290	115	44	--	8.7	590
JAN. 17...	0	20	22	.2	3.4	.78	110	54	6	129	6.9	218
FEB. 13...	0	28	25	.1	2.3	.35	90	64	13	148	7.4	248
MAR. 19...	0	38	31	.2	2.1	.33	210	78	19	180	7.5	307
APR. 02...	0	39	27	.2	1.6	--	220	71	19	165	7.3	290
MAY 07...	0	13	17	.1	1.9	.35	10	44	5	100	7.1	163
JUNE 04...	0	8.0	8.6	.0	.1	.19	120	26	5	58	6.9	92
JULY 09...	0	23	34	.3	3.1	.48	50	70	19	153	7.7	255
AUG. 07...	0	48	98	.2	2.5	1.1	200	154	39	363	7.4	673
SEPT. 17...	0	45	71	.1	4.8	.82	150	128	29	302	7.6	544

SAN JOAQUIN RIVER BASIN

11-3035. SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03 (MG/L)	TUR- BID- ITY (MG/L)
OCT. 09...	.75	53	3.4	156	--
NOV. 06...	.45	52	2.6	109	35
DEC. 11...	.43	57	3.0	71	25
JAN. 17...	.18	46	1.3	48	30
FEB. 13...	.21	44	1.3	51	91
MAR. 19...	.24	46	1.6	59	70
APR. 02...	.22	46	1.5	52	49
MAY 07...	.14	40	.9	39	30
JUNE 04...	.08	38	.6	21	45
JULY 09...	.21	42	1.2	51	40
AUG. 07...	.49	50	2.6	115	30
SEPT. 17...	.41	48	2.2	99	32

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	17	17	17	18	17	17	16	15	14	14	14	16	17	17	16	15	15	14	15	14	15	15	15	15	15	15	15	15	15	13	14	15	
NOVEMBER.	13	14	14	15	14	14	13	13	13	14	14	14	12	10	10	10	11	12	14	13	14	13	13	13	10	10	9	8	9	10	--	12	
DECEMBER.	10	9	7	7	7	7	8	10	9	10	9	8	8	9	8	10	8	8	7	9	7	7	8	12	9	8	10	10	8	8	7	8	
JANUARY..	9	8	7	7	7	8	8	8	7	6	9	8	10	10	9	9	8	8	10	7	10	10	9	9	10	11	10	10	10	8	8	9	
FEBRUARY.	9	9	9	10	10	9	8	10	10	10	11	11	10	10	10	10	10	10	11	10	10	10	10	10	10	10	11	9	--	--	--	10	
MARCH....	10	8	10	11	8	10	11	10	11	10	10	12	10	10	10	11	11	10	12	13	11	12	12	12	12	13	15	15	15	16	16	12	
APRIL....	14	14	15	14	14	15	13	14	14	14	14	15	14	15	14	15	15	16	16	16	16	16	18	16	16	14	14	14	14	15	16	--	15
MAY.....	15	16	16	16	16	15	18	18	17	19	19	17	17	18	18	17	18	18	18	18	18	19	19	17	17	19	18	18	19	19	19	18	
JUNE.....	20	19	18	18	18	18	18	18	18	17	20	19	17	18	18	19	20	20	20	20	20	20	20	20	22	20	19	19	19	20	--	19	
JULY.....	20	22	19	23	23	22	23	23	22	23	23	23	23	23	22	23	21	20	23	24	24	24	23	23	22	22	22	22	22	23	23	22	
AUGUST...	23	23	24	24	24	23	23	23	23	23	24	24	23	24	24	23	22	23	23	23	25	23	23	23	23	23	22	20	22	21	22	22	23
SEPTEMBER	23	24	23	23	23	23	23	22	22	23	24	24	22	20	20	20	19	20	19	19	20	20	20	20	20	20	21	20	20	20	19	--	21

11-3035. SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1040	103	289	1840	60	298	1700	54	248
2	1010	98	267	1900	66	339	1690	41	187
3	1060	96	275	2020	86	469	1700	34	156
4	1110	94	282	2100	86	488	1740	34	160
5	1180	99	315	2100	79	448	1750	39	184
6	1260	97	330	2020	76	415	1800	41	199
7	1240	84	281	1980	77	412	2070	66	369
8	1190	82	263	1940	72	377	2240	74	448
9	1130	81	247	1870	60	303	2190	69	408
10	1120	72	218	1830	55	272	2140	61	352
11	1120	68	206	1780	52	250	2080	59	331
12	1040	66	185	1620	52	227	2080	58	326
13	1270	87	298	1390	44	165	2040	56	308
14	1630	118	519	1330	38	136	2140	55	318
15	1970	101	537	1410	51	194	2320	67	420
16	2000	94	508	1440	49	191	2120	70	401
17	1820	89	437	1500	53	215	2070	62	347
18	1630	95	418	1500	56	227	2420	76	497
19	1490	98	394	1470	56	222	2610	74	521
20	1330	93	334	1440	53	206	2580	61	425
21	1180	86	274	1400	54	204	2590	74	517
22	1120	83	251	1380	52	194	2730	78	575
23	1150	82	255	1350	53	193	2740	74	547
24	1210	83	271	1310	51	180	2750	70	520
25	1290	84	293	1280	49	169	2840	66	506
26	1560	91	388	1290	46	160	2760	80	596
27	1660	80	359	1290	46	160	3060	111	917
28	1720	74	344	1290	48	167	4180	136	1530
29	1770	77	368	1410	54	206	4460	142	1710
30	1800	75	365	1650	62	276	4490	143	1730
31	1810	66	323	--	--	--	4440	129	1550
TOTAL	42910	--	10094	48130	--	7763	78520	--	17303

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	4320	112	1310	31000	161	13500	47600	122	15700
2	4200	116	1320	29900	149	12000	46200	121	15100
3	4160	137	1540	28700	138	10700	44200	116	13800
4	3690	93	927	27000	114	8310	41800	125	14100
5	3230	82	715	26900	97	7050	39300	121	12800
6	2880	69	537	26900	135	9810	36400	120	11800
7	2780	59	443	27000	132	9620	34000	110	10100
8	2990	68	549	27300	160	11800	32200	100	8690
9	2950	77	613	28100	160	12100	31000	107	8960
10	3000	77	624	30000	141	11400	30400	94	7720
11	3200	58	501	31500	141	12000	30000	86	6970
12	3320	69	619	31900	120	10300	29900	77	6220
13	3340	88	794	32400	113	9890	29800	75	6030
14	3580	91	880	32900	106	9420	29200	85	6700
15	6180	94	1570	32800	105	9300	28400	84	6440
16	7700	130	2700	32800	106	9390	28100	74	5610
17	7560	165	3370	32900	108	9590	27900	75	5650
18	7650	150	3100	32900	103	9150	27300	75	5530
19	7770	132	2770	32900	101	8970	26700	73	5260
20	9350	140	3530	34200	96	8860	26300	70	4970
21	14000	238	9000	35200	100	9500	26000	66	4630
22	23100	355	22100	35300	105	10000	26000	70	4910
23	29600	161	12900	34200	101	9330	26400	77	5490
24	27200	123	9030	33600	106	9620	26800	78	5640
25	26300	135	9590	34800	135	12700	27100	81	5930
26	29100	233	18300	38800	136	14200	27200	72	5290
27	41700	365	41100	44000	108	12800	27100	63	4610
28	39000	202	21300	45600	121	14900	26500	54	3860
29	36800	224	22300	--	--	--	26000	57	4000
30	35000	200	18900	--	--	--	25800	69	4810
31	32600	174	15300	--	--	--	25500	63	4340
TOTAL	428250	--	228232	911500	--	296210	957100	--	231660

SAN JOAQUIN RIVER BASIN

11-3035. SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	25500	68	4680	16900	104	4750	33500	77	6960	
2	25300	84	5740	16900	103	4700	33500	81	7330	
3	24700	87	5800	16800	109	4940	33600	80	7260	
4	24100	84	5470	16100	113	4910	33600	88	7980	
5	23400	99	6250	15900	115	4940	33600	92	8350	
6	23200	96	6010	16400	113	5000	33600	88	7980	
7	24300	97	6360	16700	103	4640	33600	86	7800	
8	25400	98	6720	16900	102	4650	33800	84	7670	
9	26600	103	7400	17200	108	5020	34100	89	8190	
10	27400	124	9170	17400	101	4740	34500	92	8570	
11	27000	74	5390	17200	112	5200	35000	94	8880	
12	26000	67	4700	17800	123	5910	34900	99	9330	
13	25100	76	5150	19600	127	6720	34000	100	9180	
14	24400	73	4810	21300	112	6440	32600	102	9980	
15	23700	77	4930	23000	108	6710	31200	105	8850	
16	22600	80	4880	25100	95	6440	29700	109	8740	
17	21500	87	5050	27200	90	6610	27300	119	8770	
18	20600	88	4890	29000	89	6970	26200	121	8560	
19	20200	101	5510	30300	92	7530	26200	110	7780	
20	19900	92	4940	30900	80	6670	25600	107	7400	
21	19900	90	4840	31200	90	7580	24100	114	7420	
22	19700	89	4730	31300	94	7940	22900	116	7170	
23	19100	102	5260	31500	86	7310	21700	114	6680	
24	18400	108	5370	31900	88	7580	20800	120	6740	
25	17900	109	5270	32200	97	8430	20500	119	6590	
26	17700	106	5070	32400	88	7700	20600	119	6620	
27	17700	98	4680	32400	101	8840	20000	115	6210	
28	17700	89	4250	32500	90	7900	17900	129	6230	
29	17400	96	4510	32700	90	7950	15200	167	6850	
30	17100	106	4890	33000	84	7480	12800	189	6530	
31	--	--	--	33300	89	8000	--	--	--	
TOTAL	663500	--	162720	763000	--	200200	836600	--	231600	
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	11200	200	6050	2370	84	538	2700	92	671	
2	10100	192	5240	2410	72	469	2700	108	787	
3	9450	178	4540	2460	63	418	2680	106	767	
4	8500	176	4040	2450	66	437	2710	102	746	
5	8260	181	4040	2340	77	486	2790	95	716	
6	8660	167	3900	2250	73	443	2880	92	715	
7	8540	152	3500	2220	85	509	2980	92	740	
8	8110	147	3220	2210	91	543	3250	84	737	
9	7650	141	2910	2210	88	525	3300	80	713	
10	6860	139	2570	2230	89	536	3260	95	836	
11	6910	138	2570	2280	90	554	3250	98	860	
12	6930	127	2380	2170	88	516	3210	94	815	
13	6430	119	2070	2140	109	630	3120	100	842	
14	6080	115	1890	2090	101	570	3150	98	833	
15	5620	114	1730	2040	97	534	3160	93	793	
16	5700	111	1710	1990	92	494	3070	90	746	
17	6640	101	1810	2110	82	467	3090	83	692	
18	5910	91	1450	2280	87	536	3090	78	651	
19	4350	109	1280	2320	103	645	3000	78	632	
20	3750	112	1130	2320	94	589	3200	84	726	
21	3790	112	1150	2320	101	633	3260	83	731	
22	3830	110	1140	2330	103	648	3300	73	650	
23	3630	108	1060	2320	98	614	3270	78	689	
24	3140	104	882	2420	104	680	3200	76	657	
25	2940	93	738	2580	100	697	3240	81	709	
26	2820	100	761	2500	93	628	3480	81	761	
27	2950	100	797	2440	99	652	3590	89	863	
28	3020	97	791	2470	101	674	4190	103	1170	
29	2930	93	736	2500	99	668	4680	89	1120	
30	2670	90	649	2620	101	714	4850	106	1390	
31	2520	75	510	2670	95	685	--	--	--	
TOTAL	179890	--	67244	72060	--	17732	97650	--	23758	
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									5079110	
TOTAL LOAD FOR YEAR (TONS)									1494516	

11-3035. SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- ERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALYSIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
OCT 18, 1968	1620	19	1600	95	410	--	--	--	--	--	52	52	74	100	--	--	V
NOV 13.....	1215	14	1380	57	212	--	--	--	--	--	82	86	92	98	100	--	S
JAN 15, 1969	0930	9	5940	250	4010	17	21	38	42	45	62	80	91	99	100	--	SBWC
JAN 17.....	0830	8	7550	192	3910	26	32	48	50	51	61	69	86	98	100	--	SBWC
JAN 20.....	0900	7	8580	153	3540	33	36	59	61	64	76	87	96	100	--	--	SBWC
JAN 21.....	0900	10	13600	321	11800	16	25	34	40	45	58	73	87	99	100	--	SBWC
JAN 21.....	1450	13	14700	222	8810	27	34	42	50	57	66	75	84	97	100	--	SBWC
JAN 22.....	0700	10	17700	390	18600	10	15	23	30	36	54	71	87	98	100	--	SBWC
JAN 23.....	0700	9	28400	156	12000	29	46	55	61	65	73	82	94	99	100	--	SBWC
JAN 23.....	1425	8	29800	137	11000	26	34	40	43	46	47	49	51	61	89	100	SBWC
JAN 28.....	1200	10	35500	106	10200	56	76	85	88	90	90	94	98	100	--	--	SBWC
FEB 5.....	1240	7	26900	73	5300	32	47	58	63	66	72	77	89	96	100	--	SBWC
FEB 7.....	1525	8	27000	92	6710	54	69	72	75	77	78	81	90	99	100	--	SBWC
FEB 26.....	0800	10	40500	94	10300	--	--	--	--	--	46	57	100	--	--	--	S
MAR 4.....	1420	12	41700	125	14100	38	49	56	60	61	62	64	70	90	99	100	SBWC
APR 30.....	1415	17	17100	111	5120	30	53	54	60	66	70	75	88	99	100	--	SBWC
MAY 22.....	1200	20	31400	95	8050	14	19	23	26	28	30	33	43	100	--	--	VBWC
JUN 18.....	1130	22	26200	126	8910	39	55	68	79	86	91	94	97	100	--	--	SBWC
JUL 8.....	1100	24	8140	151	3320	40	53	66	77	86	93	96	99	100	--	--	SBWC
AUG 11.....	1130	25	2330	76	478	46	58	76	86	93	98	100	--	--	--	--	SBWC
SEP 18.....	1105	21	3120	75	632	--	--	--	--	--	96	100	--	--	--	--	S

11-3111.5. STOCKTON SHIP CANAL AT LIGHT 40, NEAR STOCKTON, CALIF.

LOCATION.--Lat 37°58'40", long 121°23'00", T.2 N., R.5 E., San Joaquin County, on left bank at Light 40, approximately 7 miles northwest of Stockton.

PERIOD OF RECORD.--Chemical analyses: February 1968 to September 1969.

REMARKS.--Records furnished by U.S. Bureau of Reclamation and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	HARD- NESS (CA, MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	NITRATE (NO3) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	AMMONIA (NH4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)
OCT. 10...	1015	20	6.4	186	7.8	900	7.5	2.8	--	1.1	.86	--
NOV. 13...	1110	14	9.0	--	7.7	630	--	--	--	--	--	3.6
JAN. 23...	1315	10	9.2	60	7.1	180	3.5	1.3	.27	.51	--	2.9
FEB. 14...	1235	9	10.1	--	7.5	230	--	--	--	--	--	2.4
MAR. 24...	1315	16	10.5	--	7.2	260	--	--	--	--	--	2.4
APR. 16...	1100	15	9.3	47	7.4	200	.9	.55	.24	.35	.29	1.6
MAY 22...	1215	21	8.5	--	7.0	120	--	--	--	--	--	1.7
JUNE 09...	1135	19	8.3	--	7.0	100	--	--	--	--	--	1.3
JULY 17...	1300	28	6.4	80	7.1	317	4.4	.25	.21	.44	.39	1.7
AUG. 07...	1330	27	4.6	--	7.3	550	--	--	--	--	--	2.4
SEPT. 17...	1345	24	3.6	--	7.1	450	--	--	--	--	--	2.6

SAN JOAQUIN RIVER BASIN

11-3129.9. DELTA-MENDOTA CANAL ABOVE TRACY PUMPING PLANT, NEAR TRACY, CALIF.

LOCATION.--Lat 37°48'45", long 121°34'40", in sec.30, T.1 S., R.4 E., Contra Costa County, at Byron Road bridge, 1.1 miles upstream from Tracy Pumping Plant, and 9.2 miles northwest of Tracy.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Records of discharge are given for 11-3130. Delta-Mendota Canal at Tracy Pumping Plant, near Tracy. No appreciable inflow between sampling point and gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 09...	4410	--	--	17	12	32	2.2	105	0	23	37
NOV. 06...	3130	--	--	19	13	42	2.9	100	0	27	57
DEC. 11...	180	--	--	41	23	114	5.1	153	0	102	150
FEB. 05...	2870	--	--	8.5	11	25	2.6	61	0	26	28
MAR. 05...	2900	--	--	17	8.4	27	2.1	71	0	33	30
APR. 09...	1690	--	--	16	5.8	25	1.6	58	0	27	31
SEPT. 17...	1950	22	8.2	--	--	48	--	112	0	--	58

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	2.8	140	196	.27	92	6	42	1.5	86	8.1	361
NOV. 06...	6.1	220	226	.31	100	18	47	1.8	82	7.8	458
DEC. 11...	9.0	560	530	.72	196	70	55	3.5	125	8.1	952
FEB. 05...	3.2	210	161	.22	66	16	44	1.3	50	7.5	254
MAR. 05...	5.3	190	184	.25	77	19	42	1.3	58	7.7	295
APR. 09...	2.6	170	172	.23	64	16	45	1.4	48	7.9	266
SEPT. 17...	--	110	--	--	108	16	49	2.0	92	7.6	448

11-3130.5. DELTA-MENDOTA CANAL NEAR MENDOTA, CALIF.

LOCATION.--Lat 36°47'11", long 120°23'04", in sec.19, T.13 S., R.15 E., Fresno County, approximately 1 mile upstream from control gates into Mendota Pool, and 2 miles north of Mendota.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)
OCT. 09...	1560	18	12	35	2.3	106	0	27	42	2.5
NOV. 06...	389	21	14	49	2.9	106	0	50	58	7.0
DEC. 11...	.01	40	24	114	5.3	152	0	121	133	8.4
FEB. 05...	.01	41	23	99	4.9	148	0	120	124	6.8
MAR. 05...	.01	54	31	144	4.2	142	0	260	140	6.1
APR. 09...	.01	8.3	3.0	7.2	1.5	46	0	7.6	2.6	.9
SEPT. 08...	1730	--	--	54	--	113	0	--	71	--

DATE	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	130	218	.30	95	8	44	1.6	87	8.2	384
NOV. 06...	250	279	.38	110	23	48	2.0	87	7.8	493
DEC. 11...	630	524	.71	199	74	55	3.5	125	8.2	925
FEB. 05...	560	513	.70	195	74	51	3.1	121	8.1	895
MAR. 05...	1000	762	1.04	262	146	54	3.9	116	8.2	1200
APR. 09...	0	88	.12	33	0	31	.5	38	7.6	101
SEPT. 08...	200	--	--	128	35	48	2.1	93	7.5	540

SAN JOAQUIN RIVER BASIN

11-3195. MOKELUMNE RIVER NEAR MOKELUMNE HILL, CALIF.

LOCATION.--Lat 38°18'46", long 120°43'09", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.5 N., R.11 E., Calaveras County, temperature recorder at gaging station on downstream side of bridge, 1.2 miles northwest of Mokelumne Hill, and 8 miles downstream from confluence of North and South Forks.

DRAINAGE AREA.--544 sq mi.

PERIOD OF RECORD.--Water temperatures: February 1961 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 19°C July 25; minimum, 4°C on several days during January to March.

EXTREMES, 1961-69.--Water temperatures: Maximum, 24°C Aug. 5, 1967; minimum (1961-65, 1966-69), 1°C Jan. 31, Feb. 1, 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	15	15	15	15	16	17	15	14	14	14	14	14	14	14	13	13	13	14	14	13	14	14	14	14	15	14	14	14	14	14	13	14		
MINIMUM	13	13	14	14	14	13	13	13	13	13	13	13	14	13	13	12	12	12	12	12	13	13	12	12	12	13	13	13	13	13	13	13		
NOVEMBER																																		
MAXIMUM	13	13	13	14	13	13	12	12	13	13	13	13	13	12	11	11	12	12	12	11	11	10	10	10	10	10	9	9	8	9	9	--	12	
MINIMUM	12	13	13	13	13	12	12	12	12	12	13	13	13	12	11	11	11	11	10	10	10	10	10	10	10	9	9	8	8	7	9	--	11	
DECEMBER																																		
MAXIMUM	9	9	8	8	8	8	8	9	9	9	9	8	7	7	8	8	7	7	7	6	6	6	6	6	7	6	5	6	6	6	6	7		
MINIMUM	9	8	8	7	7	7	7	8	8	9	8	7	7	7	7	7	6	6	6	6	6	5	5	5	6	6	5	5	5	5	5	5	7	
JANUARY																																		
MAXIMUM	6	6	6	6	6	7	6	6	6	6	6	6	6	7	8	7	6	6	6	6	8	8	8	8	7	7	8	9	7	6	5	4	7	
MINIMUM	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	6	6	6	6	6	8	8	7	7	7	7	7	6	5	4	4	6		
FEBRUARY																																		
MAXIMUM	4	5	5	5	5	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	5	5	4	4	5	5	--	--	5	
MINIMUM	4	4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	5	5	5	4	4	4	4	4	--	--	--	5	
MARCH																																		
MAXIMUM	5	5	5	5	6	6	5	5	5	5	5	5	5	5	5	5	5	6	6	6	7	6	6	7	7	7	8	8	8	9	9	9	6	
MINIMUM	4	4	5	5	5	5	5	5	5	5	5	4	5	4	4	5	5	5	6	6	6	6	6	6	6	7	7	7	7	8	8	8	6	
APRIL																																		
MAXIMUM	8	8	8	9	9	8	8	9	9	10	10	10	10	10	9	9	9	10	11	10	11	11	11	11	10	9	10	10	11	11	--	10		
MINIMUM	8	8	8	8	8	7	7	8	8	9	9	10	9	9	8	9	9	10	10	10	10	11	11	11	10	8	8	9	9	10	10	--	9	
MAY																																		
MAXIMUM	11	11	10	10	11	12	12	12	12	12	12	12	12	12	11	11	12	12	12	12	12	12	12	13	13	13	12	12	12	13	13	14	12	
MINIMUM	10	10	10	9	10	11	12	12	12	12	12	12	12	11	11	10	11	11	11	10	10	11	11	11	11	10	10	10	10	11	11	12	11	
JUNE																																		
MAXIMUM	14	14	14	14	14	14	14	14	13	12	12	13	14	14	15	14	14	14	14	14	14	14	14	14	15	14	14	14	14	14	15	--	14	
MINIMUM	12	12	12	12	12	12	12	12	12	12	12	12	11	12	12	13	14	13	13	13	13	13	13	13	13	14	13	13	13	13	12	13	--	13
JULY																																		
MAXIMUM	16	16	16	16	16	16	16	16	16	17	16	17	16	16	17	17	17	17	16	16	16	16	16	16	18	16	19	16	15	16	15	15	16	
MINIMUM	13	14	14	14	14	14	15	15	15	15	15	14	15	15	15	15	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
AUGUST																																		
MAXIMUM	15	15	15	15	15	15	16	15	14	15	15	15	15	15	16	16	16	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	
MINIMUM	14	13	13	14	14	14	13	13	13	13	13	13	13	13	13	13	14	14	14	13	13	13	12	12	12	12	12	12	12	12	12	12	13	
SEPTEMBER																																		
MAXIMUM	14	14	14	15	15	14	14	14	15	15	15	15	15	15	15	14	14	14	15	14	15	14	15	15	14	16	15	15	15	18	16	--	15	
MINIMUM	12	12	12	13	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	14	14	14	14	14	--	13	

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LOCATION.--Lat 38°09'31", long 121°18'09", in NW¼NE¼ sec.34, T.4 N., R.6 E., San Joaquin County, at gaging station on right bank at Woodbridge, 0.3 mile downstream from county highway bridge, and 0.4 mile downstream from dam and canal intake of Woodbridge Irrigation District.

PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1963, April 1968 to September 1969.

Water temperatures: March 1951 to September 1958, November 1960 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C on several days in August; minimum, 6°C on several days in December.

EXTREMES, 1951-58, 1960-69.--Water temperatures; Maximum (1951-54, 1956-58, 1960-69), 28°C July 9, 1951; minimum (1951-55, 1956-58, 1961-69), 2°C Jan. 29, 30, 1954.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	SODIUM (NA) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT. 10...	0800	38	15	9.5	6.0	2.5	25	0
MAR. 03...	1225	2360	9	12.6	4.3	2.1	20	0

DATE	CHLORIDE (CL) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	ALKALINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT. 10...	2.0	24	3	27	.3	21	7.3	64
MAR. 03...	1.6	19	3	30	.3	16	7.2	50

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	17	17	17	17	17	17	17	17	17	17	16	16	16	16	16	15	14	14	14	14	15	15	15	16	15	15	16	16	16	15	14	16	
	MINIMUM	17	17	17	17	17	17	17	17	17	16	16	16	16	16	15	14	14	14	14	14	14	15	15	15	15	15	15	15	16	15	14	14	15
NOVEMBER	MAXIMUM	14	14	14	14	14	14	14	14	14	14	14	14	12	11	11	11	12	13	13	13	13	13	13	13	12	12	12	11	11	10	10	--	13
	MINIMUM	14	14	14	13	13	14	13	13	13	14	14	14	12	11	11	11	11	12	13	13	13	13	13	13	12	12	11	11	10	10	10	--	12
DECEMBER	MAXIMUM	10	10	10	9	9	8	9	9	10	10	10	9	9	8	8	8	8	8	8	8	8	8	6	6	7	7	7	7	7	7	8	8	
	MINIMUM	10	10	9	9	8	8	8	9	9	10	9	9	8	8	8	8	8	8	8	8	8	6	6	6	6	7	7	7	7	7	7	8	
JANUARY	MAXIMUM	8	8	8	8	8	8	8	7	7	7	7	7	8	9	8	8	8	8	8	9	10	10	9	9	9	9	9	9	9	9	9	8	
	MINIMUM	8	8	8	8	8	8	7	7	7	7	7	7	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	8	
FEBRUARY	MAXIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	--	--	--	9	
	MINIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	--	--	--	9	
MARCH	MAXIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
	MINIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
APRIL	MAXIMUM	9	9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	--	10	
	MINIMUM	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	--	10	
MAY	MAXIMUM	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	12	
	MINIMUM	11	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	12	
JUNE	MAXIMUM	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	16	16	16	16	16	17	17	--	14</

SAN JOAQUIN RIVER BASIN

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11-3350, COSUMNES RIVER AT MICHIGAN BAR, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	7.6	2	.04	31	2	.17	68	1	.18
2	8.2	1	.02	31	2	.17	86	1	.23
3	8.2	1	.02	183	12	17	90	1	.24
4	7.9	1	.02	456	52	73	71	2	.38
5	7.9	1	.02	164	18	8.0	68	1	.18
6	8.5	1	.02	93	8	2.0	62	2	.33
7	8.8	1	.02	66	6	1.1	59	4	.64
8	9.1	1	.02	50	5	.68	64	2	.35
9	9.1	1	.02	49	4	.53	62	2	.33
10	9.4	1	.03	43	3	.35	84	5	1.1
11	10	1	.03	42	4	.45	222	9	5.4
12	11	1	.03	53	1	.14	240	9	5.8
13	12	1	.03	126	3	1.0	144	8	3.1
14	14	1	.04	102	2	.55	285	19	15
15	26	1	.07	93	4	1.0	400	26	35
16	36	1	.10	105	4	1.1	697	61	119
17	26	1	.07	90	3	.73	322	26	23
18	22	1	.06	82	2	.44	226	10	6.1
19	19	1	.05	79	5	1.1	190	4	2.1
20	18	1	.05	102	2	.55	180	3	1.5
21	17	2	.09	86	1	.23	136	3	1.1
22	16	1	.04	73	1	.20	110	2	.59
23	16	1	.04	68	1	.18	128	2	.69
24	16	1	.04	66	1	.18	184	5	2.4
25	16	1	.04	73	1	.20	692	19	48
26	15	1	.04	88	1	.24	903	32	83
27	14	1	.04	75	1	.20	460	2	2.5
28	14	1	.04	68	1	.18	355	2	1.9
29	15	1	.04	62	2	.33	370	2	2.0
30	16	2	.09	62	2	.33	298	2	1.6
31	19	2	.10	--	--	--	246	2	1.3
TOTAL	452.7	--	1.36	2761	--	112.33	7502	--	365.04

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	218	2	1.2	1990	30	161	3640	87	855
2	198	2	1.1	1800	18	87	2440	25	165
3	184	2	.99	1560	12	51	2280	17	105
4	174	2	.94	1420	20	77	1830	10	49
5	171	2	.92	2040	25	146	1560	8	34
6	171	2	.92	3660	170	1800	1420	7	27
7	174	3	1.4	2440	50	329	1300	7	25
8	177	1	.48	1760	17	81	1180	8	25
9	177	2	.96	1520	18	74	1200	6	19
10	171	3	1.4	1360	10	37	1290	7	24
11	222	2	1.2	1620	33	184	1080	4	12
12	326	2	1.8	3160	85	725	1020	4	11
13	3280	277	3840	2090	30	169	1070	10	29
14	4430	170	2450	1930	20	104	941	6	15
15	1590	20	86	3160	100	853	878	5	12
16	1120	10	30	3220	85	739	860	3	7.0
17	754	5	10	2320	30	188	878	4	9.5
18	873	14	48	2460	23	153	896	4	9.7
19	7070	514	11800	2410	20	130	923	5	12
20	13200	780	27800	2180	20	118	970	4	10
21	18800	1220	62800	1880	15	76	1480	21	84
22	10200	663	19500	1590	15	64	1150	8	25
23	4420	218	2600	2350	81	567	1090	5	15
24	3660	100	988	2960	86	791	1100	5	15
25	7540	530	11600	3040	60	492	1130	4	12
26	11700	1010	35500	2980	37	298	1180	4	13
27	5890	250	3980	2220	38	228	1240	6	20
28	4500	100	1220	2390	35	226	1400	8	30
29	3400	78	716	--	--	--	1560	14	59
30	2730	46	339	--	--	--	1800	22	107
31	2180	41	241	--	--	--	2090	26	147
TOTAL	109700	--	185561.31	63510	--	8948	42876	--	1982.2

SAN JOAQUIN RIVER BASIN

11-3350. COSUMNES RIVER AT MICHIGAN BAR, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	2150	28	163	1630	11	48	746	6	12
2	2140	26	150	1600	8	35	730	6	12
3	2120	26	149	1510	8	33	698	5	9.4
4	1800	17	83	1420	7	27	669	5	9.0
5	3600	257	2830	1350	7	26	627	5	8.5
6	3470	13	122	1410	8	30	585	5	7.9
7	2570	36	250	1510	11	45	544	5	7.3
8	2140	18	104	1630	13	57	490	3	4.0
9	1900	17	87	1770	14	67	448	3	3.6
10	1740	14	66	1820	13	64	425	3	3.4
11	1730	14	65	1800	11	53	390	3	3.2
12	1830	15	74	1740	14	66	400	4	4.3
13	1940	18	94	1650	11	49	370	5	5.0
14	1910	12	62	1580	10	43	345	5	4.7
15	1790	9	43	1440	12	47	335	4	3.6
16	1650	13	58	1330	10	36	370	4	4.0
17	1590	11	47	1290	10	35	390	3	3.2
18	1670	8	36	1300	10	35	345	4	3.7
19	1720	9	42	1270	9	31	330	5	4.5
20	1730	9	42	1160	8	25	310	5	4.2
21	1820	12	59	1070	8	23	298	5	4.0
22	2020	18	98	1030	9	25	278	5	3.8
23	2280	32	197	1030	7	19	258	4	2.8
24	2220	23	138	1020	8	22	246	3	2.0
25	1800	13	63	980	7	19	216	3	1.7
26	1600	8	35	923	6	15	215	3	1.7
27	1480	8	32	887	6	14	204	3	1.7
28	1450	8	31	851	7	16	194	3	1.6
29	1530	12	50	797	5	11	180	3	1.5
30	1590	11	47	779	6	13	171	3	1.4
31	--	--	--	754	6	12	--	--	--
TOTAL	58980	--	5317	40331	--	1041	11807	--	139.7

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	164	2	.89	49	1	.13	27	2	.15
2	164	2	.89	46	1	.12	27	2	.15
3	155	2	.84	44	4	.48	26	1	.07
4	152	1	.41	43	6	.70	25	2	.14
5	141	1	.38	42	3	.34	27	3	.22
6	139	2	.75	41	2	.22	29	2	.16
7	136	2	.73	40	2	.22	29	3	.23
8	128	2	.69	39	2	.21	30	4	.32
9	126	2	.68	39	4	.42	33	1	.09
10	118	2	.64	38	3	.31	38	4	.41
11	115	2	.62	38	3	.31	32	4	.35
12	107	2	.58	36	3	.29	30	3	.24
13	102	2	.55	36	5	.49	29	4	.31
14	97	2	.52	34	6	.55	28	2	.15
15	93	2	.50	32	2	.17	26	1	.07
16	93	3	.75	31	3	.25	26	1	.07
17	86	3	.70	30	6	.49	26	2	.14
18	82	2	.44	31	6	.50	26	4	.28
19	73	3	.59	31	6	.50	25	5	.34
20	70	3	.57	31	6	.50	26	6	.42
21	68	3	.55	30	6	.49	26	6	.42
22	64	3	.52	30	6	.49	26	6	.42
23	62	3	.50	30	6	.49	26	7	.49
24	64	3	.52	30	5	.41	26	8	.56
25	62	3	.50	30	3	.24	24	8	.52
26	57	3	.46	29	2	.16	23	7	.43
27	56	3	.45	29	3	.23	23	7	.43
28	57	2	.31	32	3	.26	23	4	.25
29	54	3	.44	30	3	.24	23	2	.12
30	51	4	.55	28	4	.30	22	2	.12
31	50	3	.41	27	2	.15	--	--	--
TOTAL	2986	--	17.93	1076	--	10.66	807	--	8.07

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)342788.7
203504.60

11-3350. COSUMNES RIVER AT MICHIGAN BAR, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 13, 1969	1310	9	2220	169	1010	19	26	39	47	50	70	83	94	97	100	--	SBWC
JAN 13.....	1725	10	6160	267	4440	24	33	40	46	52	57	67	87	98	100	--	SBWC
JAN 14.....	1110	10	4480	170	2060	12	20	38	43	46	56	62	74	96	100	--	SBWC
JAN 19.....	1225	11	11800	672	21400	11	13	18	23	29	35	35	80	100	--	--	SBWC
JAN 20.....	1255	10	15200	1390	57000	4	7	10	15	20	28	37	54	91	100	--	SBWC
JAN 21.....	0715	10	20900	1750	98800	9	13	19	27	37	52	69	88	99	100	--	SBWC
JAN 22.....	0835	9	11800	706	22500	1	6	10	15	22	30	43	67	93	100	--	SBWC

11-3372. SAN JOAQUIN RIVER AT ANTIOCH, CALIF.

LOCATION.--Lat 38°01'04", long 121°48'06", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.2 N., R.2 E., Contra Costa County, at tidal gaging station at Antioch, and 4.5 miles from mouth.

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1969.

REMARKS.--No discharge records available. Chemical quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG/L)	SODIUM (NA) (MG/L)	PO-TASIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
OCT. 01...	0800	19	8.1	32	--	210	--	105	0	--	371
NOV. 14...	1020	14	8.6	20	43	191	10	80	0	52	342
DEC. 09...	1350	11	8.7	20	32	165	11	71	0	48	286
FEB. 05...	1345	8	9.9	12	7.8	16	2.5	52	0	22	20
APR. 07...	1425	17	9.5	13	7.4	25	1.4	60	0	28	31
JUNE 03...	1230	19	9.3	8.8	3.9	12	1.2	35	0	10	15

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA, MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	ALKALINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)
OCT. 01...	--	--	--	--	214	128	85	10	86	8.2	1410
NOV. 14...	2.7	80	713	.97	183	117	63	5.5	66	8.1	1310
DEC. 09...	2.4	120	625	.85	149	91	65	5.3	58	7.9	1120
FEB. 05...	4.1	110	107	.15	62	19	35	.9	43	7.6	208
APR. 07...	1.5	70	172	.23	63	14	46	1.4	49	7.8	262
JUNE 03...	.8	0	90	.12	38	9	40	.8	29	7.8	136

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

GOOSE LAKE BASIN

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11-3377.05. GOOSE LAKE AT WILLOW RANCH, CALIF.

LOCATION.--Lat 41°54'14", long 120°21'55", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.21, T.47 N., R.20 E., Modoc County, at east edge of Goose Lake, 0.5 mile northwest of Willow Ranch.
 PERIOD OF RECORD.--Chemical analyses: May to September 1969.
 REMARKS.--Sampled bi-annually during high and low stage conditions.

CHEMICAL ANALYSES, MAY TO SEPTEMBER 1969

DATE	RESER- VOIR STORAGE (AC-FT)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
MAY 16...	583100	6.0	2.2	413	29	59	145

DATE	FLUO- RIDE (F) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
MAY 16...	.8	3400	1170	1.59	24	1770

11-3377.15. GOOSE LAKE AT EVERLY RANCH, NEAR WILLOW RANCH, CALIF.

LOCATION.--Lat 41°52'17", long 120°29'49", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.47 N., R.19 E., Modoc County, at west edge of Goose Lake, 0.8 mile southeast of Everly Ranch, 7.5 miles west of Willow Ranch, and 11.4 miles northwest of town of Davis Creek.
 PERIOD OF RECORD.--Chemical analyses: May to September 1969.
 REMARKS.--Sampled bi-annually during high and low stage conditions.

CHEMICAL ANALYSES, MAY TO SEPTEMBER 1969

DATE	RESER- VOIR STORAGE (AC-FT)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
MAY 16...	583100	5.4	2.1	386	29	67	130

DATE	FLUO- RIDE (F) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
MAY 16...	.8	3100	1090	1.48	22	1730

11-3377.2. GOOSE LAKE AT WEST SHORE LOG LANDING, NEAR WILLOW RANCH, CALIF.

LOCATION.--Lat 41°57'51", long 120°29'37", in NE $\frac{1}{4}$ sec.32, T.48 N., R.19 E., Modoc County, at west edge of Goose Lake at Log Landing near California-Oregon State line, 8.3 miles northwest of Willow Ranch, and 10.3 miles west of town of New Pine Creek.
 PERIOD OF RECORD.--Chemical analyses: May to September 1969.
 REMARKS.--Sampled bi-annually during high and low stage conditions.

CHEMICAL ANALYSES, MAY TO SEPTEMBER 1969

DATE	RESER- VOIR STORAGE (AC-FT)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
MAY 16...	583100	5.6	2.2	358	25	55	125

DATE	FLUO- RIDE (F) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
MAY 16...	.6	2900	1010	1.37	23	1580

11-3420. SACRAMENTO RIVER AT DELTA, CALIF.

LOCATION.--Lat 40°56'23", long 122°24'58", in NW¼ sec.35, T.36 N., R.5 W., Shasta County, on Bureau of Reclamation property, at gaging station on left bank 0.2 mile downstream from Dog Creek, 0.6 mile southeast of Delta, and 2.8 miles south of Lamaine.

DRAINAGE AREA.--425 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1953 to September 1969.

Water temperatures: June to September 1951, October 1953 to September 1957, October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C July 20-22; minimum, freezing point Dec. 22-25.

EXTREMES, 1951, 1953-57, 1962-69.--Water temperatures: Maximum (1951, 1953-57, 1963-69), 28°C July 6, 1968;

minimum, freezing point Dec. 18, 19, 1964, Jan. 20, 1967, Jan. 11, 28-30, 1968, Dec. 22-25, 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT. 09...	1300	190	11	11.8	1.0	--	--	12	--	81	0	--
NOV. 13...	1005	396	7	12.6	40	--	--	7.7	--	70	0	--
DEC. 10...	0920	5860	7	11.4	250	--	--	3.2	--	34	0	--
JAN. 20...	1040	5090	6	12.2	35	--	--	2.7	--	38	0	--
FEB. 17...	0900	2840	6	12.4	5.0	--	--	2.6	--	42	0	--
MAR. 10...	0855	1230	4	13.3	2.0	--	--	3.4	--	50	0	--
APR. 08...	1000	3440	8	13.9	4.0	--	--	2.0	--	43	0	--
MAY 12...	1000	3950	12	12.1	70	2.3	6.0	1.4	.0	37	0	.0
JUNE 09...	1145	1120	11	11.5	4.0	--	--	2.6	--	45	0	--
JULY 07...	0955	444	16	10.3	4.0	--	--	5.5	--	58	0	--
AUG. 12...	1030	236	19	10.1	2.0	--	--	8.8	--	71	0	--
SEPT. 15...	1030	242	15	11.0	--	7.6	7.5	11	.5	70	0	.0

DATE	CHLD- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	8.2	--	190	--	--	57	0	31	.7	66	8.0	159
NOV. 13...	5.3	--	90	--	--	63	6	21	.4	57	8.1	136
DEC. 10...	2.5	--	30	--	--	30	2	19	.3	28	7.0	71
JAN. 20...	1.4	--	0	--	--	30	0	16	.2	31	7.6	72
FEB. 17...	1.5	--	0	--	--	38	4	13	.2	34	7.6	79
MAR. 10...	2.3	--	60	--	--	43	43	15	.2	0	7.5	94
APR. 08...	1.1	--	10	--	--	35	0	11	.1	35	7.6	77
MAY 12...	1.7	.1	0	43	.06	30	0	9	.1	30	7.6	64
JUNE 09...	3.2	--	0	--	--	36	0	14	.2	37	7.5	79
JULY 07...	3.6	--	50	--	--	48	0	20	.3	48	8.2	108
AUG. 12...	6.0	--	130	--	--	53	0	27	.5	58	8.1	134
SEPT. 15...	7.7	.0	120	97	.13	50	0	32	.7	57	7.8	139

SACRAMENTO RIVER BASIN

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11-3485. PIT RIVER NEAR CANBY, CALIF.

LOCATION.--Lat 41°24'22", long 120°55'36", in NW¼SW¼ sec.10, T.41 N., R.9 E., Modoc County, at gaging station on right bank, at lower end of Warm Spring Valley, and 4 miles southwest of Canby.

DRAINAGE AREA.--1,431 sq mi, excluding Goose Lake basin.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

Water temperatures: March 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 28°C July 20; minimum, freezing point on many days during November to February.

EXTREMES, 1965-69.--Water temperatures: Maximum, 28°C on several days during June and July in 1968 and 1969; minimum (1965-66, 1967-69), freezing point on many days during November to February of most years.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Recorder malfunctioned Oct. 23, 24, and Feb. 3-10.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT.												
08...	1110	54	10	10.0	94	--	--	33	--	182	0	--
NOV.												
15...	0950	116	1	11.9	45	--	--	35	--	182	4	--
DEC.												
11...	1130	181	1	11.6	500	--	--	30	--	139	0	--
JAN.												
21...	1310	2620	1	11.2	550	--	--	13	--	52	0	--
FEB.												
18...	1045	828	2	11.2	140	--	--	29	--	107	0	--
MAR.												
11...	1250	185	3	11.8	85	--	--	32	--	150	0	--
APR.												
09...	1230	947	10	10.0	45	--	--	9.8	--	71	0	--
MAY												
13...	1330	956	17	8.2	50	14	4.9	11	3.0	82	0	9.6
JUNE												
10...	1030	183	16	8.4	280	--	--	22	--	122	0	--
JULY												
08...	1330	80	23	8.5	40	--	--	20	--	126	0	--
AUG.												
13...	1100	109	22	7.5	55	--	--	19	--	125	0	--
SEPT.												
16...	1505	122	17	9.5	39	20	6.6	27	5.1	148	0	7.2

DATE	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORDN (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CA CO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
08...	7.1	--	160	--	--	105	0	41	1.4	149	8.1	324
NOV.												
15...	9.4	--	70	--	--	103	0	43	1.5	156	8.5	356
DEC.												
11...	7.4	--	90	--	--	79	0	45	1.5	114	7.8	273
JAN.												
21...	4.1	--	50	--	--	38	0	43	.9	43	7.6	117
FEB.												
18...	12	--	110	--	--	75	0	46	1.5	88	8.0	260
MAR.												
11...	13	--	80	--	--	97	0	42	1.4	123	7.8	351
APR.												
09...	2.5	--	0	--	--	48	0	31	.6	58	7.4	141
MAY												
13...	3.6	1.2	40	134	.18	55	0	29	.6	67	7.3	158
JUNE												
10...	4.4	--	160	--	--	76	0	39	1.1	100	7.5	240
JULY												
08...	4.7	--	50	--	--	82	0	35	1.0	103	8.1	230
AUG.												
13...	5.2	--	50	--	--	80	0	34	.9	103	8.0	236
SEPT.												
16...	5.2	.2	120	153	.21	77	0	41	1.3	121	8.3	262

11-3485. PIT RIVER NEAR CANBY, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
	MAXIMUM	17	17	17	16	16	16	13	12	12	11	11	11	10	9	9	11	10	11	11	11	9	11	--	--	11	11	11	11	10	8	8	12	
	MINIMUM	11	12	12	14	13	13	10	8	8	8	9	9	9	7	6	7	7	8	7	8	7	7	--	--	8	9	8	8	8	7	7	9	
NOVEMBER																																		
	MAXIMUM	7	7	7	7	8	7	7	9	9	10	10	8	6	4	3	4	4	7	7	7	6	6	6	6	4	4	3	2	3	2	--	6	
	MINIMUM	5	6	7	6	6	5	5	6	8	6	8	5	3	2	1	1	3	4	5	5	4	5	5	4	3	2	1	0	0	0	--	4	
DECEMBER																																		
	MAXIMUM	0	0	0	0	1	1	2	3	6	5	3	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	MINIMUM	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JANUARY																																		
	MAXIMUM	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	2	1	2	2	2	2	1	0	0	2	2	1	0	0	0	0	1	
	MINIMUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
FEBRUARY																																		
	MAXIMUM	0	1	--	--	--	--	--	--	--	--	--	1	1	1	2	4	4	4	3	3	2	3	4	2	3	4	5	3	--	--	--	--	
	MINIMUM	0	0	--	--	--	--	--	--	--	--	--	0	0	0	0	1	1	2	2	2	1	1	1	1	1	1	2	2	--	--	--	--	
MARCH																																		
	MAXIMUM	4	3	2	4	5	3	4	5	5	5	5	7	7	8	9	9	7	6	6	6	6	8	8	8	9	10	11	12	13	12	7		
	MINIMUM	2	2	1	1	3	2	2	3	3	1	2	2	3	4	4	5	7	5	3	4	4	5	5	5	5	6	7	7	7	8	10	4	
APRIL																																		
	MAXIMUM	12	11	9	11	10	7	10	11	11	12	13	13	12	11	10	12	11	12	12	15	16	15	14	10	11	13	15	15	14	14	--	12	
	MINIMUM	8	7	7	6	7	5	4	7	8	9	9	11	8	8	7	7	9	9	9	9	11	12	10	6	6	7	9	12	11	10	--	8	
MAY																																		
	MAXIMUM	13	13	13	11	14	17	18	19	19	19	19	18	18	17	17	19	20	19	18	15	16	15	14	10	20	18	18	19	21	24	24	18	
	MINIMUM	10	9	9	7	8	12	13	15	17	16	15	15	15	14	13	14	16	16	15	15	16	17	18	19	18	16	14	16	18	19	20	15	
JUNE																																		
	MAXIMUM	23	24	26	25	23	25	24	21	20	19	21	23	23	23	22	21	21	22	22	22	23	22	21	21	20	20	19	21	23	24	--	22	
	MINIMUM	20	20	21	22	21	20	20	17	16	17	17	18	21	21	20	19	19	20	20	20	19	21	20	18	18	16	17	17	17	18	--	19	
JULY																																		
	MAXIMUM	24	23	24	25	25	24	25	25	24	25	24	24	24	25	24	25	25	26	27	28	27	27	26	26	27	27	26	25	26	25	24	25	
	MINIMUM	19	18	17	17	19	18	19	20	20	19	20	19	19	19	19	19	20	21	21	22	23	22	22	22	19	16	17	17	17	18	19	19	
AUGUST																																		
	MAXIMUM	24	25	25	24	24	24	22	22	23	22	25	22	24	24	24	24	24	23	23	24	24	24	22	22	22	22	21	22	22	21	22	23	23
	MINIMUM	18	21	20	17	16	17	17	18	18	18	17	17	17	19	19	19	19	18	18	18	19	19	19	18	16	17	17	16	16	16	17	18	
SEPTEMBER																																		
	MAXIMUM	23	22	22	21	20	22	22	23	24	23	22	22	21	20	19	17	18	18	17	16	17	16	18	18	18	19	19	16	17	17	--	20	
	MINIMUM	17	17	18	16	16	16	17	18	17	18	18	18	18	16	15	14	14	15	15	14	13	13	14	13	14	15	15	15	15	13	--	16	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

	DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
							PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
							.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
OCT 23, 1968	0950	7	52	66	9.3	--	--	--	--	--	--	--	--	--	--	--	--		
NOV 27.....	1215	2	132	33	12	--	--	--	--	--	--	--	--	--	--	--	--		
JAN 8, 1969	1500	0	241	86	56	39	51	66	82	92	96	98	100	--	--	--	--	SBWC	
JAN 22.....	1245	0	3450	284	2650	70	80	87	90	93	94	96	99	100	--	--	--	SBWC	
FEB 10.....	1300	1	556	60	90	40	47	65	70	75	88	94	98	100	--	--	--	SBWC	
MAR 10.....	1305	2	222	37	22	71	87	93	94	94	94	95	99	100	--	--	--	SBWC	
MAR 28.....	1820	12	1600	93	402	42	54	65	70	73	79	83	89	98	100	--	--	SBWC	
APR 3.....	1330	7	1900	73	374	--	--	--	--	--	--	--	--	--	--	--	--		
MAY 6.....	1245	12	811	48	105	--	--	--	--	--	--	--	--	--	--	--	--		
JUN 18.....	1315	21	342	48	44	--	--	--	--	--	--	--	--	--	--	--	--		
JUL 15.....	1300	22	53	21	3.0	--	--	--	--	--	--	--	--	--	--	--	--		
AUG 14.....	0920	19	83	42	9.4	--	--	--	--	--	--	--	--	--	--	--	--		
SEP 16.....	1700	16	117	36	11	--	--	--	--	--	--	--	--	36	--	11	--		

11-3650. PIT RIVER NEAR MONTGOMERY CREEK, CALIF.

LOCATION.--Lat 40°50'36", long 122°00'58", in SE¼ sec.31, T.35 N., R.1 W., Shasta County, at gaging station on right bank, 0.5 mile upstream from Potem Creek, 1.9 miles downstream from Pit No. 7 dam and powerhouse, and 5.0 miles west of town of Montgomery Creek.

DRAINAGE AREA.--4,951 sq mi, approximately, excluding Goose Lake basin.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

Water temperatures: June to September 1951, October 1953 to September 1957, October 1958 to August 1959.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT. 08...	0720	3350	13	10.8	2.0	--	--	9.7	--	78	0	--
NOV. 14...	1630	4460	9	11.1	6.0	--	--	9.9	--	80	0	--
JAN. 21...	1210	29400	5	13.6	70	--	--	6.7	--	61	0	--
MAR. 11...	1025	5490	6	12.4	20	--	--	7.3	--	98	0	--
MAY 13...	1100	8590	16	10.8	10	9.4	4.2	5.6	1.0	58	0	4.3
JULY 08...	1055	3430	18	11.3	8.0	--	--	9.1	--	76	0	--
SEPT. 16...	1250	5040	16	10.3	1.0	9.8	5.2	10	1.8	74	0	.0

DATE	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 08...	2.7	--	10	--	--	50	0	30	.6	64	7.9	134
NOV. 14...	2.9	--	50	--	--	56	0	28	.6	66	8.2	141
JAN. 21...	2.0	--	0	--	--	52	2	22	.4	50	7.8	113
MAR. 11...	2.4	--	20	--	--	57	0	22	.4	80	8.1	140
MAY 13...	3.1	.3	20	70	.10	41	0	22	.4	48	7.7	105
JULY 08...	2.7	--	0	--	--	52	0	28	.5	62	8.3	139
SEPT. 16...	2.8	.8	10	91	.12	46	0	31	.6	61	8.3	142

SACRAMENTO RIVER BASIN

11-3680. MCCLOUD RIVER ABOVE SHASTA LAKE, CALIF.

LOCATION.--Lat 40°57'30", long 122°13'07", in NW $\frac{1}{4}$ sec.28, T.36 N., R.3 W., Shasta County, at gaging station just upstream from Shasta Lake, 0.2 mile downstream from Big Bollibokka Creek, and 11.3 miles east of Lamoine.

DRAINAGE AREA.--604 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

Water temperatures: June to September 1951, October 1953 to September 1959.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT.												
09...	1415	257	10	11.9	1.0	--	--	5.5	--	60	0	--
NOV.												
13...	0850	345	7	12.3	4.0	--	--	5.0	--	62	0	--
DEC.												
10...	0815	2460	8	11.6	60	--	--	4.3	--	51	0	--
JAN.												
20...	0815	11900	7	12.0	180	--	--	2.1	--	33	0	--
APR.												
08...	0845	1880	7	12.3	4.0	--	--	2.3	--	48	0	--
MAY												
12...	0900	2070	12	10.8	50	9.5	2.3	3.0	1.2	44	0	2.0
JUNE												
09...	1005	478	12	11.0	2.0	--	--	3.2	--	58	0	--
JULY												
07...	0840	358	16	10.4	4.0	--	--	4.2	--	58	1	--
AUG.												
12...	0900	294	16	9.4	4.0	--	--	4.9	--	61	1	--
SEPT.												
15...	0920	286	13	11.5	3.0	12	3.4	5.7	.5	61	0	.0

DATE	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)
OCT.												
09...	1.4	--	70	--	--	42	0	22	.4	49	7.8	105
NOV.												
13...	1.8	--	0	--	--	50	0	18	.3	51	8.1	113
DEC.												
10...	1.4	--	20	--	--	41	0	19	.3	42	7.6	99
JAN.												
20...	.9	--	0	--	--	30	3	13	.2	27	6.8	62
APR.												
08...	.8	--	10	--	--	38	0	12	.2	39	7.6	86
MAY												
12...	1.3	--	20	53	.07	33	0	16	.2	36	7.3	79
JUNE												
09...	1.6	--	50	--	--	45	0	13	.2	48	7.7	102
JULY												
07...	1.6	--	0	--	--	48	0	16	.3	49	8.4	110
AUG.												
12...	1.8	--	40	--	--	47	0	18	.3	52	8.4	131
SEPT.												
15...	1.7	.0	0	83	.11	44	0	22	.4	50	7.7	107

11-3705. SACRAMENTO RIVER AT KESWICK DAM, NEAR KESWICK, CALIF.

LOCATION.--Lat 40°36'04", long 122°26'36", in SW1/4 sec.28, T.32 N., R.5 W., Shasta County, at gaging station 0.4 mile upstream from Middle Creek, 0.8 mile downstream from Keswick Dam, 1.6 miles downstream from Keswick, and 10 miles downstream from Shasta Dam.

DRAINAGE AREA.--6,468 sq mi, excluding Goose Lake basin.

PERIOD OF RECORD.--Chemical analyses: December 1953 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 07...	7190	13	9.5	2.0	--	--	6.5	--	63	0	2.8	2.0
NOV. 06...	6940	13	9.3	4.0	--	--	6.4	--	61	0	6.4	2.3
DEC. 05...	6640	12	10.2	4.0	--	--	7.6	--	68	0	2.6	2.8
JAN. 06...	3100	8	11.6	20	--	--	6.3	--	61	0	6.1	2.4
FEB. 03...	13000	7	13.4	70	--	--	5.7	--	57	0	6.2	2.0
MAR. 04...	12000	6	12.1	--	--	--	5.0	--	52	0	4.4	1.8
APR. 01...	6030	7	13.1	15	--	--	5.4	--	54	0	6.1	1.9
MAY 02...	11900	8	12.6	11	9.9	4.0	5.7	1.0	56	0	4.4	3.0
JUNE 02...	14500	9	11.5	10	--	--	4.6	--	50	0	5.4	2.6
JULY 02...	12400	9	11.7	9.0	--	--	4.6	--	53	0	2.3	1.8
AUG. 04...	12600	10	9.9	10	--	--	5.0	--	57	0	2.8	1.7
SEPT. 02...	12000	10	9.3	10	9.3	5.6	4.1	.4	55	0	2.5	1.9

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 07...	--	0	--	--	46	0	24	.4	52	7.8	114
NOV. 06...	--	10	--	--	61	11	70	1.1	50	8.1	122
DEC. 05...	--	0	--	--	50	0	25	.5	56	7.9	126
JAN. 06...	--	0	--	--	48	0	22	.4	50	7.8	125
FEB. 03...	--	10	--	--	43	0	22	.4	47	7.2	118
MAR. 04...	--	0	--	--	44	1	20	.3	43	7.5	109
APR. 01...	--	0	--	--	40	0	23	.4	44	7.5	107
MAY 02...	.5	50	63	.09	41	0	23	.4	46	7.6	107
JUNE 02...	--	40	--	--	39	0	20	.3	41	7.5	100
JULY 02...	--	0	--	--	42	0	--	--	43	8.0	101
AUG. 04...	--	30	--	--	42	0	21	.3	47	7.8	104
SEPT. 02...	.2	40	72	.10	46	1	16	.3	45	7.5	116

11-3722. SOUTH COW CREEK NEAR MILLVILLE, CALIF.

LOCATION.--Lat 40°32'56", long 122°05'29", in NW¼NE¼ sec.16, T.31 N., R.2 W., Shasta County, temperature recorder at gaging station on left bank, 2.5 miles upstream from Old Cow Creek, and 4.4 miles east of Millville.

DRAINAGE AREA.--77.3 sq mi.

PERIOD OF RECORD.--Water temperatures: December 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 30°C sometime during period July 19 to Aug. 11; minimum, freezing point sometime during period Dec. 6 to Jan. 14.

EXTREMES, 1965-69.--Water temperatures: Maximum, 31°C Aug. 6, 7, 1966; minimum (1965-69), freezing point sometime during period Dec. 6, 1968 to Jan. 14, 1969.

REMARKS.--Recorder stopped Nov. 21 to Jan. 14, Jan. 23 to Mar. 7, May 9-14, May 22 to June 5, July 20 to Aug. 11; temperature ranges, 0°C to 11°C, 2°C to 9°C, 11°C to 14°C, 11°C to 18°C, and 20°C to 30°C, respectively. No record Oct. 1-4 and June 22 to July 10;

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	--	--	--	--	18	18	17	15	14	15	15	16	14	13	13	14	14	14	14	14	14	14	14	15	16	15	15	15	15	13	13	12	15
MINIMUM	--	--	--	--	15	15	13	11	11	12	14	13	13	12	10	10	11	11	10	11	11	11	11	11	11	11	11	11	11	12	11	10	12
NOVEMBER																																	
MAXIMUM	12	12	13	12	13	11	12	13	14	14	13	12	10	8	6	9	10	11	11	10	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	9	11	12	12	11	9	10	11	11	12	12	10	7	4	4	6	9	10	9	10	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	5	6	8	8	7	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	5	4	4	4	6	6	5	--	--	--	--	--	--	--	--	--	--	--
FEBRUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH																																	
MAXIMUM	--	--	--	--	--	--	--	7	7	7	7	8	8	8	9	8	8	10	9	8	9	10	10	10	10	11	11	11	11	12	12	12	--
MINIMUM	--	--	--	--	--	--	--	5	6	5	6	6	5	5	6	7	8	8	6	8	8	7	8	7	7	8	8	8	8	9	9	10	--
APRIL																																	
MAXIMUM	10	9	8	10	10	9	10	11	11	11	12	12	9	10	11	11	11	11	11	12	13	13	12	10	11	12	12	13	13	12	--	11	
MINIMUM	9	8	8	8	9	8	7	8	9	8	9	9	7	8	7	8	9	8	8	9	9	10	9	9	8	7	8	9	10	10	10	--	8
MAY																																	
MAXIMUM	12	12	11	12	13	14	14	14	--	--	--	--	--	--	13	14	14	14	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	10	9	9	8	10	10	10	10	--	--	--	--	--	--	9	10	11	12	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE																																	
MAXIMUM	--	--	--	--	--	20	16	15	16	18	20	21	23	23	22	21	22	22	22	22	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	16	15	14	15	16	17	18	18	18	18	18	17	18	18	19	18	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	25	25	25	25	25	25	26	26	26	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	18	19	18	19	19	19	18	19	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26	26	26	26	25	26	26	26	26	26	24	24	24	23	24	24	24	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	19	19	19	19	19	19	20	20	20	19	18	18	18	18	18	17	--	
SEPTEMBER																																	
MAXIMUM	--	--	--	23	24	--	23	22	23	23	--	25	24	23	--	--	--	20	20	20	19	19	--	--	20	21	20	20	20	20	--	--	--
MINIMUM	--	--	--	18	19	--	19	19	19	19	--	19	19	19	--	--	--	18	18	18	16	15	--	--	15	16	16	16	16	15	--	--	--

SACRAMENTO RIVER BASIN

11-3740. COW CREEK NEAR MILLVILLE, CALIF.

LOCATION.--Lat 40°30'19", long 122°13'56", in NE¼NW¼ sec.32, T.31 N., R.3 W., Shasta County, temperature recorder at gaging station on right bank, 2.9 miles upstream from mouth, 4.2 miles southwest of Millville, and 4.3 miles downstream from Little Cow Creek.

DRAINAGE AREA.--425 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1966.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 30°C on several days during July and August; minimum, 1°C Dec. 24, 25.

EXTREMES, 1965-69.--Water temperatures: Maximum (1966-67, 1968-69), 32°C Aug. 3, 4, 7, 1966; minimum, freezing point Dec. 14, 15, 1967, Jan. 10, 11, 1968.

REMARKS.--Clock stopped Dec. 4-6, Jan. 29 to Feb. 6, Mar. 8, 9, Sept. 15-24; temperature ranges, 3°C to 5°C, 2°C to 6°C, 6°C to 9°C, and 21°C to 25°C, respectively. Temperature probe buried Dec. 30 to Jan. 9, Sept. 29, 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	--	--	--	--	21	19	18	17	19	21	18	18	18	16	15	16	16	17	16	17	16	16	16	17	17	17	17	17	14	14	14	17	
MINIMUM	--	--	--	--	17	17	15	13	12	15	17	16	17	14	13	13	14	14	13	14	13	13	12	13	13	13	13	12	13	13	12	14	
NOVEMBER																																	
MAXIMUM	12	12	13	13	13	12	12	14	14	14	14	13	12	9	6	8	10	11	11	11	11	10	10	9	9	8	8	7	7	6	--	11	
MINIMUM	11	12	12	12	12	11	10	12	12	12	13	10	9	6	5	6	8	10	9	10	10	10	8	8	7	7	6	6	6	6	--	9	
DECEMBER																																	
MAXIMUM	7	6	6	--	--	--	6	7	8	10	9	7	7	6	6	7	6	6	7	6	6	6	4	3	5	8	7	7	8	--	--	7	
MINIMUM	6	5	4	--	--	--	5	6	7	8	7	5	6	6	6	5	5	5	5	5	5	4	3	1	1	5	5	4	6	--	--	5	
JANUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	6	6	6	7	7	8	8	8	6	5	8	7	7	5	5	6	7	4	4	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	5	5	4	4	6	7	6	6	5	5	7	6	5	3	4	5	4	3	2	--	--	--	--	
FEBRUARY																																	
MAXIMUM	--	--	--	--	--	--	7	7	8	9	9	9	9	8	9	10	10	10	10	10	8	8	9	7	7	8	7	7	--	--	--	8	
MINIMUM	--	--	--	--	--	--	6	6	8	8	8	7	5	7	7	8	7	9	9	8	7	6	7	5	5	5	6	6	--	--	--	7	
MARCH																																	
MAXIMUM	9	8	8	8	8	8	9	--	--	10	9	10	10	10	9	10	9	12	11	10	11	12	12	12	13	13	14	14	14	15	14	11	
MINIMUM	6	6	5	5	6	5	5	--	--	6	6	7	6	6	7	8	8	7	7	9	9	8	9	8	8	9	9	10	11	11	12	8	
APRIL																																	
MAXIMUM	13	12	10	11	11	11	12	12	12	13	14	15	12	14	14	15	14	14	14	16	16	16	16	14	13	14	15	16	16	16	--	14	
MINIMUM	10	10	9	8	9	8	8	9	10	9	10	12	9	10	10	10	11	10	10	11	12	13	11	9	10	10	11	12	12	--	--	10	
MAY																																	
MAXIMUM	16	17	15	16	18	19	18	18	19	18	18	19	18	18	18	19	20	19	20	20	21	22	22	22	21	20	20	20	20	21	22	19	
MINIMUM	13	13	12	11	13	14	14	15	14	15	14	15	15	14	13	14	15	16	15	15	16	16	17	18	18	17	16	14	16	17	18	15	
JUNE																																	
MAXIMUM	22	22	23	23	23	23	23	22	19	18	19	22	23	24	25	25	24	24	23	24	24	25	25	26	25	25	25	24	24	25	--	23	
MINIMUM	18	18	19	20	20	20	20	19	17	17	18	19	21	22	23	22	21	22	22	22	22	23	23	23	21	21	21	21	21	22	--	21	
JULY																																	
MAXIMUM	26	26	27	26	26	27	27	27	28	28	29	29	29	29	29	29	29	29	29	30	30	30	30	30	30	29	30	30	30	30	29	29	
MINIMUM	23	24	24	23	23	24	24	25	26	25	26	26	26	26	26	26	26	26	27	27	28	28	28	28	28	27	28	28	27	26	26	26	
AUGUST																																	
MAXIMUM	30	30	30	29	28	29	29	29	29	29	29	28	29	30	30	29	30	29	29	29	29	29	29	29	28	28	28	28	28	27	27	28	
MINIMUM	26	27	27	27	25	25	25	25	26	26	25	26	25	26	26	26	26	26	25	26	26	26	26	26	25	25	24	24	24	24	24	25	
SEPTEMBER																																	
MAXIMUM	28	29	28	28	28	27	27	28	28	28	28	28	28	27	--	--	--	--	--	--	--	--	--	--	--	25	26	26	26	--	--	--	--
MINIMUM	24	24	25	25	24	23	25	24	25	25	25	25	25	25	--	--	--	--	--	--	--	--	--	--	--	22	22	23	22	--	--	--	--

LOCATION.--Lat 40°23'25", long 122°31'15", in SE¹SE⁴ sec.3, T.29 N., R.6 W., Shasta County, temperature recorder at gaging station on left bank, 0.4 mile upstream from North Fork, and 7.8 miles southeast of Ono.
DRAINAGE AREA.--249 sq mi.
PERIOD OF RECORD.--Water temperatures: October 1963 to September 1965, July 1968 to September 1969.
Sediment records: October 1963 to September 1969.
EXTREMES, 1968-69.--Water temperatures: Maximum, 31°C July 20-22; minimum, freezing point Dec. 25, 26.
EXTREMES, July 1968 to September 1969.--Water temperatures: Maximum, 31°C July 27, Aug. 1, 2, 1968, July 20-22, 1969; minimum, freezing point Dec. 25, 26, 1968.
REMARKS.--Clock stopped Sept. 21-26; temperature range, 20°C to 25°C.

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	21	22	21	21	20	20	19	18	18	18	17	17	17	16	17	17	17	17	17	18	17	17	18	18	17	18	17	17	16	16	16	18	
	MINIMUM	17	17	17	17	17	17	16	14	13	14	16	16	16	14	12	13	13	14	13	14	13	13	13	13	14	14	13	13	14	14	13	14	
NOVEMBER	MAXIMUM	15	14	15	14	15	14	14	15	16	16	15	14	12	11	7	9	10	11	12	11	11	11	11	10	10	9	8	8	8	--	12		
	MINIMUM	13	13	12	13	13	12	12	13	14	14	14	12	9	5	4	6	8	10	9	9	10	10	8	9	7	7	6	5	6	6	--	10	
DECEMBER	MAXIMUM	8	8	6	6	8	8	8	8	9	11	10	8	6	6	8	7	7	7	7	3	2	1	1	1	1	1	3	4	4	4	5	6	
	MINIMUM	6	5	4	3	6	6	7	8	8	9	7	5	5	5	6	5	5	5	4	2	1	1	1	1	0	0	2	2	2	2	3	4	
JANUARY	MAXIMUM	6	6	6	7	7	7	7	8	7	7	8	6	7	6	7	8	8	5	5	5	5	6	7	7	8	7	7	7	6	5	5	7	
	MINIMUM	4	4	5	5	5	5	6	7	6	4	5	5	6	6	6	6	5	3	3	5	5	4	5	6	6	7	6	6	5	4	3	2	5
FEBRUARY	MAXIMUM	6	5	5	4	4	3	4	5	5	5	6	7	6	6	6	6	7	7	8	9	9	6	7	6	8	9	8	8	--	--	--	6	
	MINIMUM	4	2	2	2	1	0	3	4	4	5	5	5	5	6	6	6	5	6	6	7	8	5	4	5	4	6	7	7	7	--	--	--	5
MARCH	MAXIMUM	9	9	11	11	12	11	10	10	10	10	9	11	10	10	11	10	9	10	10	10	10	11	11	11	11	11	11	11	10	10	10	11	10
	MINIMUM	7	9	9	6	8	7	6	6	7	5	7	8	5	5	6	8	8	7	6	8	7	6	7	6	6	6	7	8	8	9	9	9	7
APRIL	MAXIMUM	11	10	10	10	9	10	12	12	12	13	14	13	11	12	13	13	12	12	13	13	14	13	11	12	12	15	15	15	16	--	--	12	
	MINIMUM	9	10	7	7	8	8	7	8	10	8	9	10	7	8	8	8	9	7	7	8	9	9	10	7	6	8	10	11	10	10	--	--	8
MAY	MAXIMUM	15	16	14	17	19	20	21	21	22	21	21	22	20	21	22	23	24	23	21	22	24	24	24	24	23	22	22	24	24	25	24	21	
	MINIMUM	10	11	11	10	12	13	15	15	16	16	15	16	17	15	15	16	17	18	15	11	17	18	19	18	18	19	18	18	16	18	19	15	
JUNE	MAXIMUM	25	26	26	27	27	26	25	23	20	19	22	25	26	27	27	25	26	26	24	24	26	26	25	25	23	24	23	24	25	27	--	25	
	MINIMUM																																	

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

SACRAMENTO RIVER BASIN

11-3760. COTTONWOOD CREEK NEAR COTTONWOOD, CALIF.

LOCATION.--Lat 40°23'10", long 122°14'12", in NE¼ sec.7, T.29 N., R.3 W., Tehama County, at gaging station 2 miles east of Cottonwood, and 2.4 miles upstream from mouth.

DRAINAGE AREA.--922 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: October 1962 to September 1967.

Sediment records: October 1962 to September 1967.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
07...	53	17	11.9	3.0	--	--	7.6	--	91	0	--	3.2
NOV.												
06...	117	12	10.7	9.0	--	--	12	--	125	2	--	20
DEC.												
05...	114	10	14.3	3.0	--	--	14	--	139	0	--	23
JAN.												
06...	2760	5	13.3	240	--	--	8.2	--	102	0	--	4.7
FEB.												
03...	1800	6	13.1	45	--	--	8.7	--	131	0	--	4.5
MAR.												
04...	2940	7	12.5	45	--	--	8.9	--	128	0	--	3.6
APR.												
01...	3700	9	12.0	140	--	--	4.4	--	92	0	--	2.2
MAY												
01...	1650	13	11.3	20	18	8.5	4.5	.8	91	0	10	4.1
JUNE												
02...	668	21	8.5	4.0	--	--	5.3	--	91	0	--	5.1
JULY												
02...	217	23	9.7	4.0	--	--	7.8	--	130	0	--	6.4
AUG.												
11...	74	26	7.2	7.0	--	--	7.8	--	118	0	--	5.4
SEPT.												
03...	81	21	9.6	1.0	18	10	6.8	.5	108	0	5.6	4.5

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
07...	--	0	--	--	68	0	20	.4	75	8.0	162
NOV.											
06...	--	0	--	--	131	25	17	.5	106	8.4	294
DEC.											
05...	--	0	--	--	136	22	18	.5	114	8.3	337
JAN.											
06...	--	20	--	--	104	20	15	.3	84	8.2	216
FEB.											
03...	--	0	--	--	123	16	13	.3	107	8.3	263
MAR.											
04...	--	0	--	--	125	20	13	.3	105	8.3	267
APR.											
01...	--	0	--	--	80	5	11	.2	75	7.8	173
MAY											
01...	.0	10	92	.13	80	5	11	.2	75	7.9	174
JUNE											
02...	--	30	--	--	77	2	13	.3	75	7.7	172
JULY											
02...	--	0	--	--	111	4	13	.3	107	8.3	235
AUG.											
11...	--	20	--	--	98	1	15	.3	97	8.0	216
SEPT.											
03...	.2	20	96	.13	87	0	15	.3	89	8.0	193

SACRAMENTO RIVER BASIN

11-3772. SACRAMENTO RIVER AT BEND, CALIF.

LOCATION.--Lat 40°15'51", long 122°13'19", in NW¼SE¼ sec.20, T.28 N., R.3 W., Tehama County, at highway bridge at Bend, 2.7 miles downstream from gaging station, 0.1 mile upstream from Spring Creek, and approximately 6 miles north of Red Bluff.

DRAINAGE AREA.--8,904 sq mi (revised), excluding Goose Lake basin (at gaging station).

PERIOD OF RECORD.--Chemical analyses: May 1955 to September 1969.

Water temperatures: May 1955 to September 1969.

Sediment records: October 1957 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 3°C Dec. 24.

Sediment concentrations: Maximum daily, 810 mg/l Jan. 13; minimum daily, 2 mg/l Oct. 1-3, Nov. 30.

Sediment loads: Maximum daily, 175,000 tons Jan. 13; minimum daily, 41 tons Nov. 30.

EXTREMES, 1955-69.--Water temperatures: Maximum (1955-66), 19°C June 1, 1960; minimum, 3°C Jan. 22, 1962, Dec. 24, 1968.

Sediment concentrations (1957-69): Maximum daily, 2,920 mg/l Dec. 24, 1964; minimum daily, 1 mg/l on many days in 1964, July 12, 1967.

Sediment loads (1957-69): Maximum daily, 876,000 tons Dec. 22, 1964; minimum daily, 12 tons Dec. 8-10, 15, 1964.

REMARKS.--Records of daily discharge data given for station 11-3771. Sacramento River above Bend Bridge, near Red Bluff. No appreciable inflow between sampling point and gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)
OCT. 07...	7000	13	10.8	--	--	7.0	--	66	0	--	2.2	.0
NOV. 06...	7450	12	11.0	--	--	7.7	--	70	0	--	3.5	.7
JAN. 03...	9700	7	11.5	--	--	7.7	--	65	0	--	4.6	2.7
MAR. 03...	26200	6	11.8	--	--	5.0	--	60	0	--	2.2	.8
MAY 01...	14500	10	12.3	11	4.5	5.3	.8	53	0	8.7	2.9	.5
JULY 02...	13500	11	10.4	--	--	5.4	--	58	0	--	2.2	.2
SEPT. 03...	11900	12	10.6	8.9	5.4	4.4	.7	57	0	1.8	2.0	.2

DATE	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 07...	.07	0	--	--	49	0	24	.4	54.	7.6	120
NOV. 06...	.02	10	--	--	56	0	23	.4	57	8.2	130
JAN. 03...	.26	50	--	--	59	6	22	.4	53	7.8	147
MAR. 03...	.06	0	--	--	50	1	18	.3	49	7.6	119
MAY 01...	.11	30	87	.12	46	3	20	.3	43	7.6	119
JULY 02...	--	0	--	--	46	0	20	.3	48	8.3	108
SEPT. 03...	--	10	71	.10	44	0	17	.3	47	7.5	105

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER- AGE	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	13	--	13	--	14	--	--	--	13	--	13	13	12	--	13	--	13	--	--	12	--	13	--	13	--	--	--	13	--	13	--	
NOVEMBER.	--	12	--	15	12	--	12	--	--	13	--	11	--	--	10	--	11	11	11	12	12	12	11	--	11	10	11	11	11	10	--	--	
DECEMBER.	--	8	9	9	11	9	9	9	9	10	8	8	8	8	8	7	7	7	7	7	6	6	4	3	4	4	--	4	4	6	6	7	
JANUARY..	6	7	7	7	6	7	--	--	--	--	7	6	6	7	7	7	6	6	6	8	8	7	6	7	7	7	7	6	7	6	7	7	
FEBRUARY.	7	7	7	6	6	6	6	6	7	7	--	7	7	7	7	7	8	7	7	--	7	6	--	6	6	6	7	7	--	--	--	7	
MARCH....	7	7	7	7	7	--	7	7	7	--	7	--	8	--	--	8	8	8	--	--	--	8	8	11	11	12	12	12	11	11	12	--	
APRIL....	11	10	9	10	9	11	10	11	11	11	11	11	9	11	11	13	12	12	13	13	13	12	11	11	11	12	13	13	13	12	--	11	
MAY.....	12	12	11	12	14	14	14	14	14	15	14	14	14	13	14	14	14	14	14	13	13	14	14	14	14	14	14	13	14	15	16	14	
JUNE.....	--	16	--	15	--	15	--	--	12	--	13	--	15	--	--	14	--	14	--	14	--	--	14	--	14	--	14	--	--	14	--	--	--
JULY.....	14	14	--	14	--	--	14	--	14	--	14	--	--	14	--	14	--	14	--	--	15	--	14	--	15	--	14	--	--	14	--	--	--
AUGUST...	15	--	--	14	--	14	--	14	--	--	14	--	14	--	14	--	--	14	--	--	15	15	--	--	--	14	--	14	--	15	--	--	--
SEPTEMBER	14	--	--	--	10	12	--	15	--	15	--	15	--	--	13	--	13	--	13	--	--	13	--	12	--	14	--	--	14	--	--	--	--

SACRAMENTO RIVER BASIN

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11-3772. SACRAMENTO RIVER AT BEND, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	9320	2	50	7670	5	104	7730	3	63
2	8410	2	45	7710	5	104	7820	4	84
3	8100	2	44	8290	9	201	7620	3	62
4	7710	3	62	8090	5	109	7560	4	82
5	7420	3	60	7820	7	148	7550	4	82
6	7440	4	80	7710	6	125	7510	3	61
7	7400	4	80	7740	4	84	7490	4	81
8	7350	5	99	7690	5	104	7650	4	83
9	7350	5	99	7730	5	104	7830	30	634
10	7350	5	99	7760	4	84	20100	229	15900
11	7530	4	81	7780	4	84	16300	178	8790
12	8050	6	130	8410	5	114	9740	35	920
13	8350	11	248	8250	4	89	8540	25	576
14	8420	13	296	8160	4	88	19300	144	7890
15	8180	10	221	8160	6	132	19000	140	8340
16	8010	5	108	8290	8	179	14700	119	5530
17	8000	5	108	7980	6	129	9780	24	634
18	7960	4	86	8240	5	111	8410	21	477
19	7980	4	86	8480	5	114	7730	12	250
20	7980	4	86	8010	6	130	7420	8	160
21	7940	5	107	7820	4	84	7190	6	116
22	7920	4	86	7640	4	83	7110	6	115
23	7830	4	85	7640	3	62	7280	6	118
24	7820	5	106	7650	3	62	23400	185	11700
25	7800	6	126	7830	5	106	34600	210	19600
26	7800	6	126	7710	4	83	19800	100	5350
27	7800	7	147	7620	3	62	12800	60	2070
28	7820	6	127	7550	4	82	25500	332	24000
29	8160	8	176	7550	5	102	17400	102	5460
30	8560	9	208	7650	2	41	11600	26	814
31	8200	5	111	--	--	--	9740	20	526
TOTAL	245960	--	3573	236630	--	3104	386200	--	120568

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	8620	20	465	29100	59	4640	41400	221	27000
2	8670	40	936	24700	100	6670	26900	90	6540
3	9170	110	2720	20700	51	2850	26100	85	5990
4	9510	185	4750	19800	31	1660	21300	40	2300
5	9320	178	4480	26100	290	20400	19600	40	2120
6	8580	93	2150	36100	465	45300	17100	40	1850
7	8000	71	1530	25200	90	6120	15400	39	1620
8	7350	57	1130	22200	45	2700	14300	38	1470
9	6750	44	802	37900	51	5220	13900	38	1430
10	6380	29	500	33800	90	8210	13600	37	1360
11	13000	302	18500	49800	143	21700	12500	36	1220
12	59800	770	124000	71600	240	46400	11800	36	1150
13	80000	810	175000	55000	105	15600	11200	36	1090
14	32400	441	42100	55800	300	45200	10900	34	1000
15	18300	170	8400	73500	350	69500	10400	32	899
16	14300	89	3440	59800	90	14500	10100	30	818
17	11800	58	1850	53300	70	10100	9810	75	1990
18	11400	44	1350	52600	57	8100	10900	47	1380
19	27300	202	16700	51000	61	8400	10700	40	1160
20	48900	570	75300	49800	80	10800	10600	40	1140
21	58900	740	118000	41000	98	10800	11200	39	1180
22	81100	530	116000	30200	42	3420	10900	35	1030
23	66900	220	39700	31000	94	7870	10800	27	787
24	62800	98	16600	38800	88	10100	10800	28	816
25	63900	70	12100	35200	100	9500	10800	28	816
26	71500	160	30900	27800	56	4200	10800	27	787
27	66000	68	12100	24900	45	3030	11000	41	1220
28	62800	70	11900	42900	255	30600	11500	82	2550
29	49700	50	6710	--	--	--	11900	70	2250
30	36600	49	4840	--	--	--	12200	102	3360
31	35200	47	4470	--	--	--	12400	100	3350
TOTAL	1054950	--	859423	1119600	--	433590	442810	--	81673

SACRAMENTO RIVER BASIN

11-3772. SACRAMENTO RIVER AT BEND, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	12500	100	3380	14200	20	767	15700	11	466
2	11900	55	1770	14100	18	685	15700	12	509
3	11300	39	1190	14000	18	680	15600	10	421
4	10500	36	1020	13800	17	633	15500	10	419
5	13000	34	1190	13700	16	592	15400	10	416
6	15000	75	3040	13700	16	592	15400	10	416
7	12300	50	1660	14100	18	685	15300	10	413
8	11500	25	776	14300	22	849	15300	10	413
9	11200	19	575	14500	25	979	15400	12	499
10	10900	20	589	14700	28	1110	15500	11	460
11	10800	19	554	14800	27	1080	15500	9	377
12	11000	23	683	14900	29	1170	15400	9	374
13	11100	26	779	15800	27	1150	15300	8	330
14	10800	21	612	16600	27	1210	15200	8	328
15	10600	18	515	14300	24	927	15100	9	367
16	9830	17	451	17900	33	1590	15000	10	405
17	10100	17	464	18900	32	1630	14900	10	402
18	10800	27	787	18700	27	1360	14900	8	322
19	10600	20	572	18700	24	1210	15000	8	324
20	10500	19	539	18400	21	1040	15000	8	324
21	10500	20	567	18300	20	988	14900	9	362
22	11200	29	877	18100	17	831	14800	9	360
23	12900	48	1670	17300	16	747	14800	11	440
24	14000	44	1660	17300	15	701	14700	11	437
25	13100	26	920	17200	14	650	14700	8	318
26	13200	22	784	17200	14	650	14700	8	318
27	13400	20	724	17100	13	600	14700	8	318
28	13300	18	646	16900	12	548	14600	8	315
29	13400	20	724	16800	14	635	14600	8	315
30	14000	25	945	16700	14	631	14500	9	352
31	--	--	--	15700	12	509	--	--	--
TOTAL	355230	--	30663	498700	--	27429	453100	--	11520

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	14200	8	307	12100	5	163	12000	4	130
2	13300	8	287	12100	5	163	12000	4	130
3	12700	8	274	12100	5	163	11700	4	126
4	12700	5	171	12100	4	131	10900	4	118
5	12700	5	171	12000	4	130	10000	4	108
6	12700	5	171	12100	5	163	9430	5	127
7	12600	6	204	12000	5	162	9430	5	127
8	12600	6	204	12100	5	163	9430	6	153
9	12600	7	238	12100	5	163	9430	6	153
10	12500	7	236	12100	5	163	9390	5	127
11	12500	5	169	12100	5	163	9380	4	101
12	12500	5	169	12100	4	131	9380	5	127
13	12500	5	169	12100	4	131	9390	5	127
14	12500	6	203	12100	4	131	9390	4	101
15	12500	5	169	12000	4	130	9390	4	101
16	12400	4	134	12100	5	163	9390	4	101
17	12300	4	133	12100	5	163	9390	4	101
18	12300	6	199	12000	5	162	9450	4	102
19	12300	7	232	12000	5	162	9480	4	102
20	12300	7	232	12100	5	163	9470	4	102
21	12300	6	199	12000	5	162	9480	4	102
22	12300	5	166	12000	6	194	9470	5	128
23	12400	6	201	12000	6	194	9410	5	127
24	12300	5	166	12000	6	194	9410	5	127
25	12300	3	100	12000	5	162	9410	4	102
26	12300	3	100	12000	4	130	9390	5	127
27	12300	4	133	12000	4	130	9410	5	127
28	12200	4	132	12000	4	130	9430	5	127
29	12200	4	132	12000	4	130	9450	7	179
30	12200	4	132	12000	4	130	9430	8	204
31	12200	5	165	12000	4	130	--	--	--
TOTAL	387700	--	5698	373500	--	4749	292110	--	3714

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

5846490
1585704

11-3772. SACRAMENTO RIVER AT BEND, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
DEC 10, 1968	1500	10	28200	418	31800	28	37	50	61	71	77	88	97	100	--	--	SBWC
JAN 3, 1969	1135	8	9130	125	3080	36	49	65	74	79	81	82	85	92	97	100	SBWC
JAN 12.....	0805	6	53000	780	112000	28	38	50	63	75	87	94	99	100	--	--	VBWC
JAN 12.....	1200	6	60500	608	99300	30	41	54	65	74	83	92	99	100	--	--	VBWC
JAN 13.....	1130	6	78000	710	150000	30	43	57	70	82	93	99	100	--	--	--	VBWC
JAN 23.....	1325	6	66700	228	41100	10	15	21	27	33	39	49	66	91	100	--	VBWC
JAN 31.....	1205	7	34900	60	5650	27	36	42	45	47	53	64	79	97	100	--	SBWC
FEB 6.....	0830	6	43000	595	69100	36	49	62	73	82	89	96	99	100	--	--	SBWC
MAR 1.....	0930	7	44600	245	29500	26	44	57	68	74	85	93	98	99	100	--	SBWC

11-3816.2. MILL CREEK AT MOUTH, NEAR LOS MOLINOS, CALIF.

LOCATION.--Lat 40°02'34", long 122°05'57", T.25 N., R.2 W., in Rio de Los Molinos land grant, Tehama County, at bridge on U.S. Highway 99, 0.8 mile upstream from confluence with Sacramento River, and 4.7 miles downstream from gaging station near Los Molinos.

DRAINAGE AREA.--131 sq mi (upstream from gaging station).

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. No discharge records available.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 07...	15	11.2	1.0	--	--	18	--	92	0	--	21
NOV. 04...	11	11.8	20	--	--	14	--	51	0	--	--
JAN. 03...	7	12.7	4.0	--	--	13	--	55	0	--	13
MAR. 03...	6	13.1	4.0	--	--	6.1	--	52	0	--	5.2
APR. 30...	11	11.8	9.0	6.7	2.8	6.3	1.1	30	0	13	6.3
JULY 03...	18	10.7	12	--	--	8.6	--	35	0	--	7.4
SEPT. 04...	22	10.3	1.0	12	6.6	14	2.0	61	0	12	15

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 07...	--	570	--	--	83	8	32	.9	75	8.1	252
NOV. 04...	--	530	--	--	57	15	35	.8	42	8.0	181
JAN. 03...	--	370	--	--	57	12	33	.7	45	7.9	162
MAR. 03...	--	100	--	--	40	0	25	.4	43	7.6	112
APR. 30...	.1	170	42	.06	28	3	32	.5	25	7.3	88
JULY 03...	--	210	--	--	43	14	30	.6	29	8.0	120
SEPT. 04...	.0	350	122	.17	57	7	34	.8	50	8.2	178

SACRAMENTO RIVER BASIN

11-3820, THOMES CREEK AT PASKENTA, CALIF.

LOCATION.--Lat 39°52'57", long 122°33'03", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.4, T.23 N., R.6 W., Tehama County, at gaging station on left bank, 0.2 mile upstream from Digger Creek, and 0.3 mile upstream from highway bridge at Paskenta.

DRAINAGE AREA.--194 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

Water temperatures: October 1961 to September 1969.

Sediment records: October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 34°C Aug. 2; minimum, freezing point on several days during December and January.

Sediment concentrations: Maximum daily, 8,080 mg/l Jan. 20; minimum daily, 1 mg/l on many days.

Sediment loads: Maximum daily, 162,000 tons Jan. 20; minimum daily, 0.01 tons Oct. 4, 9-11.

EXTREMES, 1961-69.--Water temperatures: Maximum, 34°C Aug. 18, 23, 1967, Aug. 2, 1969; minimum, freezing point on several days during December and January of most years.

Sediment concentrations (1962-69): Maximum daily, 60,200 mg/l Dec. 22, 1964; minimum daily, no flow

Oct. 4, 1964.

Sediment loads (1962-69): Maximum daily, 5,070,000 tons Dec. 22, 1964; minimum daily, 0 tons Oct. 4, 1964.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. No record May 27-29; temperature range, 9°C to 14°C.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 07...	4.0	17	11.6	--	--	15	--	133	0	--	25
NOV. 04...	57	13	10.9	--	--	12	--	117	0	--	13
DEC. 05...	47	7	12.5	--	--	8.9	--	112	2	--	8.2
JAN. 03...	192	7	12.6	--	--	7.1	--	131	0	--	4.3
FEB. 03...	519	5	13.3	--	--	4.2	--	102	0	--	1.9
MAR. 03...	434	7	12.4	--	--	5.0	--	157	0	--	2.4
APR. 01...	2070	6	12.8	--	--	3.0	--	65	0	--	.7
30...	2370	12	12.0	15	3.0	2.2	.8	55	0	10	1.5
JUNE 03...	428	18	9.8	--	--	2.0	--	55	0	--	7.2
JULY 03...	71	21	9.5	--	--	5.4	--	111	0	--	3.8
AUG. 11...	13	28	8.3	--	--	9.2	--	130	0	--	12
SEPT. 04...	8.3	23	8.7	38	12	11	1.3	114	0	51	17

DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 07...	.0	.01	0	182	73	15	.5	109	8.1	451
NOV. 04...	1.5	.08	110	151	55	15	.4	96	8.3	343
DEC. 05...	.1	.06	80	130	35	13	.3	95	8.4	281
JAN. 03...	1.2	.46	80	132	25	10	.3	107	8.3	277
FEB. 03...	.1	.00	0	112	28	8	.2	84	8.2	207
MAR. 03...	.1	.09	10	150	21	7	.2	129	8.1	290
APR. 01...	.7	3.5	30	59	6	10	.2	53	7.9	128
30...	.0	.72	10	50	5	9	.1	45	7.9	109
JUNE 03...	.1	.07	10	50	5	8	.1	45	7.9	110
JULY 03...	.1	--	0	113	22	9	.2	91	8.2	232
AUG. 11...	1.3	--	40	150	43	12	.3	107	8.2	322
SEPT. 04...	.0	--	60	144	50	14	.4	94	8.1	334

SACRAMENTO RIVER BASIN

11-3820. THOMES CREEK AT PASKENTA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	130	41	14	690	262	488	540	160	233
2	134	50	18	630	213	362	512	190	263
3	192	90	47	519	216	303	434	130	152
4	498	321	432	477	266	343	404	125	136
5	690	340	633	630	305	519	416	80	90
6	760	381	782	750	315	638	440	75	89
7	730	440	867	596	220	354	410	59	65
8	670	260	470	491	180	239	404	79	86
9	533	320	461	980	700	1850	404	61	67
10	452	100	122	940	525	1330	366	60	59
11	732	182	536	1690	2040	9570	350	53	50
12	3260	5120	45100	1320	1100	3920	345	60	56
13	4130	5040	57000	1000	1050	2840	325	53	47
14	1900	1820	10200	1060	625	1790	325	45	39
15	1170	800	2530	1170	540	1710	360	66	64
16	990	480	1280	1030	390	1080	477	137	176
17	960	340	881	940	325	825	760	725	1490
18	1110	450	1350	900	350	851	910	550	1350
19	3180	3070	36300	780	260	548	810	300	656
20	7320	8080	162000	690	225	419	930	500	1260
21	6160	5780	99800	564	200	305	1160	551	1730
22	2900	3060	24600	519	190	266	1050	300	851
23	1740	1610	7560	540	150	219	1420	425	1630
24	1460	900	3550	931	580	1930	1550	400	1670
25	1820	1800	8850	556	180	270	1670	600	2710
26	3050	3330	28500	477	145	187	2000	595	3210
27	1470	1200	4760	580	170	266	2540	1050	7200
28	1110	950	2850	780	380	800	3060	1450	12000
29	950	720	1850	--	--	--	3140	1800	15300
30	950	450	1150	--	--	--	2900	1800	14100
31	780	290	611	--	--	--	2680	1550	11200
TOTAL	51931	--	505104	22230	--	34222	33092	--	78029

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	2070	1320	7380	1880	400	2030	484	30	39
2	1820	1000	4910	1160	320	1000	458	25	31
3	1360	800	2940	930	560	1410	428	36	42
4	1180	650	2070	620	260	435	410	30	33
5	1420	600	2300	640	200	346	399	37	40
6	1060	375	1070	1090	240	706	372	27	27
7	760	340	698	2150	280	1630	335	23	21
8	750	325	658	2370	770	4930	290	25	20
9	830	298	668	2840	800	6130	260	20	14
10	840	325	737	3100	1100	9210	246	9	6.0
11	1640	420	1860	2280	720	4430	232	10	6.3
12	2440	680	4480	2470	600	4000	232	11	6.9
13	1910	420	2170	1670	430	1940	229	8	4.9
14	1320	340	1210	1300	460	1610	220	9	5.3
15	1040	340	955	1030	130	362	208	9	5.1
16	1180	270	860	1000	280	756	220	19	11
17	2090	330	1860	1080	220	642	208	21	12
18	2520	445	3030	1050	270	765	205	11	6.1
19	2420	410	2680	870	160	376	235	13	8.2
20	2700	525	3830	740	90	180	217	15	8.8
21	3340	800	7210	730	100	197	180	15	7.3
22	3840	900	9330	760	97	199	157	10	4.2
23	3640	800	7860	790	110	235	145	10	3.9
24	2590	360	2520	760	93	191	132	10	3.6
25	1700	260	1190	650	127	223	112	4	1.2
26	1300	220	772	580	108	169	111	5	1.5
27	1410	275	1050	540	69	101	104	3	.84
28	2140	360	2080	491	50	66	96	3	.78
29	2680	800	5790	491	80	106	91	2	.49
30	2370	380	2430	540	128	187	85	1	.23
31	--	--	--	512	65	90	--	--	--
TOTAL	56360	--	86598	37114	--	44652	7101	--	371.64

11-3820. THOMES CREEK AT PASKENTA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	80	2	.43	21	1	.06	9.6	2	.05
2	78	2	.42	20	1	.05	9.6	2	.05
3	71	2	.38	19	2	.10	9.0	2	.05
4	69	1	.19	18	2	.10	8.3	2	.04
5	65	1	.18	16	2	.09	8.3	2	.04
6	63	1	.17	16	2	.09	8.3	2	.04
7	62	1	.17	15	2	.08	8.3	2	.04
8	58	1	.16	15	2	.08	8.3	1	.02
9	54	1	.15	14	3	.11	8.3	2	.04
10	52	1	.14	14	4	.15	8.3	2	.04
11	49	1	.13	13	5	.18	7.7	1	.02
12	46	1	.12	13	5	.18	7.7	1	.02
13	42	1	.11	13	6	.21	7.7	1	.02
14	44	2	.24	13	5	.18	7.7	1	.02
15	43	2	.23	13	5	.18	7.7	1	.02
16	42	3	.34	13	5	.18	7.1	1	.02
17	40	2	.22	13	5	.18	7.1	1	.02
18	38	1	.10	13	5	.18	7.7	1	.02
19	36	2	.19	13	5	.18	7.7	1	.02
20	35	3	.28	13	1	.04	8.3	1	.02
21	33	3	.27	12	3	.10	8.3	1	.02
22	31	3	.25	12	3	.10	8.3	1	.02
23	30	2	.16	12	3	.10	8.3	1	.02
24	28	1	.08	11	3	.09	8.3	1	.02
25	28	1	.08	11	4	.12	8.3	1	.02
26	26	2	.14	11	3	.09	8.3	2	.04
27	26	2	.14	11	2	.06	7.7	3	.10
28	24	3	.19	11	2	.06	7.7	5	.13
29	24	3	.19	10	2	.05	8.3	6	.12
30	23	2	.12	10	2	.05	7.7	6	.12
31	22	2	.12	9.6	2	.05	--	--	--
TOTAL	1362	--	6.09	418.6	--	3.47	243.9	--	1.16
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									219965.5
TOTAL LOAD FOR YEAR (TONS)									784478.26

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- ERATURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	0710	9	274	600	444	26	34	41	49	53	65	73	83	95	100	--	VBWC	
DEC 10.....	1025	9	2190	9190	54300	16	18	25	39	50	63	78	91	98	100	--	VBWC	
DEC 10.....	1350	8	4800	8650	112000	16	20	26	46	51	61	74	85	91	98	100	VPWC	
JAN 14, 1969	1445	6	920	1630	4050	12	22	30	41	50	58	68	81	94	99	100	VPWC	
JAN 19.....	0745	3	2280	1810	11100	10	14	20	31	42	54	68	86	97	100	--	VPWC	
JAN 19.....	1110	4	2710	3180	23300	15	18	23	34	46	58	73	89	97	100	--	VPWC	
JAN 20.....	1120	6	6180	6660	111000	16	21	27	39	51	61	74	85	93	97	100	SPWC	
FEB 5.....	1300	5	535	263	380	19	17	24	33	39	40	43	50	74	96	100	SBWC	
MAR 30.....	0200	6	3320	2340	21000	14	18	28	37	48	58	70	82	92	97	100	SPWC	

SACRAMENTO RIVER BASIN

11-3838. SACRAMENTO RIVER NEAR HAMILTON CITY, CALIF.

LOCATION.--Lat 39°45'06", long 121°59'40", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, R.1 W., T.22 N., Butte County, at gaging station on State Highway 32 bridge, 1.3 miles northeast of Hamilton City, and 2.4 miles upstream from Pine Creek.
 PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.
 REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 03...	7670	15	9.9	3.0	--	--	7.2	--	68	0	--	2.7
NOV. 07...	7900	13	10.1	5.0	--	--	8.2	--	72	0	--	4.2
JAN. 09...	8310	6	11.8	35	--	--	8.0	--	79	0	--	5.0
MAR. 07...	20000	8	11.3	45	--	--	6.3	--	77	0	--	3.0
MAY 08...	16400	13	11.1	35	10	4.9	5.3	1.0	55	0	6.1	3.6
JULY 08...	11100	15	11.4	12	--	--	5.4	--	57	0	--	2.2
SEPT. 03...	10700	16	11.1	7.0	9.8	4.5	4.9	1.2	56	0	4.1	2.0

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 03...	--	140	--	--	50	0	24	.4	56	7.8	124
NOV. 07...	--	70	--	--	51	0	26	.5	59	7.8	137
JAN. 09...	--	20	--	--	77	12	18	.4	65	8.1	171
MAR. 07...	--	0	--	--	75	12	15	.3	63	8.3	162
MAY 08...	.5	90	70	.10	45	0	20	.3	45	7.6	113
JULY 08...	--	0	--	--	46	0	20	.3	47	7.5	114
SEPT. 03...	.0	40	65	.09	43	0	19	.3	46	7.7	110

SACRAMENTO RIVER BASIN

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11-3840. BIG CHICO CREEK NEAR CHICO, CALIF.

LOCATION.--Lat 39°46'35", long 121°45'10", (unsurveyed), Butte County, at gaging station 1.8 miles upstream from golf clubhouse in Bidwell Park, 2.6 miles upstream from Lindo Channel, and 7 miles northeast of Chico.

DRAINAGE AREA.--72.2 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	TUR- BID- ITY (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
OCT. 03...	1120	21	16	10.3	1.0	--	--	16	--	108	0	--
NOV. 07...	1335	38	10	11.2	2.0	--	--	12	--	97	0	--
JAN. 09...	1330	176	6	13.4	5.0	--	--	5.6	--	55	0	--
MAR. 07...	1340	317	6	12.6	4.0	--	--	3.2	--	47	0	--
MAY 08...	1225	124	15	11.0	2.0	9.6	5.6	5.2	.7	61	0	1.8
JULY 08...	1300	36	23	9.6	4.0	--	--	11	--	97	0	--
SEPT. 03...	1205	26	22	9.8	2.0	16	8.0	15	.8	104	0	1.8

DATE	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 03...	11	--	290	--	--	74	0	32	.8	89	7.9	212
NOV. 07...	9.5	--	130	--	--	70	0	27	.6	80	8.1	189
JAN. 09...	3.6	--	20	--	--	48	3	20	.4	45	8.0	106
MAR. 07...	1.8	--	0	--	--	38	0	15	.2	39	7.5	88
MAY 08...	3.9	.0	50	77	.10	47	0	19	.3	50	7.7	112
JULY 08...	7.3	--	90	--	--	69	0	26	.6	80	8.2	180
SEPT. 03...	9.3	.0	180	121	.16	73	0	31	.8	85	8.0	202

SACRAMENTO RIVER BASIN

11-3846. LITTLE STONY CREEK ABOVE EAST PARK RESERVOIR, NEAR LODOGA, CALIF.

LOCATION.--Lat 39°17'48", long 122°32'22", in SE¼NW¼ sec.28, T.17 N., R.6 W., Colusa County, temperature recorder at gaging station on left bank, 1.1 miles upstream from county bridge on Lodoga-Stonyfork road, 1.4 miles downstream from Frenzel Creek, and 2.8 miles southwest of Lodoga.

DRAINAGE AREA.--45.6 sq mi.

PERIOD OF RECORD.--Water temperatures: May 1967 to September 1969.
EXTREMES 1969 60. Water temperatures: Maximum 80.8°C July 28, 64

EXTREMES, 1968-69.--Water temperatures: Maximum, 30°C July 20-24; minimum, freezing point Dec. 21-23.
EXTREMES, 1967-69.--Water temperatures: Maximum, 30°C July 20-24, 1969; minimum, freezing point Dec.

EXTREMES, 1967-69.--Water temperatures: Maximum, 30°C July 20-24, 1969; minimum, freezing point Dec. 21-23, 1968.
REMARKS --Clock stopped Oct 1-3 Nov 2-12 June 4 to July 2; temperature ranges 16°C to 21°C, 0°C to 12°C

REMARKS.--Clock stopped Oct. 1, 2, Nov. 3-12, June 4 to July 2; temperature ranges, 16°C to 21°C, 9°C to 13°C, and 21°C to 28°C, respectively. Probe out of water Sept. 4-30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	--	--	20	20	19	19	17	16	16	17	16	16	16	14	14	15	15	15	14	15	14	15	16	16	16	16	15	14	14	12	12	16	
MINIMUM	--	--	16	16	16	15	13	12	12	14	14	14	13	11	10	11	11	11	11	11	11	11	11	12	12	12	11	11	12	10	9	12	
NOVEMBER																																	
MAXIMUM	11	11	--	--	--	--	--	--	--	--	--	--	--	6	2	6	8	10	11	11	10	10	11	9	8	7	7	6	7	--	--		
MINIMUM	8	10	--	--	--	--	--	--	--	--	--	--	--	9	2	2	5	7	9	9	8	7	9	7	5	4	4	3	3	5	--		
DECEMBER																																	
MAXIMUM	6	5	5	5	6	6	6	7	9	9	6	5	5	6	7	5	5	6	5	3	1	2	1	4	5	5	5	6	6	5	5	5	
MINIMUM	4	2	2	3	3	4	4	6	7	6	4	3	3	4	5	4	4	4	3	1	0	0	0	1	4	3	3	5	4	3	3	3	
JANUARY																																	
MAXIMUM	6	6	6	7	7	7	6	6	4	5	7	8	9	8	7	7	7	6	5	9	10	10	7	6	5	9	7	6	5	5	6	7	
MINIMUM	4	4	4	5	5	5	4	3	3	3	5	7	6	5	5	5	5	5	5	9	7	5	5	5	6	6	5	4	3	3	3	5	
FEBRUARY																																	
MAXIMUM	7	6	6	6	6	6	6	6	7	8	8	7	6	6	7	7	7	7	8	8	7	7	7	7	8	8	7	8	--	--	--	7	
MINIMUM	5	5	5	5	3	4	4	5	6	6	6	5	4	4	5	5	6	6	7	5	5	5	6	5	5	5	6	5	--	--	--	5	
MARCH																																	
MAXIMUM	8	7	8	8	7	8	7	8	7	8	8	6	8	8	8	8	9	9	9	8	9	10	10	10	11	11	12	11	12	11	11	9	
MINIMUM	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5	6	7	6	6	7	6	6	7	7	6	6	7	7	8	8	8	6	
APRIL																																	
MAXIMUM	11	9	10	10	8	9	10	10	10	11	12	11	10	11	12	13	13	13	14	14	15	14	11	11	12	14	14	15	14	15	--	12	
MINIMUM	6	6	6	6	7	6	6	6	8	7	7	7	7	8	7	8	9	8	9	9	9	10	11	9	7	7	8	9	10	10	--	8	
MAY																																	
MAXIMUM	15	15	13	15	16	17	18	19	20	19	19	20	19	18	19	20	21	20	19	20	21	21	23	22	22	21	21	22	23	24	24	20	
MINIMUM	10	11	10	10	11	12	13	13	15	15	15	15	15	13	13	14	16	15	14	14	15	16	18	18	17	17	16	16	18	19	19	15	
JUNE																																	
MAXIMUM	24	25	26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	19	20	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JULY																																	
MAXIMUM	--	--	26	26	26	26	27	27	27	28	28	28	28	28	28	28	29	29	29	30	30	30	30	30	30	29	29	29	29	29	29	28	
MINIMUM	--	--	19	19	20	20	20	20	20	20	21	21	22	21	21	21	21	21	21	22	22	22	23	23	23	22	22	22	22	20	19	18	21
AUGUST																																	
MAXIMUM	29	29	29	29	28	28	28	27	28	29	29	28	28	28	28	28	28	27	28	28	28	28	28	28	27	27	27	27	26	26	26	26	
MINIMUM	19	19	19	20	21	18	19	19	19	21	20	19	18	19	19	20	19	19	19	19	20	20	20	19	18	19	18	19	18	18	18	19	
SEPTEMBER																																	
MAXIMUM	27	27	27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	18	19	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

LOCATION.--Lat 39°49'07", long 122°19'26", in SW $\frac{1}{4}$ sec.28, T.23 N., R.4 W., Tehama County, at gaging station on left bank, 200 ft downstream from road bridge, 0.6 mile downstream from Black Butte Dam, and 8.1 miles northwest of Orland.

PERIOD OF RECORD.--Chemical analyses: October 1957 to September 1969.

Water temperatures: June to September 1969.

EXTREMES, June to September 1969.--Water temperatures: Maximum, 27°C on many days in August.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Recorder clock stopped Sept. 6-30; temperature range, 24°C to 25°C.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	DISS-OLVED OXYGEN (MG/L)	CAL-CIUM (CA) (MG/L)	MAG-NE-SIUM (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)
OCT. 03...	97	18	9.4	--	--	17	--	199	0	--	16	.1
NOV. 07...	39	11	10.7	--	--	17	--	219	0	--	16	.3
JAN. 09...	46	5	13.3	--	--	17	--	165	0	--	27	2.7
FEB. 06...	1900	6	13.1	--	--	9.3	--	112	0	--	9.1	1.7
MAR. 07...	1220	8	12.0	--	--	11	--	145	0	--	9.4	.5
APR. 08...	100	14	13.0	--	--	12	--	134	0	--	11	.3
MAY 08...	607	16	11.2	26	11	9.8	1.0	128	0	14	9.4	.0
JULY 08...	609	22	10.7	--	--	11	--	134	0	--	8.5	.0
SEPT. 03...	325	23	9.0	36	15	13	1.1	193	0	18	10	.1

DATE	PHOS-PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESIDUAL) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA, MG) (MG/L)	NON-CARBONATE HARD-NESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	ALKALINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT. 03...	.50	310	--	--	169	6	18	.6	163	8.0	383
NOV. 07...	.11	250	--	--	182	2	17	.5	180	8.3	416
JAN. 09...	.26	90	--	--	165	30	18	.6	135	8.3	394
FEB. 06...	.11	20	--	--	107	15	16	.4	92	7.7	237
MAR. 07...	.01	60	--	--	135	16	15	.4	119	8.3	309
APR. 08...	.13	0	--	--	125	15	17	.5	110	7.9	287
MAY 08...	.11	50	128	.17	111	6	16	.4	105	7.9	266
JULY 08...	--	30	--	--	123	13	16	.4	110	8.2	272
SEPT. 03...	--	--	164	.22	152	0	16	.5	158	--	--

DAY

[illegible]

SACRAMENTO RIVER BASIN

11-3890. SACRAMENTO RIVER AT BUTTE CITY, CALIF.

LOCATION.--Lat 39°27'28", long 121°59'35", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.19 N., R.1 W., Glenn County, temperature recorder at gaging station on left bank 100 ft upstream from highway bridge, 0.5 mile south of Butte City, and at mile 115.8 upstream from Sacramento.

DRAINAGE AREA.--12,096 sq mi.

PERIOD OF RECORD.--Chemical analyses: May 1955 to September 1966.

Water temperatures: May 1955 to September 1958, October 1959 to September 1967, July to September 1969.

EXTREMES, 1955-58, 1959-67.--Water temperatures: Maximum, 24°C June 2, 3, 5, 7, 1960; minimum (1955-57, 1959-62, 1963-67), freezing point Jan. 2-5, 1960.

TEMPERATURE (°C) OF WATER, JULY TO SEPTEMBER 1969

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
JULY																																	
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	19	19	19	19	19	19	19	19	18	18	19	19	18	18	18	--
AUGUST																	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	MAXIMUM	18	19	19	19	19	19	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18	18	17	17	17	19	
SEPTEMBER																	16	16	16	16	16	16	16	16	16	16	16	16	15	15	15	15	
	MINIMUM	16	17	17	17	17	16	16	16	16	16	16	17	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	15	15	15	16
	MAXIMUM	17	18	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	17	17	17	17	17	16	17	17	17	17	17	17	17	--	17
	MINIMUM	15	15	15	15	15	16	16	16	16	17	16	16	16	16	16	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	--	15

11-3900. BUTTE CREEK NEAR CHICO, CALIF.

LOCATION.--Lat 39°43'34", long 121°42'28", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.22 N., R.2 E., Butte County, at gaging station 0.7 mile downstream from Little Butte Creek, and 7.5 miles east of Chico.

DRAINAGE AREA.--147 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: November 1961 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 23°C July 22-25; minimum, 3°C Dec. 21, 22.

EXTREMES, 1961-69.--Water temperatures: Maximum (1961-64, 1965-69), 26°C July 21, 22, 1966; minimum, 1°C Dec. 14, 15, 1967.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Recorder clock stopped Apr. 16-30, May 14 to June 10, June 17 to July 1; temperature ranges, 8°C to 10°C, 9°C to 15°C, and 14°C to 16°C, respectively. No record Nov. 27, 28, Sept. 1-3, 29, 30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 03...	1300	142	15	10.3	--	--	3.6	--	62	0	--	1.3
NOV. 07...	1420	155	9	11.9	--	--	3.7	--	65	0	--	1.4
JAN. 09...	1500	302	4	13.3	--	--	2.8	--	55	0	--	1.3
MAR. 07...	1515	668	7	11.9	--	--	2.1	--	44	0	--	1.0
MAY 08...	1315	1160	11	11.7	5.4	2.1	1.6	.6	28	0	.6	1.3
JULY 08...	1405	224	21	10.0	--	--	3.0	--	51	0	--	1.1
SEPT. 03...	1310	161	20	10.6	12	3.6	3.1	1.2	59	0	1.2	1.3

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 03...	--	0	--	--	46	0	15	.2	51	7.9	124
NOV. 07...	--	40	--	--	49	0	14	.2	53	8.1	108
JAN. 09...	--	0	--	--	44	0	12	.2	45	8.0	92
MAR. 07...	--	0	--	--	38	2	11	.1	36	7.3	77
MAY 08...	.0	80	35	.05	22	0	13	.1	23	7.3	49
JULY 08...	--	0	--	--	39	0	14	.2	42	7.9	88
SEPT. 03...	.0	60	95	.13	45	0	13	.2	48	7.5	103

SACRAMENTO RIVER BASIN

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11-3900. BUTTE CREEK NEAR CHICO, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER-	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																		
	MAXIMUM	16	16	16	16	16	16	16	14	14	14	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	
	MINIMUM	14	14	14	14	14	14	13	13	12	12	13	14	13	13	12	12	12	12	12	11	11	11	11	11	11	12	11	11	11	12	12	11	12
NOVEMBER																																		
	MAXIMUM	12	12	12	12	11	11	11	11	11	11	11	11	11	10	9	9	9	10	10	10	10	10	9	9	9	9	9	--	--	7	7	--	10
	MINIMUM	11	11	11	11	11	10	9	9	10	10	11	11	9	9	8	8	9	9	10	10	9	8	8	8	7	--	--	--	6	6	--	9	
DECEMBER																																		
	MAXIMUM	7	7	6	6	6	6	6	6	6	7	8	7	6	6	7	7	7	6	6	5	4	4	4	4	6	7	7	6	6	6	6	6	
	MINIMUM	7	6	5	5	5	5	5	5	5	6	7	6	5	5	6	6	6	5	5	4	3	3	4	4	4	6	6	6	6	6	5	5	
JANUARY																																		
	MAXIMUM	6	6	7	7	7	7	7	6	6	6	5	5	7	8	8	7	7	7	7	8	8	8	7	7	8	8	7	6	5	5	5	7	
	MINIMUM	5	6	6	7	7	7	6	6	5	5	5	5	7	7	7	6	6	6	7	7	7	6	6	7	7	7	7	6	5	4	4	6	
FEBRUARY																																		
	MAXIMUM	6	6	6	6	6	6	7	7	8	8	8	8	7	7	7	8	8	8	8	8	7	7	7	7	7	6	7	7	7	--	--	--	7
	MINIMUM	5	6	5	5	5	6	6	6	7	8	8	7	6	7	7	7	7	8	8	6	6	6	6	6	6	6	6	6	6	--	--	--	6
MARCH																																		
	MAXIMUM	7	7	7	7	7	7	7	7	7	7	7	8	7	7	7	8	7	8	8	8	7	8	9	8	8	8	9	9	9	9	10	10	8
	MINIMUM	6	6	6	6	6	6	5	5	6	5	6	6	5	5	6	6	6	7	7	6	6	7	7	7	7	7	7	8	8	8	8	9	6
APRIL																																		
	MAXIMUM	9	8	8	9	9	8	9	9	9	9	10	10	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	8	8	8	7	8	7	7	8	8	8	9	9	8	8	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY																																		
	MAXIMUM	9	10	9	9	10	11	11	11	12	11	11	11	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	9	8	7	7	9	9	9	10	9	9	9	10	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE																																		
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	14	14	16	17	18	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	12	14	14	15	14	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																		
	MAXIMUM	--	20	19	19	20	20	20	20	21	21	21	21	21	21	22	22	22	22	22	22	22	23	23	23	23	23	22	22	21	21	21	21	
	MINIMUM	--	17	17	17	17	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	21	21	20	20	19	19	19	18	
AUGUST																																		
	MAXIMUM	21	21	21	21	20	20	19	20	20	20	21	20	19	20	19	19	19	19	19	19	19	19	19	19	19	19	18	18	18	18	18	18	19
	MINIMUM	18	18	18	18	18	17	17	17	17	18	18	18	17	17	17	16	17	17	17	17	16	16	17	17	17	17	16	16	16	16	16	16	17
SEPTEMBER																																		
	MAXIMUM	--	--	--	20	20	20	20	20	20	20	20	20	20	19	18	18	18	17	18	18	18	17	17	18	18	18	18	18	--	--	--	--	19
	MINIMUM	--	--	--	18	18	17	18	18	18	18	18	18	18	17	16	16	16	16	16	16	16	15	15	15	16	16	16	16	--	--	--	--	17

SACRAMENTO RIVER BASIN

11-3905. SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CALIF.

LOCATION.--Lat 39°00'36", long 121°49'25", in NW¼NE¼ sec.2, T.13 N., R.1 E., Colusa County, temperature recorder at gaging station on right bank, 1,200 ft downstream from Wilkins Slough, 5.8 miles southeast of Grimes, and at mile 62.9 upstream from Sacramento.

DRAINAGE AREA.--12,940 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 20°C July 23; minimum, 4°C Dec. 26.

EXTREMES, 1966-69.--Water temperatures: Maximum, 21°C on several days in June 1968; minimum, 4°C Dec. 26, 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	17	17	17	18	18	18	18	17	16	16	16	16	16	16	16	14	14	14	15	16	16	16	16	16	16	16	16	16	16	15	14	16		
MINIMUM	17	17	17	17	18	18	17	16	16	16	15	16	16	15	14	14	14	14	15	15	15	15	15	16	16	16	16	16	15	14	14	16		
NOVEMBER																																		
MAXIMUM	14	14	13	13	13	14	14	13	13	14	14	14	14	13	11	11	11	11	12	12	13	13	13	13	13	12	12	12	11	11	--	13		
MINIMUM	14	13	13	13	13	13	13	13	13	14	14	13	11	11	11	11	11	11	11	12	12	13	13	13	12	12	12	11	11	11	--	12		
DECEMBER																																		
MAXIMUM	11	10	10	10	10	10	10	10	11	11	11	11	10	9	9	9	9	8	8	7	6	6	6	6	5	5	5	5	6	6	6	8		
MINIMUM	10	10	10	10	10	10	10	10	10	11	11	10	9	9	9	8	8	8	7	6	6	6	6	6	5	4	5	5	5	5	5	8		
JANUARY																																		
MAXIMUM	6	7	8	8	8	8	8	8	8	7	7	7	6	6	6	6	6	6	6	6	6	8	8	8	7	7	7	7	6	7	7			
MINIMUM	6	6	7	7	8	8	8	8	8	7	7	6	6	5	5	6	6	6	6	6	6	6	8	7	7	7	7	6	6	6	7			
FEBRUARY																																		
MAXIMUM	6	7	8	8	8	8	7	8	8	8	8	9	9	9	9	8	9	9	9	10	10	10	10	9	9	9	9	9	--	--	--	9		
MINIMUM	6	6	7	8	8	7	7	7	8	8	8	9	9	9	8	8	9	9	9	10	10	10	9	9	9	9	8	8	9	--	--	8		
MARCH																																		
MAXIMUM	9	9	10	10	11	11	11	12	12	11	11	11	12	12	12	12	12	12	12	12	13	13	13	13	14	14	14	15	15	15	15	12		
MINIMUM	8	8	9	10	10	11	11	11	11	11	11	11	12	11	12	11	12	12	12	12	12	13	13	13	14	14	14	15	15	15	15	12		
APRIL																																		
MAXIMUM	15	14	13	13	12	11	11	12	12	13	13	13	13	13	13	13	14	14	15	15	16	16	16	16	15	14	13	13	14	15	--	14		
MINIMUM	14	13	12	12	11	10	10	11	12	12	13	13	12	12	12	12	13	13	14	15	15	15	15	15	14	13	13	12	13	14	14	--		
MAY																																		
MAXIMUM	15	14	14	14	13	14	15	16	16	16	17	17	17	16	16	15	16	16	16	16	16	15	16	16	17	17	17	16	16	16	17	16		
MINIMUM	14	13	13	13	13	14	15	15	16	16	16	16	16	16	15	15	15	15	15	15	15	15	15	16	16	16	16	16	16	16	16	15		
JUNE																																		
MAXIMUM	17	18	18	18	18	18	18	17	16	15	15	15	16	17	18	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	--	17		
MINIMUM	17	17	17	17	17	17	17	16	15	15	15	15	15	16	17	17	18	17	17	17	17	17	17	17	17	17	17	16	16	16	--	17		
JULY																																		
MAXIMUM	17	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	20	19	19	19	19	19	19	19	19		
MINIMUM	16	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	19	19	19	19	19	19	19	18	18	18		
AUGUST																																		
MAXIMUM	19	19	19	19	19	19	19	19	19	19	19	18	18	18	18	18	18	18	18	18	18	18	18	19	19	19	18	18	18	18	17	17		
MINIMUM	18	18	18	18	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	17	17		
SEPTEMBER																																		
MAXIMUM	17	17	18	18	18	18	19	19	19	19	19	19	19	19	19	18	18	17	17	17	17	17	17	17	17	17	17	18	18	17	--	18		
MINIMUM	17	17	17	17	17	17	18	18	19	19	19	19	19	18	18	18	17	17	17	17	17	17	17	17	17	16	17	17	17	17	16	--		

11-3906.5. SACRAMENTO RIVER ABOVE COLUSA TROUGH, AT KNIGHTS LANDING, CALIF.

LOCATION.--Lat 38°48'18", long 121°43'22", in NW¼ sec.14, T.11 N., R.2 E., Yolo County, approximately 200 yards upstream from State Highway 24 bridge at Knights Landing, and approximately 0.3 mile upstream from gaging station.
 PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1969.
 REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.											
04...	9280	17	9.7	--	--	7.2	--	70	0	--	2.6
NOV.											
08...	9380	13	10.0	--	--	9.2	--	77	0	--	5.4
DEC.											
06...	9020	8	11.4	--	--	9.4	--	78	0	--	5.2
JAN.											
10...	11800	6	11.7	--	--	9.2	--	87	0	--	6.0
FEB.											
07...	27000	7	11.6	--	--	6.6	--	66	0	--	3.8
MAR.											
06...	25700	9	11.3	--	--	7.9	--	87	0	--	4.5
APR.											
09...	17500	11	10.6	--	--	7.1	--	67	0	--	4.6
MAY											
07...	12600	15	10.1	12	5.8	6.6	1.1	66	0	6.6	3.8
JUNE											
09...	14100	16	10.0	--	--	7.2	--	63	0	--	5.1
JULY											
07...	10100	21	9.7	--	--	7.0	--	66	0	--	3.3
AUG.											
04...	8940	21	9.1	--	--	7.0	--	63	0	--	3.4
SEPT.											
02...	11700	18	10.3	9.8	6.7	7.8	.5	67	0	5.1	3.5

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
04...	--	30	--	--	52	0	23	.4	57	7.1	130
NOV.											
08...	--	30	--	--	57	0	26	.5	63	7.8	150
DEC.											
06...	--	80	--	--	64	0	24	.5	64	8.0	157
JAN.											
10...	--	10	--	--	82	11	20	.4	71	8.0	183
FEB.											
07...	--	0	--	--	54	0	21	.4	54	7.3	135
MAR.											
06...	--	0	--	--	73	2	19	.4	71	7.5	175
APR.											
09...	--	0	--	--	55	0	22	.4	55	7.6	143
MAY											
07...	.6	0	94	.13	54	0	21	.4	54	7.6	137
JUNE											
09...	--	40	--	--	50	0	24	.4	52	7.4	131
JULY											
07...	--	0	--	--	59	5	21	.4	54	8.2	133
AUG.											
04...	--	0	--	--	58	6	21	.4	52	7.9	129
SEPT.											
02...	.2	70	100	.14	52	0	24	.5	55	7.7	138

SACRAMENTO RIVER BASIN

11-3907. COLUSA TROUGH NEAR COLUSA, CALIF.

LOCATION.--Lat 39°11'43", long 122°03'34", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.34, T.15 N., R.2 W., Colusa County, at gaging station 3 miles west of Colusa, on State Highway 20, and 6 miles northeast of Williams.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 04...	0830	217	18	8.4	34	29	59	1.6	213	0	76	35
NOV. 08...	0915	671	13	8.8	22	22	45	3.6	163	0	53	22
DEC. 06...	0915	143	7	11.2	51	62	146	2.6	316	7	221	95
JAN. 10...	0950	306	5	11.9	44	45	146	3.1	320	0	228	90
FEB. 07...	0840	2570	7	10.2	19	11	38	3.0	113	0	47	21
MAR. 06...	1035	2520	10	9.8	34	24	59	2.7	216	0	81	31
APR. 09...	1435	439	16	9.5	26	34	89	1.4	236	0	123	58
MAY 07...	1005	479	20	8.0	26	20	54	2.3	160	0	92	28
JUNE 09...	0920	648	20	8.1	27	21	56	1.1	198	0	79	28
JULY 07...	0920	422	24	7.4	32	23	60	.8	230	0	73	26
AUG. 05...	0925	822	23	7.7	30	22	50	1.3	219	5	50	20
SEPT. 02...	1510	1120	23	8.4	30	20	48	1.4	229	0	42	20

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 04...	1.5	130	322	.44	174	0	38	1.8	175	8.1	595
NOV. 08...	2.6	160	269	.37	124	0	39	1.6	134	8.2	453
DEC. 06...	1.7	360	764	1.04	319	48	45	3.2	271	8.5	1220
JAN. 10...	2.7	400	746	1.01	297	34	52	3.7	262	8.3	1210
FEB. 07...	6.7	160	228	.31	93	0	46	1.7	93	7.8	369
MAR. 06...	10	190	357	.49	182	5	41	1.9	177	7.9	613
APR. 09...	2.6	140	462	.63	205	11	48	2.7	194	7.9	791
MAY 07...	3.5	260	299	.41	146	15	44	1.9	131	7.6	527
JUNE 09...	1.5	280	352	.48	155	0	44	2.0	162	8.0	536
JULY 07...	1.6	230	342	.47	176	0	43	2.0	189	8.2	568
AUG. 05...	1.2	190	286	.39	164	0	39	1.7	188	8.4	489
SEPT. 02...	.8	230	298	.41	159	0	40	1.7	188	8.2	485

LOCATION.--Lat 39°45'14", long 120°35'42", in SE $\frac{1}{4}$ sec.23, T.22 N., R.12 E., Plumas County, temperature recorder at gaging station 0.6 mile upstream from Frazier Creek, 1.0 mile northwest of Clito, and 2.2 miles southeast of Blairsdien.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C July 22-26; minimum, freezing point on many days during January to March.

EXTREMES, 1963-69.--Water temperatures: Maximum, 26°C Aug. 3, 1966; minimum (1963-66, 1968-69), freezing point on many days in December 1963, and January to March 1969.

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	12	13	13	13	13	12	11	10	9	10	10	14	11	11	10	10	10	10	10	10	10	9	9	10	10	9	9	9	9	8	10		
	MINIMUM	10	11	10	11	10	10	9	7	7	7	8	8	9	9	9	7	7	8	7	8	7	7	7	7	7	7	7	7	8	8	7	8	
NOVEMBER	MAXIMUM	7	7	7	8	8	7	7	7	8	8	7	7	7	5	5	6	5	5	7	7	6	7	7	7	6	5	4	4	3	3	3	--	6
	MINIMUM	6	7	7	7	7	6	6	6	7	7	7	6	6	4	4	5	5	5	6	6	6	6	7	6	5	4	3	3	2	3	--	5	
DECEMBER	MAXIMUM	3	3	2	2	2	2	3	3	2	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	MINIMUM	3	2	2	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
JANUARY	MAXIMUM	1	1	1	1	1	1	1	1	1	1	0	1	1	2	2	1	1	1	1	1	2	2	1	0	0	0	1	1	1	1	1	1	
	MINIMUM	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	
FEBRUARY	MAXIMUM	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	--	--	0	
	MINIMUM	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	--	--	--	0	
MARCH	MAXIMUM	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	3	4	6	1		
	MINIMUM	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	1	
APRIL	MAXIMUM	6	6	6	6	6	7	6	6	7	8	8	8	8	8	7	7	7	8	8	9	9	10	11	11	8	8	9	11	12	11	--	8	
	MINIMUM	5	6	6	6	6	6	5	5	6	7	7	8	8	8	7	7	7	7	8	8	8	9	10	11	8	8	8	9	11	11	--	7	
MAY	MAXIMUM	11	11	11	11	9	10	11	11	11	11	12	13	14	14	13	13	14	13	13	13	13	12	12	13	13	13	13	13	13	14	16	17	13
	MINIMUM	11	11	11	9	9	9	10	11	11	11	11	12	13	14	14	13	13	13	13	13	12	12	13	13	13	13	13	13	13	14	16	16	12
JUNE	MAXIMUM	18	18	17	18	18	18	18	16	14	14	14	14	16	16	16	18	18	18	18	18	18	18	19	19	19	18	18	18	18	19	--	17	
	MINIMUM	16	16	16	17	16	15	15	16	14	14	13	13	13	16	16	16	17	17	17	17	17												

SACRAMENTO RIVER BASIN

11-3945. MIDDLE FORK FEATHER RIVER NEAR MERRIMAC, CALIF.

LOCATION.--Lat 39°42'30", long 121°16'10", in NW¼NE¼ sec.2, T.21 N., R.6 E., Butte County, temperature recorder at gaging station, 400 ft downstream from bridge on Milsap Bar Road, 500 ft downstream from Little North Fork, 4.5 miles southeast of Merrimac, and 20 miles northeast of Oroville.

DRAINAGE AREA.--1,062 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1963 to June 1966.

Water temperatures: October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C July 23-26; minimum, 2°C Dec. 21, 22, Jan. 29-31.

EXTREMES, 1962-69.--Water temperatures: Maximum (1964-69), 24°C Aug. 3, 1966; minimum (1962-64, 1965-69), 1°C

Jan. 26, 27, 1966, and on several days during December 1967 to February 1968.

REMARKS.--No record Feb. 22 to Mar. 5.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	16	16	16	16	16	16	15	14	14	14	13	13	13	13	13	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	14		
MINIMUM	14	15	14	15	15	15	14	14	13	13	13	13	13	12	12	12	12	12	13	13	13	13	13	13	13	13	12	12	13	13	12	13		
NOVEMBER																																		
MAXIMUM	12	10	10	10	10	10	10	10	11	11	11	11	10	8	7	8	9	9	10	10	9	9	9	9	8	7	7	6	5	5	--	9		
MINIMUM	10	10	10	10	10	10	10	10	10	11	10	10	8	7	6	7	9	9	9	9	9	9	9	8	7	6	6	6	5	5	--	8		
DECEMBER																																		
MAXIMUM	5	5	5	4	4	5	5	6	7	7	7	6	6	5	6	6	5	5	4	3	3	3	4	4	4	4	4	4	5	5	5	5		
MINIMUM	5	5	4	4	4	4	5	5	6	7	6	5	5	4	5	6	5	5	4	3	2	2	3	3	4	4	4	4	4	4	4	4		
JANUARY																																		
MAXIMUM	5	5	5	6	6	6	5	5	5	4	4	4	5	6	6	5	5	5	5	5	5	5	4	4	4	5	6	4	4	3	3	3	5	
MINIMUM	4	4	4	5	6	5	5	5	4	4	4	3	3	4	5	5	5	4	4	5	5	4	4	4	4	5	6	4	4	3	2	2	4	
FEBRUARY																																		
MAXIMUM	4	4	4	4	4	4	5	5	5	6	6	6	6	5	5	5	5	6	6	6	4	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	3	4	4	4	4	4	4	5	5	5	6	6	5	5	4	4	5	5	6	6	4	4	--	--	--	--	--	--	--	--	--	--	--	
MARCH																																		
MAXIMUM	--	--	--	--	--	6	5	5	5	5	5	5	5	5	6	6	6	7	7	6	6	6	6	6	6	5	5	6	7	8	8	9	6	
MINIMUM	--	--	--	--	--	5	5	5	5	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	5	5	4	5	6	7	7	8	6	
APRIL																																		
MAXIMUM	9	9	8	9	9	8	8	9	9	9	10	10	9	9	8	9	10	10	9	10	10	10	10	10	7	8	9	10	11	11	11	--	9	
MINIMUM	8	8	7	8	8	7	7	8	8	9	9	9	9	8	7	8	9	9	8	9	10	9	10	9	7	6	7	8	9	10	10	9	--	8
MAY																																		
MAXIMUM	9	9	9	9	10	10	11	11	11	10	10	10	10	10	10	11	11	11	11	10	11	11	12	12	11	11	10	11	11	11	12	12	11	11
MINIMUM	9	8	8	8	9	10	10	10	10	9	9	9	9	9	9	10	10	10	10	10	8	10	11	11	11	11	10	10	10	10	11	11	10	
JUNE																																		
MAXIMUM	12	12	13	13	13	13	13	13	12	12	12	12	13	15	15	14	14	14	14	15	15	15	16	16	16	16	16	15	14	14	15	15	--	14
MINIMUM	11	11	12	13	12	13	13	12	12	12	12	12	13	14	14	14	14	14	14	14	15	15	15	16	15	15	15	14	13	13	13	14	--	13
JULY																																		
MAXIMUM	16	16	16	17	17	17	17	17	18	18	18	18	18	18	19	19	19	19	19	19	20	20	20	21	21	21	21	20	19	19	20	20	19	
MINIMUM	15	15	15	16	16	16	16	17	17	17	17	17	18	17	18	18	18	18	18	18	19	19	19	19	19	20	20	20	19	18	18	19	18	
AUGUST																																		
MAXIMUM	19	19	19	19	19	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18	18	17	17	17	17	19	
MINIMUM	18	18	18	18	18	17	17	17	17	18	18	18	18	18	18	17	17	18	17	17	17	17	17	17	18	17	17	17	16	16	16	16	17	
SEPTEMBER																																		
MAXIMUM	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	16	16	16	16	16	16	16	15	15	15	16	16	16	16	16	16	--	17	
MINIMUM	16	17	17	16	17	16	17	17	17	17	17	17	17	16	16	15	15	15	15	15	14	14	14	14	14	14	14	14	15	15	15	--	16	

11-4011.8. LITTLE GRIZZLY CREEK NEAR GENESEE, CALIF.

LOCATION.--Lat 40°00'50", long 120°45'11", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.25 N., R.11 E., Plumas County, Plumas National Forest, temperature recorder at gaging station on right bank, 2.5 miles upstream from Indian Creek, and 2 miles south of Genesee.

DRAINAGE AREA.--29.6 sq mi.

PERIOD OF RECORD.--Water temperatures: August 1964 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 17°C sometime during period June 28 to July 24; minimum, freezing point on many days during winter months.

EXTREMES, 1964-69.--Water temperatures: Maximum, 19°C Aug. 2, 3, 1966; minimum, freezing point on many days during winter months of most years.

REMARKS.--Clock stopped Feb. 14 to May 14, June 28 to July 24; temperature ranges, 2°C to 8°C, and 8°C to 17°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	9	10	10	10	10	9	8	7	7	8	9	9	9	8	7	7	7	7	7	7	7	7	7	7	7	7	7	6	7	6	5	8	
MINIMUM	7	8	8	9	8	8	7	6	5	6	7	8	8	6	6	5	5	5	5	6	5	5	5	5	5	5	5	5	6	5	4	6	
NOVEMBER																																	
MAXIMUM	5	7	7	7	6	6	6	7	8	7	7	7	5	3	4	5	6	6	6	5	5	6	5	4	3	2	2	2	1	1	2	--	5
MINIMUM	4	5	6	6	5	4	5	5	7	6	6	5	3	2	2	4	4	5	5	4	4	4	3	2	2	2	1	0	0	1	--	4	
DECEMBER																																	
MAXIMUM	1	0	0	1	1	1	2	2	3	3	2	1	1	2	2	2	2	2	1	1	1	1	1	2	2	2	2	1	1	1	3	2	
MINIMUM	0	0	0	0	1	1	1	2	2	2	1	1	1	1	1	2	1	1	0	0	0	1	1	1	1	1	1	0	0	0	2	1	
JANUARY																																	
MAXIMUM	3	3	3	3	3	4	3	2	3	4	4	5	6	5	5	4	5	5	6	6	5	5	6	6	5	5	5	4	4	4	4	4	
MINIMUM	3	3	2	2	3	3	2	2	2	2	3	4	5	4	3	3	2	5	5	5	4	4	4	5	5	4	4	3	3	2	3	3	
FEBRUARY																																	
MAXIMUM	4	3	4	4	5	5	6	6	6	6	6	5	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	2	2	3	2	4	3	4	5	5	5	4	5	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MARCH																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
APRIL																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	8	8	8	8	9	9	9	9	9	9	9	8	9	10	10	11	10	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	5	5	5	5	5	5	5	5	6	6	6	6	6	5	6	6	--	
JUNE																																	
MAXIMUM	10	11	11	11	12	12	12	10	10	11	10	12	12	12	13	12	12	12	13	12	12	13	12	12	11	11	11	--	--	--	--	12	
MINIMUM	6	7	7	7	8	7	7	8	8	8	8	9	9	9	9	9	9	10	10	10	9	10	10	9	9	9	8	--	--	--	--	8	
JULY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16	16	15	16	16	15	15	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	13	12	12	12	12	11	--
AUGUST																																	
MAXIMUM	15	15	15	15	14	14	14	14	14	14	14	15	14	15	15	14	14	15	13	13	13	13	14	14	13	12	12	12	11	12	12	14	
MINIMUM	11	12	12	12	11	11	12	12	11	12	12	11	11	11	11	10	11	11	9	9	10	10	11	10	9	9	8	9	9	9	9	10	
SEPTEMBER																																	
MAXIMUM	13	13	13	13	12	13	13	13	13	14	14	14	14	13	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	--	12	
MINIMUM	10	10	10	10	9	9	9	10	10	12	12	12	12	11	10	10	9	10	11	11	9	8	8	9	9	9	9	9	9	9	--	10	

SACRAMENTO RIVER BASIN

11-4015. INDIAN CREEK NEAR CRESCENT MILLS, CALIF.

LOCATION.--Lat 40°04'42", long 120°55'36", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.26 N., R.9 E., Plumas County, temperature recorder at gaging station on left bank, 0.8 mile upstream from Dixie Creek, and 1.5 miles south of Crescent Mills.

DRAINAGE AREA.--739 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1963.

Water temperatures: October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 23°C July 21, 22, 24; minimum, freezing point on many days during December to February.

EXTREMES, 1962-65, 1966-69.--Water temperatures: Maximum, 28°C July 26-28, 1963; minimum (1962-64, 1966-69), freezing point on many days during December to February of most years.

REMARKS.--Clock stopped Feb. 3-11, Apr. 24 to May 12, Aug. 9 to Sept. 10; temperature ranges, 0°C to 4°C, 8°C to 15°C, and 14°C to 20°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER	MAXIMUM	16	17	17	16	16	16	14	13	13	13	13	11	11	11	12	12	12	13	12	13	12	12	12	12	12	12	11	10	10	10	13			
	MINIMUM	9	10	10	11	11	11	9	7	7	8	11	9	9	8	8	7	7	8	7	8	8	8	8	7	8	8	7	7	8	8	7	8		
NOVEMBER	MAXIMUM	9	10	9	10	11	9	10	10	13	11	10	9	7	6	7	8	9	9	10	9	9	9	9	9	8	7	7	7	6	--	9			
	MINIMUM	6	8	8	8	8	7	7	7	9	8	8	7	5	6	6	7	8	8	8	8	9	9	9	9	8	7	6	6	6	6	--	7		
DECEMBER	MAXIMUM	7	6	6	5	5	6	6	6	7	7	4	3	3	4	3	3	4	3	3	2	2	1	2	2	2	2	2	3	4	3	3	4		
	MINIMUM	6	5	5	5	4	5	5	6	6	4	2	1	1	1	1	0	2	1	2	0	0	0	1	1	1	1	1	1	1	2	1	1	2	
JANUARY	MAXIMUM	3	3	5	5	5	4	4	3	2	1	1	2	1	3	3	3	2	1	2	3	2	2	1	1	2	2	1	0	0	2	1	2		
	MINIMUM	1	2	3	3	3	1	1	1	0	0	0	0	0	1	1	1	0	0	1	2	1	1	0	0	1	0	0	0	0	0	0	1		
FEBRUARY	MAXIMUM	2	2	--	--	--	--	--	--	--	--	--	--	4	3	3	2	4	4	4	4	4	1	2	2	2	2	1	3	3	3	--	--	--	
	MINIMUM	0	1	--	--	--	--	--	--	--	--	--	--	2	1	2	1	2	2	3	3	1	0	0	0	0	0	1	1	2	--	--	--	--	
MARCH	MAXIMUM	6	4	4	6	6	4	6	6	5	6	7	6	7	7	7	7	7	7	7	5	7	8	9	9	9	9	9	8	8	8	7	7		
	MINIMUM	2	3	2	2	2	3	2	3	3	2	4	4	3	3	3	4	5	4	3	3	4	4	5	5	4	5	5	5	4	4	5	4		
APRIL	MAXIMUM	7	6	8	8	7	7	9	9	9	10	10	10	9	8	9	11	11	10	11	12	12	11	10	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	4	5	6	6	6	5	6	7	7	7	8	8	7	7	6	9	9	9	9	9	10	10	6	5	--	--	--	--	--	--	--	--	--	
MAY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	13	12	13	14	14	14	14	14	15	16	16	16	15	14	15	16	16	17	17	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	9	8	9	9	10	10	9	9	10	11	12	12	11	11	11	11	12	13	14	--	
JUNE	MAXIMUM	16	17	17	17	17	17	17	17	15	16	17	18	18	18	18	18	18	18	19	19	19	19	20	19	20	19	19	18	19	20	20	--	18	
	MINIMUM	14	14	15	16	15	15	15	14	13	15	16	16	16	17	17	16	17	16	17	17	17	17	18	18	17	16	16	15	15	15	16	--	16	
JULY	MAXIMUM	20	20	20	20	21	21	21	21	21	21	20	20	21	20	20	21	22	22	22	22	22	23	23	22	23	22	22	20	21	20	20	20	21	
	MINIMUM	16	16	16	17	17	17	18	18	18	19	19	19	18	18	19	18	19	18	19	18	19	19	19	19	19	19	18	18	17	18	17	16	18	
AUGUST	MAXIMUM	20	20	20	19	19	19	19	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	16	18	17	17	15	15	15	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	18	18	17	16	16	15	15	15	16	16	16	16	15	16	16	16	15	15	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	15	15	15	14	13	13	13	13	14	14	14	14	13	13	13	14	14	14	13	--	

11-4045. NORTH FORK FEATHER RIVER AT PULGA, CALIF.

LOCATION.--Lat 39°47'40", long 121°27'00", in NE¼ sec.6, T.22 N., R.5 E., Butte County, Plumas National Forest, temperature recorder at gaging station on left bank between railroad and highway bridges, 0.5 mile downstream from Flea Valley Creek and Pulga, and 1.5 miles downstream from Poe Dam.

DRAINAGE AREA.--1,953 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1963 to June 1966.

Water temperatures: October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C July 20-24; minimum, 3°C Jan. 29, 30.

EXTREMES, 1963-69.--Water temperatures: Maximum (1963-64, 1965-66, 1967-69), 24°C on several days in 1968 and 1969; minimum (1963-65, 1966-69), 1°C Jan. 12, 13, 1963.

REMARKS.--Recorder stopped Dec. 16 to Jan. 2, temperature range, 3°C to 7°C; bulb out of water Feb. 3-8, 24, 27, Mar. 3-18, 25-27, June 5 to July 8.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER-	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER	MAXIMUM	17	17	18	18	18	17	16	15	15	15	15	14	14	13	13	13	14	14	14	14	14	13	13	13	14	14	13	14	13	13	12	12	14
	MINIMUM	14	15	15	16	16	16	14	13	13	13	14	13	13	12	11	12	12	12	12	12	11	12	11	11	11	12	12	12	12	12	11	11	13
NOVEMBER	MAXIMUM	12	12	12	12	11	11	12	12	12	12	12	12	11	9	9	9	10	11	11	11	11	11	11	11	10	10	9	9	8	8	8	--	11
	MINIMUM	11	12	12	11	11	10	11	11	11	11	11	11	9	9	8	8	9	10	9	9	9	9	10	9	10	9	8	8	7	8	8	--	10
DECEMBER	MAXIMUM	8	7	7	7	8	7	7	8	8	9	8	7	7	7	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	7	6	6	6	6	6	7	7	7	8	6	6	6	7	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY	MAXIMUM	--	--	7	7	7	7	7	7	5	5	7	8	8	6	7	8	7	7	8	6	6	6	5	5	6	6	5	4	4	4	4	6	
	MINIMUM	--	--	6	6	6	6	6	5	5	4	5	7	6	6	6	6	6	6	6	6	6	5	4	4	5	5	4	4	3	3	4	5	
FEBRUARY	MAXIMUM	5	5	--	--	--	--	--	--	7	6	6	6	6	6	6	6	6	7	7	7	6	6	6	6	--	5	6	--	6	--	--	--	
	MINIMUM	4	5	--	--	--	--	--	--	6	6	6	6	6	6	6	5	5	5	6	7	6	5	4	5	--	5	5	--	5	--	--	--	
MARCH	MAXIMUM	7	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	6	7	7	--	--	--	8	8	8	8	
	MINIMUM	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	5	6	6	6	6	--	--	--	7	7	7	7	
APRIL	MAXIMUM	8	8	7	8	8	8	8	8	8	8	9	10	9	9	8	8	9	9	9	9	10	10	10	10	10	8	8	9	9	10	11	11	--
	MINIMUM	7	7	7	7	8	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	10	10	8	6	7	8	9	9	10	10	--
MAY	MAXIMUM	10	10	10	9	10	11	11	11	12	11	11	12	11	11	11	12	12	12	12	12	12	12	13	13	13	13	13	13	11	12	12	13	14
	MINIMUM	9	9	9	8	9	10	10	11	11	10	10	11	11	10	10	10	11	11	11	10	11	11	12	12	12	13	11	11	11	11	12	12	11
JUNE	MAXIMUM	14	15	15	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	12	12	13	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY	MAXIMUM	--	--	--	--	--	--	--	--	22	22	23	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	23	23	23	23	23	23	--
	MINIMUM	--	--	--	--	--	--	--	--	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	21	21	20	20	20	20	19	19	19
AUGUST	MAXIMUM	21	21	21	21	21	20	20	20	20	21	21	21	21	21	21	20	20	20	21	21	21	21	21	21	20	20	20	20	20	20	20	20	21
	MINIMUM	17	17	17	17	16	16	17	16	16	17	17	17	17	17	17	16	17	17	17	17	17	17	17	17	17	17	16	16	16	16	16	16	17
SEPTEMBER	MAXIMUM	20	22	22	21	21	21	21	21	21	21	21	22	21	21	20	20	20	19	20	19	19	19	19	19	19	19	19	19	19	19	19	--	20
	MINIMUM	17	18	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	17	17	17	17	17	17	17	17	17	16	16	16	16	17	16	--

SACRAMENTO RIVER BASIN

11-4053. WEST BRANCH FEATHER RIVER NEAR PARADISE, CALIF.

LOCATION.--Lat 39°47'12", long 121°33'42", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.6, T.22 N., R.4 E., Butte County, temperature recorder at gaging station on right (revised) bank, 0.6 mile upstream from Griffin Gulch, and 4.0 miles northeast of Paradise.

DRAINAGE AREA.--110 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 28°C Aug. 3; minimum, 2°C Dec. 20-24.

EXTREMES, 1962-69.--Water temperatures: Maximum (1962-63, 1964-69), 31°C Aug. 18, 1967; minimum, 2°C Jan. 12-14, 1963, on several days during December 1967, January and December 1968.

REMARKS.--No record July 5-30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	19	19	19	18	18	18	17	16	15	16	16	14	12	11	11	10	11	12	13	13	13	13	12	12	12	13	13	13	13	12	11	14	
MINIMUM	17	16	17	17	16	16	15	14	14	14	14	12	11	11	9	9	10	11	11	12	11	12	11	12	12	12	12	12	12	11	10	13	
NOVEMBER																																	
MAXIMUM	10	11	11	11	10	10	10	10	11	11	11	11	8	7	7	6	7	8	8	8	8	8	8	8	8	7	6	6	6	6	--	9	
MINIMUM	9	10	11	10	9	10	10	10	11	11	11	11	8	7	7	6	6	7	8	8	7	7	8	8	8	7	6	6	6	6	--	8	
DECEMBER																																	
MAXIMUM	6	6	4	4	4	4	5	6	7	7	6	5	4	4	4	6	6	5	4	4	4	2	2	2	2	4	5	5	5	4	4	5	
MINIMUM	6	4	4	4	4	4	4	5	6	6	6	5	4	4	4	4	5	4	4	4	2	2	2	2	4	5	5	5	4	4	4	4	
JANUARY																																	
MAXIMUM	5	6	6	6	6	5	5	5	4	4	4	4	6	6	6	6	6	5	6	5	6	6	6	4	5	6	6	6	6	4	4	5	
MINIMUM	4	5	6	6	6	5	5	5	4	4	3	3	4	6	6	6	6	5	5	5	5	5	4	4	5	6	6	5	5	4	4	3	
FEBRUARY																																	
MAXIMUM	4	5	5	5	5	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	4	4	4	5	5	5	--	--	5	
MINIMUM	4	4	4	4	4	4	4	5	5	6	6	6	6	6	6	6	6	6	6	6	5	5	4	4	4	4	4	5	5	--	--	5	
MARCH																																	
MAXIMUM	6	6	6	6	6	6	6	5	5	6	6	6	6	6	6	7	7	7	7	6	6	6	6	7	7	7	8	8	8	8	8	6	
MINIMUM	5	6	6	6	6	6	5	4	5	5	6	6	6	5	5	6	6	7	6	5	6	6	6	6	6	7	7	7	7	7	7	6	
APRIL																																	
MAXIMUM	8	7	7	8	8	7	7	8	8	8	9	9	8	8	8	8	9	9	8	9	9	9	9	8	6	7	8	9	9	9	--	8	
MINIMUM	6	6	6	6	7	6	6	6	6	7	7	8	6	7	6	7	7	7	7	7	7	7	7	6	5	6	6	7	8	8	7	7	
MAY																																	
MAXIMUM	9	9	9	9	9	9	10	10	10	10	10	9	9	9	9	10	10	10	10	9	10	10	11	11	11	11	11	10	11	12	12	12	10
MINIMUM	7	7	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	7	8	8	8	8	8	9	8	8	9	9	8	
JUNE																																	
MAXIMUM	12	13	13	13	13	13	13	12	11	11	11	12	13	14	14	14	14	15	14	15	15	16	17	16	15	15	15	15	16	16	17	--	14
MINIMUM	10	10	11	11	12	12	12	11	11	11	11	11	12	13	14	13	14	14	14	13	14	14	14	15	14	13	13	13	13	13	14	--	13
JULY																																	
MAXIMUM	18	18	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27	--
MINIMUM	15	16	15	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	--
AUGUST																																	
MAXIMUM	26	27	28	27	26	26	26	25	26	26	27	27	26	26	26	26	26	26	26	26	26	27	27	26	25	25	24	25	24	25	25	25	26
MINIMUM	22	22	22	22	21	21	21	21	21	22	22	21	21	21	21	21	21	22	21	21	21	21	22	21	20	21	20	21	21	21	21	21	21
SEPTEMBER																																	
MAXIMUM	26	26	25	26	24	26	24	26	26	25	24	24	24	23	22	21	21	20	21	21	21	21	21	21	20	21	21	21	21	21	22	--	23
MINIMUM	21	21	21	21	21	21	22	21	21	21	22	21	21	20	19	18	18	19	19	19	18	18	17	17	17	17	18	18	18	18	19	--	19

11-4069,2. THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROVILLE, CALIF.

LOCATION.--Lat 39°27'23", long 121°38'10", in NW¼SE¼ sec.33, T.19 N., R.3 E., Butte County, on left bank of outlet channel, 955 ft downstream from centerline of Thermalito Afterbay Dam, and 5.7 miles southeast of Oroville.

PERIOD OF RECORD.--Water temperatures: May 1968 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C June 23; minimum, 6°C Jan. 22-25.

REMARKS.--Temperature is listed only when water is released from Thermalito Afterbay. Due to the complete regulation of the Feather River below Oroville Dam, the temperature of the water released from Thermalito Afterbay affects the temperature of the Feather River below the Oroville project.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	21	21	21	21	20	21	21	19	18	17	17	17	17	17	16	16	17	16	16	16	17	17	17	17	17	17	18	17	17	16	16	18		
MINIMUM	19	20	20	19	19	19	19	17	17	17	17	17	17	16	16	14	14	15	16	16	16	16	16	16	16	17	17	17	17	15	15	15	17	
NOVEMBER																																		
MAXIMUM	16	15	14	14	15	14	14	14	15	15	15	14	15	14	12	11	11	11	12	12	12	12	12	12	12	12	12	11	11	11	10	--	13	
MINIMUM	15	14	14	14	14	14	14	14	14	14	14	14	14	14	12	11	11	11	11	12	12	12	12	12	12	12	11	11	11	10	10	--	12	
DECEMBER																																		
MAXIMUM	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	7	7	6	6	6	7	7	7	7	7	7	8		
MINIMUM	9	9	8	8	9	9	9	9	9	9	9	9	9	8	9	9	9	9	9	8	7	7	6	6	6	6	7	7	7	7	7	8		
JANUARY																																		
MAXIMUM	7	7	7	7	7	7	7	7	7	7	6	6	7	8	8	8	8	8	8	9	10	11	10	9	9	9	9	8	8	8	8	8		
MINIMUM	7	7	7	7	7	7	7	7	7	7	6	6	6	7	8	8	8	8	8	8	9	10	9	8	8	8	8	8	8	8	8	8		
FEBRUARY																																		
MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	8	8	8	8	8	8	8	--	--	--	8	
MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	--	--	8	
MARCH																																		
MAXIMUM	8	8	8	8	9	9	8	9	8	9	9	9	8	9	9	10	10	9	11	10	9	9	9	10	11	11	11	11	12	12	13	13	10	
MINIMUM	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	8	8	8	8	8	9	10	10	10	11	12	9	
APRIL																																		
MAXIMUM	14	13	12	11	11	10	11	12	12	12	12	12	12	12	12	13	13	13	13	12	13	13	13	13	12	11	12	13	13	14	13	--	12	
MINIMUM	12	12	11	10	9	9	9	11	11	11	12	12	11	10	11	12	12	12	12	11	12	13	12	12	11	11	11	12	13	13	13	13	--	11
MAY																																		
MAXIMUM	14	14	13	13	14	16	15	17	16	16	16	16	15	14	14	14	14	16	16	15	16	16	16	17	16	17	17	17	19	18	18	18	16	
MINIMUM	13	13	12	13	13	14	14	14	14	14	14	14	14	14	14	13	13	14	14	15	15	14	14	15	15	16	16	16	16	17	17	17	14	
JUNE																																		
MAXIMUM	18	18	18	18	18	18	18	18	18	19	19	19	19	19	20	23	24	23	23	23	22	21	22	25	24	23	23	23	23	22	22	--	21	
MINIMUM	17	17	17	17	17	18	18	18	18	18	18	19	19	19	19	19	19	19	19	21	22	23	22	21	20	20	21	22	22	22	21	--	20	
JULY																																		
MAXIMUM	21	21	24	23	22	23	24	23	23	23	22	22	23	23	24	23	22	22	22	22	22	24	24	24	22	22	22	21	22	21	20	20	22	
MINIMUM	21	20	21	22	22	22	23	22	22	23	22	22	21	21	21	22	22	22	21	21	21	21	21	23	22	22	21	20	19	20	19	18	21	
AUGUST																																		
MAXIMUM	20	21	22	22	21	21	21	21	21	21	22	21	21	21	21	22	22	22	21	20	19	19	19	19	19	19	18	18	18	19	19	19	20	
MINIMUM	19	19	19	21	19	19	19	19	19	19	20	21	20	19	20	19	20	19	20	20	19	18	18	18	18	18	17	17	17	18	18	18	19	
SEPTEMBER																																		
MAXIMUM	19	18	16	16	16	16	17	16	17	17	17	16	16	17	17	16	16	15	16	16	17	17	17	17	16	16	16	16	17	17	17	--	16	
MINIMUM	18	16	15	15	14	15	15	16	16	16	16	16	16	16	16	16	15	15	15	15	15	16	16	16	16	16	16	15	15	16	16	--	16	

SACRAMENTO RIVER BASIN

11-4070. FEATHER RIVER AT OROVILLE, CALIF.

LOCATION.--Lat 39°31'13", long 121°32'48", in Fernandez Land Grant, Butte County, near gaging station 300 ft upstream from fish barrier dam on Feather River, and 0.6 mile northeast of Oroville.

DRAINAGE AREA.--3,624 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: October 1953 to September 1954, November 1956 to September 1969.

Sediment records: November 1956 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 17°C on many days during July and August.

Sediment concentrations: Maximum daily, 44 mg/l Jan. 21; minimum daily, 1 mg/l on several days during October,

November, and September.

Sediment loads: Maximum daily, 3,750 tons Jan. 22; minimum daily, 1.1 tons on several days during October,

November, and September.

EXTREMES, 1953-54, 1956-69.--Water temperatures: Maximum (1956-67, 1968-69), 27°C Sept. 10, 12, 1959; minimum

(1956-67), 2°C Dec. 27, 1959, Jan. 23-25, 1962.

Sediment concentrations (1956-69): Maximum daily, 4,100 mg/l Feb. 1, 1963; minimum daily, 1 mg/l on many days

in 1961-62, 1964, 1968-69.

Sediment loads (1956-69): Maximum daily, 1,500,000 tons Feb. 1, 1963; minimum daily, 1.0 ton June 9, 10, 1968.

REMARKS.--Chemical and sediment sampling point varies from 0.2 to 1.5 miles downstream from gaging station. Thermograph recorder is at fish hatchery near gaging station, and represents the water temperatures at Thermalito diversion dam 0.5 mile upstream from the gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (JEG C)	SILICA (SiO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
03...	323	13	13	0	8.5	3.2	3.2	.7	42	0	3.0	1.8
NOV.												
01...	323	12	11	0	8.9	3.6	3.5	.8	48	0	2.0	1.3
DEC.												
03...	332	7	11	20	9.0	3.9	3.6	1.0	50	0	3.0	1.2
JAN.												
03...	370	8	9.8	0	8.2	3.7	3.2	.8	49	0	3.0	.7
FEB.												
04...	352	--	11	20	8.6	3.8	3.2	1.0	49	0	4.0	1.0
MAR.												
04...	1700	6	11	10	7.3	3.2	2.6	.8	41	0	3.0	.6
29...	370	8	10	10	7.3	3.3	3.0	.8	40	0	3.0	1.0
MAY												
01...	390	--	13	10	7.5	3.2	2.9	.6	40	0	3.0	.9
JUNE												
05...	361	13	13	40	6.7	2.6	2.6	.7	34	0	2.0	.6
JULY												
02...	420	17	12	10	6.3	2.6	2.4	.7	35	0	2.0	.6
30...	410	17	11	20	7.3	2.8	2.7	.7	37	0	2.0	.5
SEPT.												
04...	382	--	13	0	7.4	2.9	2.9	.8	38	0	3.0	1.0
30...	402	15	12	30	7.2	2.9	2.7	.7	36	0	3.0	1.0

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	COLOR (PLATI- NUM- COBALT UNITS)	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.												
03...	.0	.4	10	58	55	.08	17	.2	34	0	81	7.9
NOV.												
01...	.1	.4	10	58	56	.08	16	.2	39	--	86	7.3
DEC.												
03...	.1	.5	0	56	58	.08	17	.3	41	4	90	7.1
JAN.												
03...	.1	.4	0	54	54	.07	16	.2	40	5	87	7.1
FEB.												
04...	.0	1.1	0	58	58	.08	15	.2	40	2	88	7.2
MAR.												
04...	.1	.6	10	52	49	.07	15	.2	34	5	77	7.0
29...	.1	2.0	0	56	51	.08	17	.2	33	4	80	7.1
MAY												
01...	.2	1.0	0	54	52	.07	16	.2	33	5	79	7.0
JUNE												
05...	.0	.0	190	48	45	.07	17	.2	28	5	66	6.9
JULY												
02...	.1	.0	0	42	44	.06	16	.2	29	8	67	7.0
30...	.1	.0	60	--	45	.06	16	.2	30	--	69	7.1
SEPT.												
04...	.0	.2	60	48	50	.07	17	.2	31	2	74	6.9
30...	.1	.0	0	49	48	.07	16	.2	30	4	72	7.1

11-4070. FEATHER RIVER AT OROVILLE, CALIF.--Continued
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PHOS- PHATE (PO4) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	AMMONIA (NH4) (MG/L)
OCT. 03...	34	0	.01	.01	1.9	.00
NOV. 01...	37	0	.03	.08	2.1	.01
DEC. 03...	38	0	.08	.03	.13	.06
JAN. 03...	36	0	.04	.03	.10	.06
FEB. 04...	37	0	.20	.10	.16	.15
MAR. 04...	31	0	.16	.10	.31	.09
29...	32	0	--	--	--	--
MAY 01...	32	0	--	.06	.46	.12
JUNE 05...	27	0	.00	.00	.00	.08
JULY 02...	26	0	--	--	--	--
30...	30	0	.09	.05	.26	.00
SEPT. 04...	30	0	.04	.00	.05	.09
30...	30	0	.00	.03	.06	.08

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY																																AVER- AGE	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	12	12	12	12	12	12	13	12	12	12	11	11	10	11	12	11	12	12	12	12	12	12	12	12	12	12	12	12	12	11	12	
	MINIMUM	11	11	11	11	11	11	11	10	11	11	11	11	10	9	9	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	
NOVEMBER	MAXIMUM	11	11	11	11	11	11	11	11	12	12	11	11	11	10	10	10	10	10	11	10	10	10	10	9	10	10	10	10	10	9	10	
	MINIMUM	11	11	11	11	10	11	10	10	10	11	11	11	10	9	9	9	9	9	9	9	9	9	9	9	9	8	9	8	8	8	9	
DECEMBER	MAXIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	7	8	7	7	7	7	7	6	6	6	7	6	8	
	MINIMUM	9	8	8	7	8	7	7	8	8	8	8	8	7	8	7	6	6	7	6	4	4	6	6	6	6	5	6	6	5	4	4	6
JANUARY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEBRUARY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH	MAXIMUM	--	--	--	--	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	9	9	11	11	11	8
	MINIMUM	--	--	--	--	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	9	7
APRIL	MAXIMUM	9	9	10	10	9	9	11	11	10	11	11	10	10	11	11	12	11	11	11	11	12	12	10	9	11	11	12	12	11	12	--	11
	MINIMUM	8	9	9	8	9	9	9	10	9	9	10	9	8	9	10	10	9	8	10	10	11	10	8	8	9	11	11	11	11	11	--	10
MAY	MAXIMUM	11	11	11	12	12	12	12	11	12	12	11	11	11	11	12	13	13	13	12	12	13	13	13	12	13	12	12	13	13	13	13	12
	MINIMUM	10	10	10	11	11	12	11	11	11	11	11	11	11	10	12	12	12	12	11	12	12	12	12	12	12	11	11	12	13	13	12	11
JUNE	MAXIMUM	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	16	16	15	15	--	14
	MINIMUM	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	14	14	14	14	15	15	14	14	14	--	13
JULY	MAXIMUM	15	15	16	16	16	16	16	16	16	16	17	17	17	16	17	17	17	16	16	16	16	16	16	16	15	16	16	15	16	16	17	16
	MINIMUM	14	14	14	16	15	15	15	16	16	16	16	16	16	16	16	16	15	16	16	16	16	15	16	15	16	14	15	14	14	15	16	15
AUGUST	MAXIMUM	17	17	16	17	17	17	17	17	17	17	17	17	17	17	15	14	16	16	16	16	16	15	15	14	15	16	16	16	15	14	12	16
	MINIMUM	16	16	16	16	16	16	16	17	16	17	16	17	17	17	15	14	14	14	15	15	14	14	14	14	13	15	15	15	14	12	12	15
SEPTEMBER	MAXIMUM	12	13	12	12	12	12	12	13	13	13	13	13	12	13	13	13	13	13	13	13	12	12	12	12	12	13	13	13	13	12	--	13
	MINIMUM	12	12	12	12	12	12	12	12	12	13	13	12	12	12	12	12	12	13	13	12	12	11	11	12	12	12	12	13	12	11	--	12

SACRAMENTO RIVER BASIN

11-4070. FEATHER RIVER AT OROVILLE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	402	2	2.2	393	1	1.1	402	4	4.3
2	402	2	2.2	412	4	4.4	402	6	6.5
3	393	2	2.1	412	3	3.3	402	3	3.3
4	402	2	2.2	422	3	3.4	402	5	5.4
5	412	2	2.2	402	3	3.3	412	9	10
6	402	2	2.2	402	4	4.3	402	3	3.3
7	402	2	2.2	412	3	3.3	384	5	5.2
8	393	1	1.1	422	2	2.3	402	6	6.5
9	393	1	1.1	422	2	2.3	402	6	6.5
10	393	1	1.1	422	2	2.3	402	7	7.6
11	402	2	2.2	412	3	3.3	393	6	6.4
12	412	2	2.2	402	4	4.3	399	6	6.5
13	412	3	3.3	402	3	3.3	411	4	4.4
14	412	3	3.3	412	3	3.3	411	10	11
15	412	3	3.3	412	4	4.4	392	11	12
16	412	3	3.3	412	5	5.6	411	11	12
17	412	4	4.4	422	4	4.6	402	8	8.7
18	412	4	4.4	422	3	3.4	392	9	9.5
19	412	4	4.4	422	3	3.4	382	7	7.2
20	402	4	4.3	422	3	3.4	402	5	5.4
21	393	4	4.2	412	3	3.3	402	4	4.3
22	384	4	4.1	412	3	3.3	411	4	4.4
23	374	4	4.0	402	3	3.3	420	4	4.5
24	374	4	4.0	412	3	3.3	420	4	4.5
25	384	4	4.1	412	2	2.2	420	4	4.5
26	393	4	4.2	422	2	2.3	411	3	3.3
27	393	4	4.2	412	3	3.3	411	3	3.3
28	393	4	4.2	422	5	5.7	420	3	3.4
29	393	6	6.4	422	5	5.7	411	3	3.3
30	393	4	4.2	402	5	5.4	411	4	4.4
31	393	3	3.2	--	--	--	411	4	4.4
TOTAL	12361	--	100.5	12391	--	106.8	12555	--	186.0

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	411	3	3.3	2030	13	71	2920	11	87
2	411	3	3.3	411	14	16	2880	12	93
3	420	4	4.5	392	13	14	2920	21	166
4	411	2	2.2	402	15	16	1750	12	57
5	411	2	2.2	402	14	15	1020	13	36
6	402	2	2.2	411	13	14	997	9	24
7	402	2	2.2	402	10	11	616	8	13
8	392	2	2.1	402	8	8.7	382	11	11
9	392	2	2.1	411	8	8.9	402	12	13
10	392	2	2.1	1820	10	49	411	13	14
11	402	9	9.8	5650	32	488	420	17	19
12	430	10	12	8570	15	347	411	14	16
13	472	11	14	6270	7	119	392	12	13
14	402	10	11	534	9	13	382	11	11
15	392	9	9.5	805	11	24	392	10	11
16	392	21	22	1840	13	65	411	9	10
17	382	21	22	2480	7	47	430	8	9.3
18	402	15	16	9680	7	183	430	8	9.3
19	420	14	16	8920	8	193	392	7	7.4
20	411	15	17	6140	8	133	382	7	7.2
21	13000	44	3230	3310	7	63	402	7	7.6
22	37400	33	3750	808	9	20	440	7	8.3
23	24800	10	670	844	14	32	430	7	8.1
24	18200	8	393	2510	14	95	420	6	6.8
25	5020	6	81	4100	15	166	382	6	6.2
26	17200	11	511	4430	14	167	392	6	6.4
27	22400	22	1330	5830	13	205	392	6	6.4
28	24800	19	1270	4620	11	137	402	6	6.5
29	24400	16	1050	--	--	--	420	5	5.7
30	24000	16	1040	--	--	--	411	5	5.5
31	16200	12	525	--	--	--	420	5	5.7
TOTAL	235569	--	14025.5	84424	--	2720.6	22851	--	700.4

SACRAMENTO RIVER BASIN

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 11-4070. FEATHER RIVER AT OROVILLE, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	430	7	8.1	440	6	7.1	400	4	4.3
2	440	6	7.1	420	4	4.5	410	4	4.4
3	430	7	8.1	440	3	3.6	400	3	3.2
4	2490	9	61	364	3	2.9	391	3	3.2
5	2390	9	58	373	3	3.0	391	4	4.2
6	2390	9	58	402	7	7.6	400	7	7.6
7	2300	7	43	411	5	5.5	400	6	6.5
8	2390	7	45	420	4	4.5	400	5	5.4
9	2340	5	32	411	6	6.7	400	4	4.3
10	2300	4	25	373	5	5.0	410	4	4.4
11	2340	5	32	373	6	6.0	431	3	3.5
12	2390	7	45	382	4	4.1	431	3	3.5
13	2430	6	39	392	12	13	410	2	2.2
14	2340	8	51	402	7	7.6	391	2	2.1
15	2430	9	59	382	9	9.3	391	3	3.2
16	2390	10	65	382	8	8.3	391	3	3.2
17	2410	7	46	373	8	8.1	410	4	4.4
18	1490	8	32	373	5	5.0	410	4	4.4
19	1510	7	29	373	5	5.0	400	3	3.2
20	1430	7	27	364	2	2.0	410	3	3.3
21	1150	6	19	364	7	6.9	420	2	2.3
22	420	4	4.5	364	3	2.9	410	3	3.3
23	430	6	7.0	369	3	3.0	410	4	4.4
24	420	8	9.1	391	5	5.3	410	6	6.6
25	420	7	7.9	382	5	5.2	420	4	4.5
26	420	6	6.8	382	6	6.2	420	3	3.4
27	402	9	9.8	362	4	3.9	420	3	3.4
28	420	10	11	353	4	3.8	420	3	3.4
29	420	8	9.1	391	4	4.2	410	3	3.3
30	430	7	8.1	400	6	6.5	420	2	2.3
31	--	--	--	400	4	4.3	--	--	--
TOTAL	43992	--	862.6	12008	--	171.0	12237	--	117.4

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	420	2	2.3	400	2	2.2	392	8	8.5
2	420	3	3.4	400	3	3.2	392	4	4.2
3	431	4	4.7	410	4	4.4	392	3	3.2
4	431	3	3.5	410	4	4.4	382	2	2.1
5	431	3	3.5	391	3	3.2	392	2	2.1
6	431	3	3.5	382	5	5.2	392	2	2.1
7	431	2	2.3	410	4	4.4	392	2	2.1
8	420	2	2.3	410	4	4.4	392	1	1.1
9	431	2	2.3	400	4	4.3	392	1	1.1
10	431	2	2.3	400	3	3.2	392	3	3.2
11	431	2	2.3	410	3	3.3	392	2	2.1
12	431	2	2.3	410	3	3.3	392	2	2.1
13	431	2	2.3	400	3	3.2	392	2	2.1
14	442	3	3.6	400	3	3.2	382	3	3.1
15	442	3	3.6	400	4	4.3	402	4	4.3
16	410	3	3.3	400	3	3.2	411	3	3.3
17	382	3	3.1	400	4	4.3	411	3	3.3
18	391	2	2.1	410	4	4.4	411	4	4.4
19	400	5	5.4	410	4	4.4	402	4	4.3
20	400	2	2.2	400	4	4.3	392	4	4.2
21	400	5	5.4	400	5	5.4	402	3	3.3
22	400	4	4.3	400	10	11	411	3	3.3
23	400	3	3.2	400	8	8.6	411	2	2.2
24	400	2	2.2	400	7	7.6	411	2	2.2
25	410	2	2.2	395	6	6.4	420	2	2.3
26	400	2	2.2	382	4	4.1	411	2	2.2
27	400	2	2.2	382	2	2.1	402	2	2.2
28	410	2	2.2	382	2	2.1	402	2	2.2
29	400	2	2.2	382	2	2.1	402	2	2.2
30	410	3	3.3	382	2	2.1	402	4	4.3
31	410	2	2.2	392	4	4.2	--	--	--
TOTAL	12877	--	91.9	12350	--	132.5	11971	--	89.3

 TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
 TOTAL LOAD FOR YEAR (TONS)

 485586
 19304.5

SACRAMENTO RIVER BASIN

11-4070. FEATHER RIVER AT OROVILLE, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
FEB	4, 1969	0800	8	402	6	6.5	--	--	--	--	--	95	100	--	--	--	S

11-4071.5. FEATHER RIVER NEAR GRIDLEY, CALIF.

LOCATION.--Lat 39°22'00", long 121°38'46", in SW $\frac{1}{4}$ sec.33, T.18 N., R.3 E., Butte County, at gaging station on right bank, 300 ft upstream from highway bridge, and 2.7 miles east of Gridley.

DRAINAGE AREA.--3,676 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1964 to September 1969.

Sediment records: October 1964 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 6°C Dec. 22.

Sediment concentrations: Maximum daily, 310 mg/l Jan. 22; minimum daily, 1 mg/l Dec. 12.

Sediment loads: Maximum daily, 42,100 tons Jan. 22; minimum daily, 2.4 tons Dec. 12.

EXTREMES, 1964-69.--Water temperatures: Minimum, 4°C on several days during December and January of most years.

Sediment concentrations: Maximum daily, 1,340 mg/l Dec. 25, 1964; minimum daily, 1 mg/l Dec. 12, 1968.

Sediment loads: Maximum daily, 527,000 tons Dec. 23, 1964; minimum daily, 1.4 tons Oct. 27, 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	18	--	18	--	17	--	17	--	17	--	15	--	14	--	15	--	14	--	15	--	16	--	17	--	18	--	14	--	13	--	13	--
NOVEMBER.	--	13	--	14	--	12	--	11	--	15	11	--	10	11	11	11	12	13	12	11	12	11	12	11	11	11	11	9	10	--	12	
DECEMBER.	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	7	7	6	7	7	7	8	8	8	8	9	8	8	
JANUARY..	8	7	7	7	7	7	7	7	7	7	--	8	8	9	9	8	8	8	8	9	10	9	9	7	8	9	7	7	7	7	8	
FEBRUARY.	7	9	8	7	7	8	--	--	8	8	7	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	--	--	--	8	
MARCH....	7	7	7	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	11	10	10	10	10	11	11	12	12	13	13	13	10	
APRIL....	13	12	11	11	11	11	12	12	12	12	12	12	12	13	13	13	13	13	12	12	13	12	13	13	13	13	13	13	13	--	12	
MAY.....	13	13	13	13	14	15	16	16	18	19	17	17	19	19	19	19	21	21	21	21	20	20	20	20	20	17	21	21	22	22	18	
JUNE.....	21	--	21	20	21	--	21	--	20	--	21	--	20	--	19	--	20	--	20	--	19	--	20	--	19	--	22	--	22	--	--	--
JULY.....	22	--	23	--	24	--	24	--	25	--	22	--	22	--	22	--	22	--	22	--	22	--	21	--	22	--	21	--	21	--	22	--
AUGUST...	--	22	--	22	--	23	--	23	--	23	--	24	--	26	--	25	--	21	--	21	--	21	--	20	--	19	--	19	--	19	--	--
SEPTEMBER	19	--	19	--	19	--	20	--	20	--	18	--	18	--	17	--	16	--	16	--	16	--	16	--	16	--	16	--	18	--	18	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	888	4	9.6	1100	6	18	894	3	7.2
2	884	4	9.5	1130	12	37	873	2	4.7
3	900	4	9.7	1160	6	19	889	3	7.2
4	910	5	12	1140	6	18	898	6	15
5	921	5	12	1140	6	18	898	5	12
6	914	5	12	1110	6	18	898	3	7.3
7	907	4	9.8	1080	7	20	907	4	9.8
8	902	4	9.7	1090	8	24	914	4	9.9
9	905	4	9.8	1100	6	18	948	5	13
10	921	3	7.5	1120	4	12	969	8	21
11	950	3	7.7	1110	5	15	934	5	13
12	979	4	11	1120	5	15	902	1	2.4
13	957	6	16	1080	6	17	914	2	4.9
14	1010	5	14	1100	2	5.9	967	9	23
15	1100	5	15	1100	3	8.9	924	11	27
16	1150	5	16	946	3	7.7	844	9	21
17	1160	6	19	920	2	5.0	863	5	12
18	1140	6	18	934	4	10	888	8	19
19	1130	5	15	913	2	4.9	867	6	14
20	1120	5	15	899	2	4.9	856	8	18
21	1120	4	12	895	2	4.8	857	4	9.3
22	1130	4	12	892	2	4.8	866	4	9.4
23	1120	5	15	887	2	4.8	875	5	12
24	1100	5	15	895	2	4.8	920	5	12
25	1090	5	15	886	2	4.8	927	11	28
26	1100	5	15	886	2	4.8	899	5	12
27	1100	5	15	896	3	7.3	905	8	20
28	1100	6	18	900	4	9.7	912	5	12
29	1140	6	18	911	3	7.4	909	4	9.8
30	1130	6	18	917	4	9.9	889	5	12
31	1100	6	18	--	--	--	883	4	9.5
TOTAL	31978	--	419.3	30257	--	359.4	27889	--	407.4

11-4071.5. FEATHER RIVER NEAR GRIDLEY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	877	5	12	17600	55	2610	12400	16	536
2	877	5	12	12000	43	1390	12400	17	569
3	877	5	12	10600	43	1230	12300	16	531
4	877	6	14	9950	37	994	12000	22	713
5	864	4	9.3	9780	38	1000	10900	13	383
6	856	4	9.2	10400	31	870	10100	16	436
7	856	4	9.2	10900	32	942	9800	14	370
8	836	5	11	10300	33	918	8570	15	347
9	845	3	6.8	11000	34	1010	7690	17	353
10	841	4	9.1	13300	36	1290	7030	13	247
11	893	5	12	17600	27	1280	5490	14	208
12	994	93	250	21800	33	1940	4620	15	187
13	4210	85	966	20500	26	1440	4490	13	158
14	3190	23	198	14300	20	772	4110	14	155
15	1200	13	42	14100	26	990	4120	13	145
16	1070	9	26	14900	27	1090	4370	15	177
17	989	10	27	15500	15	628	5180	13	182
18	948	10	26	15400	18	748	5280	24	342
19	1070	16	46	14200	14	537	6220	21	353
20	1650	24	107	12300	17	565	7790	20	421
21	13000	149	8230	11700	17	537	9230	25	623
22	50300	310	42100	12000	14	454	10800	28	816
23	39200	80	8470	12400	22	737	10600	16	458
24	37300	60	6040	12300	23	764	8730	7	165
25	21000	38	2150	13500	20	729	5880	12	191
26	29300	62	4900	12100	20	653	5730	17	263
27	35700	40	3860	12100	20	653	5600	9	136
28	38500	40	4160	12000	15	486	5450	12	177
29	38500	32	3330	--	--	--	5440	13	191
30	38000	33	3390	--	--	--	5440	11	162
31	34100	28	2580	--	--	--	5440	10	147
TOTAL	399720	--	91014.6	374530	--	27257	233200	--	10142

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	5440	26	382	10400	13	365	6250	25	422
2	5790	37	578	10200	13	358	5480	15	222
3	10500	28	794	8990	18	408	4340	7	82
4	14700	26	1030	8160	11	242	4330	7	82
5	15700	10	424	8200	8	177	3450	9	84
6	15800	30	1280	8180	7	155	3360	9	82
7	16100	35	1520	8190	9	199	2400	8	52
8	16100	5	217	8120	10	219	1430	8	31
9	16100	12	522	8090	7	153	1210	8	26
10	15900	22	944	8060	7	152	1210	6	20
11	15400	10	416	8160	9	198	1200	4	13
12	15500	29	1210	8130	7	154	1180	4	13
13	15400	22	915	8130	7	154	1170	4	13
14	15400	14	582	9710	7	184	1140	3	9.2
15	15500	16	670	10700	30	867	1130	3	9.2
16	15600	16	674	10800	29	846	1130	3	9.2
17	15800	17	725	10700	11	318	1130	3	9.2
18	14900	16	644	10600	11	315	1140	5	15
19	15200	18	739	10600	15	429	1140	5	15
20	14600	21	828	10600	16	458	1310	5	18
21	14600	18	710	10600	17	487	1560	4	17
22	14000	15	567	10000	7	189	1550	4	17
23	14300	20	772	8910	7	168	1550	4	17
24	14100	18	685	8010	7	151	1530	4	17
25	14200	13	498	8000	25	540	1530	4	17
26	14100	14	533	7220	10	195	1160	4	13
27	14100	12	457	6120	12	198	1130	4	12
28	14100	17	647	6080	10	164	1130	3	9.2
29	12600	13	442	6100	11	181	1130	3	9.2
30	11900	13	418	6180	13	217	1120	3	9.1
31	--	--	--	6240	20	337	--	--	--
TOTAL	423430	--	20823	267580	--	9178	58520	--	1364.3

SACRAMENTO RIVER BASIN

11-4071.5. FEATHER RIVER NEAR GRIDLEY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1130	3	9.2	4280	9	104	6700	4	72
2	1130	4	12	4260	8	92	6780	5	92
3	1110	4	12	4220	8	91	6830	6	111
4	1110	4	12	4640	8	100	6830	5	92
5	1200	4	13	5930	6	96	6810	4	74
6	1940	4	21	6200	5	84	6790	4	73
7	2050	6	33	6370	5	86	6750	5	91
8	2060	7	39	6960	4	75	6760	4	73
9	2270	8	49	6620	4	71	6760	4	73
10	2610	8	56	5780	4	62	6760	4	73
11	2590	6	42	6420	5	87	6750	4	73
12	2590	6	42	6950	5	94	6740	5	91
13	2590	6	42	6950	5	94	6740	5	91
14	2620	5	35	6910	5	93	6710	4	72
15	2670	5	35	6900	5	93	6710	3	54
16	2600	5	35	6840	5	92	6740	3	55
17	2550	6	41	6810	6	110	6750	3	55
18	2530	6	41	6890	6	112	6780	4	73
19	2540	5	34	6890	4	74	6750	4	73
20	2540	5	34	6880	5	93	6700	4	72
21	2540	5	34	6840	4	74	6660	4	72
22	2550	5	34	6840	4	74	6710	4	72
23	3350	6	54	6810	4	74	6720	4	73
24	4030	6	65	6760	7	128	6700	3	54
25	4310	7	81	6820	6	110	6700	3	54
26	4300	7	81	6850	4	74	6700	5	90
27	4290	8	93	6820	4	74	6320	7	119
28	4300	8	93	6830	4	74	5330	6	86
29	4320	7	82	6820	4	74	4340	6	70
30	4320	8	93	6790	4	73	3310	6	54
31	4300	9	104	6740	4	73	--	--	--
TOTAL	84990	--	1451.2	198620	--	2705	194630	--	2277
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									2325344
TOTAL LOAD FOR YEAR (TONS)									167398.2

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 13, 1969	1700	8	7170	96	1860	4	8	17	22	27	56	90	99	100	--	--	SBC	
JAN 22.....	1320	9	52900	351	50100	5	7	10	13	15	21	29	49	84	100	--	SBWC	
FEB 13.....	1530	8	20900	24	1350	--	--	--	--	--	14	31	60	89	100	--	S	

11-4077. FEATHER RIVER AT YUBA CITY, CALIF.

LOCATION.--Lat 39°08'20", long 121°36'17", in NE $\frac{1}{4}$ sec.23, T.15 N., R.3 E., Yuba County, at gaging station on left bank, at 5th Street railroad bridge in Yuba City, 0.7 mile upstream from confluence with Yuba River, and at mile 28.0 upstream from mouth.

DRAINAGE AREA.--3,974 sq mi.

PERIOD OF RECORD.--Water temperatures: July 1964 to September 1969.

Sediment records: October 1964 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 420 mg/l Jan. 22; minimum daily, 6 mg/l Jan. 9, 10.

Sediment loads: Maximum daily, 46,900 tons Jan. 22; minimum daily, 18 tons Jan. 9, 10.

EXTREMES, 1964-69.--Water temperatures (1964-67): Maximum, 32°C July 29, 1964; minimum (1964-65), 3°C on several days in January 1965.

Sediment concentrations: Maximum daily, 786 mg/l Dec. 24, 1964; minimum daily, 6 mg/l Jan. 9, 10, 1969.

Sediment loads: Maximum daily, 334,000 tons Dec. 24, 1964; minimum daily, 12 tons Oct. 27, 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	18	--	17	--	--	16	--	14	--	16	--	--	14	--	13	--	14	--	--	14	--	14	--	--	17	--	17	--	14	--	--	
NOVEMBER.	--	14	--	13	--	12	--	--	13	--	13	15	9	--	9	--	--	--	13	--	12	--	11	--	10	--	8	--	8	--	--	--	
DECEMBER.	--	9	--	8	--	--	8	--	10	--	--	9	8	8	9	--	9	9	9	9	7	6	--	5	7	--	8	7	8	--	7	6	--
JANUARY..	--	8	8	9	--	7	7	7	7	7	7	--	9	9	7	7	7	7	--	12	12	9	7	7	7	8	--	7	7	6	4	6	8
FEBRUARY.	7	--	7	7	7	7	7	7	--	8	9	8	7	8	8	--	8	8	8	7	8	8	--	7	7	7	7	7	8	--	--	7	
MARCH....	7	--	7	7	7	7	7	7	--	7	8	8	7	7	8	--	9	9	9	9	8	8	--	9	9	11	11	11	11	--	12	--	8
APRIL....	15	12	12	12	10	--	9	11	11	11	11	11	--	10	10	12	12	13	13	--	13	13	12	11	10	11	--	9	16	12	--	12	
MAY.....	12	12	14	--	13	14	14	14	18	17	--	15	14	13	15	14	15	--	14	16	16	17	18	16	--	16	16	16	17	--	19	15	
JUNE.....	--	17	--	16	--	18	--	--	19	--	20	--	--	22	--	23	--	--	21	--	21	--	--	--	23	--	--	23	--	26	--	--	--
JULY.....	--	--	--	--	25	--	22	--	23	--	25	--	--	22	--	25	--	--	26	--	--	23	--	25	--	25	--	--	21	--	21	--	--
AUGUST...	21	--	--	--	21	--	20	--	23	--	24	--	--	23	--	21	--	22	--	22	--	23	--	23	--	--	--	20	--	23	--	--	--
SEPTEMBER	--	23	--	20	--	20	--	20	18	20	--	--	18	--	18	--	17	--	15	--	--	20	--	20	--	20	--	--	--	20	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1090	13	38	1290	16	56		13	42
2	1050	15	43	1320	15	53		13	41
3	1050	14	40	1500	18	73		10	32
4	1060	13	37	1530	19	78		7	22
5	1070	14	40	1470	19	75		7	22
6	1050	14	40	1430	21	81		9	28
7	1020	14	39	1380	22	82		11	34
8	1030	13	36	1340	21	76		11	34
9	1030	11	31	1330	20	72		12	37
10	1030	10	28	1340	20	72		14	46
11	1060	11	31	1330	20	72	1460	24	95
12	1140	12	37	1380	15	56	1390	18	68
13	1200	13	42	1350	16	58	1320	19	68
14	1200	14	45	1350	14	51	1690	45	205
15	1200	14	45	1450	12	47	2130	90	518
16	1390	13	49	1440	14	54	2380	137	880
17	1410	14	53	1290	15	52	1760	55	261
18	1390	15	56	1290	16	56	1640	21	93
19	1370	15	55	1360	19	70	1860	17	85
20	1360	13	48	1330	18	65	1640	14	62
21	1350	12	44	1280	17	59	1430	10	39
22	1340	13	47	1220	16	53	1440	10	39
23	1340	15	54	1200	16	52	1460	9	35
24	1340	16	58	1190	16	51	1720	11	51
25	1320	16	57	1170	17	54	2480	64	429
26	1290	15	52	1150	15	47	2490	64	430
27	1300	13	46	1150	12	37	1920	34	176
28	1290	13	45	1150	11	34	1580	25	107
29	1340	14	51	1150	11	34	1700	25	115
30	1430	17	66	1190	12	39	1590	17	73
31	1340	16	58	--	--	--	1420	10	38
TOTAL	37880	--	1411	39350	--	1759	48150	--	4205

SACRAMENTO RIVER BASIN

11-4077. FEATHER RIVER AT YUBA CITY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1310	8	28	26700	241	17400	14300	136	5250
2	1240	8	27	14500	259	10100	15200	120	4920
3	1180	11	35	11000	208	6180	14100	115	4380
4	1210	12	39	9900	153	4090	13300	196	7040
5	1190	11	35	10800	130	3790	12000	178	5770
6	1150	11	34	11900	130	4180	10900	139	4090
7	1140	11	34	12900	150	5220	10500	148	4200
8	1120	12	36	11700	125	3950	9380	128	3240
9	1140	6	18	10700	135	3900	8400	128	2900
10	1120	6	18	13400	190	6870	8010	115	2490
11	1200	30	97	16500	280	12500	6370	107	1840
12	2760	164	1220	22200	300	18000	5430	82	1200
13	8900	400	9610	26200	220	15600	5090	89	1220
14	16000	380	16400	19800	140	7480	4820	71	924
15	5000	160	2160	15300	110	4540	4620	68	848
16	3020	70	571	21100	90	5130	4600	81	1010
17	2350	40	254	19600	160	8470	5020	102	1380
18	2110	30	171	18000	150	7290	5300	88	1260
19	3680	100	994	16800	148	6710	5460	89	1310
20	5800	150	2350	14300	119	4590	6910	147	2740
21	7800	100	2650	12300	123	4080	7950	170	3650
22	41400	420	46900	12300	136	4520	10300	262	7290
23	48100	260	33800	12000	123	3990	10600	245	7010
24	41600	255	28600	12500	144	4860	10000	223	6020
25	31300	157	13300	13800	156	5810	6450	136	2370
26	21800	83	4890	14200	149	5710	5970	94	1520
27	40700	73	8020	13400	119	4310	5760	87	1350
28	41300	84	9370	12500	111	3750	5450	68	1000
29	40200	136	14800	--	--	--	5240	80	1130
30	38800	162	17000	--	--	--	5410	76	1110
31	37500	171	17300	--	--	--	5290	63	900
TOTAL	455120	--	230761	426300	--	193020	248130	--	91362

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4740	58	742	10500	60	1700	6190	50	836
2	5080	58	796	10100	57	1550	5980	52	840
3	7520	162	3290	8870	102	2440	4400	50	594
4	11600	264	8270	8090	88	1920	4240	46	527
5	13400	206	7450	8050	88	1910	3960	40	428
6	14400	158	6140	8040	88	1910	3430	34	315
7	14900	168	6760	8040	88	1910	2830	27	206
8	14300	147	5680	7980	70	1510	2020	20	109
9	14500	146	5480	7890	63	1340	1560	15	63
10	15100	168	6850	7920	70	1500	1480	14	56
11	15300	182	7520	8060	66	1440	1490	20	80
12	15200	175	7180	8150	62	1360	1490	26	105
13	15200	178	7310	8100	54	1180	1470	26	103
14	15200	183	7510	9090	56	1370	1460	23	91
15	15500	206	8620	10500	43	1220	1440	21	82
16	16000	189	8160	11000	54	1600	1390	16	60
17	16100	228	9910	10900	47	1380	1400	15	57
18	15900	231	9920	10900	42	1240	1380	16	60
19	15700	214	9070	10700	37	1090	1370	16	59
20	15800	214	9130	10900	42	1240	1370	16	59
21	15000	214	8670	10800	51	1490	1520	20	82
22	14700	217	8610	10500	42	1190	1620	24	105
23	14600	189	7450	9450	32	816	1700	25	115
24	14800	186	7430	8130	68	1490	1650	25	111
25	13900	200	7510	7990	94	2030	1600	23	99
26	13800	105	3910	7800	58	1220	1500	21	85
27	14000	91	3440	6360	29	498	1400	20	76
28	14300	88	3400	6200	35	586	1250	21	71
29	13100	78	2760	6150	41	681	1300	21	74
30	12200	78	2570	6210	44	738	1250	22	74
31	--	--	--	6240	47	792	--	--	--
TOTAL	411840	--	171538	262810	--	42341	65140	--	5622

11-4077. FEATHER RIVER AT YUBA CITY, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1240	22	74	4030	73	794	6890	80	1490
2	1240	21	70	3990	80	862	6900	90	1680
3	1220	20	66	3990	82	883	7020	88	1670
4	1220	18	59	4010	77	834	6980	76	1430
5	1170	17	54	5280	83	1180	7020	73	1380
6	1490	21	84	5910	94	1500	7000	83	1570
7	1900	35	180	5910	94	1500	7030	85	1610
8	1870	35	177	6460	106	1950	7020	88	1670
9	1870	35	177	6470	124	2170	7030	75	1420
10	2290	38	235	5740	117	1810	7000	80	1510
11	2330	45	283	5900	86	1370	6980	82	1550
12	2280	48	295	6490	88	1540	6980	77	1450
13	2290	48	297	6520	133	2340	6970	69	1300
14	2320	49	307	6520	159	2800	6950	66	1240
15	2290	50	309	6500	141	2470	6950	65	1220
16	2280	52	320	6470	111	1940	6970	66	1240
17	2220	48	288	6500	105	1840	6950	70	1310
18	2090	38	214	6540	104	1840	7000	73	1380
19	2060	31	172	6570	93	1650	6980	71	1340
20	2100	31	176	6620	76	1360	6940	71	1330
21	2120	34	195	6600	76	1350	6890	73	1360
22	2090	37	209	6600	79	1410	6870	80	1480
23	2520	44	299	6680	78	1410	6900	82	1530
24	3490	67	631	6660	77	1380	6860	77	1430
25	4050	82	897	6650	77	1380	6860	74	1370
26	4060	82	899	6790	77	1410	6870	73	1350
27	4090	85	939	6760	77	1410	6780	71	1300
28	4060	90	987	6820	77	1420	5980	62	1000
29	4050	93	1020	6870	76	1410	5040	51	694
30	4060	85	932	6870	69	1280	4050	39	426
31	4060	72	789	6890	71	1320	--	--	--
TOTAL	76420	--	11634	190610	--	47713	202660	--	40730
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									2471410
TOTAL LOAD FOR YEAR (TONS)									862096

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 13, 1969	0755	9	D 8900	84	2020	--	--	--	--	--	82	93	99	100	--	--	S
JAN 14.....	0745	8	D 16000	322	13900	--	--	--	--	--	43	66	88	98	100	--	SBWC
JAN 21.....	0750	12	D 9800	68	1800	1	9	30	53	68	97	99	100	--	--	--	SBWC
JAN 22.....	0755	9	D 41400	391	43700	8	11	21	31	36	61	78	91	99	100	--	SBWC
JAN 22.....	1100	10	D 41400	553	61800	16	17	29	39	49	60	70	80	89	98	100	SPWC

D Daily mean discharge.

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LOCATION.--Lat 39°24'10", long 121°04'35", in NW1/4 sec. 27, T.18 N., R.8 E., Yuba County, Tahoe National Forest, temperature recorder at gaging station on right bank, 0.7 mile upstream from mouth, and 2.7 miles northeast of North San Juan.

DRAINAGE AREA.--34.4 sq mi.

PERIOD OF RECORD.--Water temperatures: February 1965 to September 1969 (discontinued).

EXTREMES, 1968-69.--Water temperatures: Maximum, 26°C July 22; minimum, 2°C Dec. 20-22.

EXTREMES, 1965-69.--Water temperatures: Maximum, 27°C Aug. 17, 18, 1966; minimum, freezing point Jan. 30, 31, 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
	MAXIMUM	17	17	18	18	17	17	16	14	14	15	15	14	14	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	12	12		15
	MINIMUM	13	14	14	14	14	14	13	11	11	12	13	13	13	12	11	11	11	11	11	11	11	11	11	12	12	12	12	12	11	12	11	9	12
NOVEMBER																																		
	MAXIMUM	11	11	11	12	10	11	12	12	13	13	12	11	10	7	8	10	10	11	11	11	11	11	10	10	10	9	8	8	8	7	7	--	10
	MINIMUM	9	10	11	10	10	9	9	9	10	10	10	9	7	6	6	7	8	9	9	8	7	9	7	9	7	6	5	5	5	5	5	--	8
DECEMBER																																		
	MAXIMUM	8	7	7	7	8	8	8	9	9	9	9	9	7	7	8	8	7	6	6	4	3	3	4	6	6	6	5	5	6	7	7	7	8
	MINIMUM	6	5	4	4	5	5	5	7	7	9	7	5	5	7	7	6	5	5	4	2	2	2	3	4	5	5	5	5	5	4	6	5	5
JANUARY																																		
	MAXIMUM	7	7	7	8	8	7	7	7	6	5	5	6	7	7	7	6	6	6	7	8	8	8	7	7	8	8	6	5	5	5	5	7	6
	MINIMUM	5	5	6	6	6	6	5	4	4	4	4	4	6	7	6	6	5	5	7	8	8	6	6	7	7	6	5	5	5	4	3	6	7
FEBRUARY																																		
	MAXIMUM	5	6	6	6	6	6	7	7	7	8	7	8	7	6	6	6	7	7	7	6	5	5	5	4	4	5	6	6	--	--	--	--	6
	MINIMUM	4	5	5	5	4	5	6	6	7	7	7	6	5	5	5	5	5	6	6	4	3	4	3	3	3	4	4	4	--	--	--	--	5
MARCH																																		
	MAXIMUM	5	5	6	6	7	7	6	6	6	5	7	6	6	6	6	6	6	7	7	7	7	8	9	9	8	9	9	9	9	9	9	9	7
	MINIMUM	4	5	5	5	5	6	5	5	5	5	5	5	5	5	4	5	5	6	6	5	6	5	6	6	6	6	6	6	6	6	6	6	5
APRIL																																		
	MAXIMUM	9	7	7	9	8	8	9	10	9	11	11	10	9	8	9	10	10	11	11	12	10	11	12	12	10	9	10						

LOCATION.--Lat 39°31'29", long 121°05'26", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.19 N., R.8 E., Yuba County, Tahoe National Forest, temperature recorder at gaging station on left bank 500 ft upstream from Slate Creek, and 2.8 miles southeast of Strawberry Valley.

PERIOD OF RECORD.--Water temperatures: September 1968 to July 1969 (discontinued).

EXTREMES, September 1968 to July 1969.--Water temperatures: Maximum, 22°C July 22, 24, 25, 28, 1969; minimum, 2°C Jan. 31, Feb. 4, 5, 1969.

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SEPTEMBER																																	
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	17	16	14	14	14	15	16	15	15	14	14	14	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16	15	13	12	12	12	13	13	13	13	13	12	12	--	--

		DAY																															AVER-	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER	MAXIMUM	14	14	14	14	14	14	14	13	12	12	12	12	11	11	10	10	11	11	11	11	11	11	11	11	11	11	10	10	10	10	10	12	
	MINIMUM	12	13	13	13	13	13	13	11	11	11	11	11	10	10	9	9	10	10	10	10	10	10	10	10	10	10	9	9	9	10	9	11	
NOVEMBER	MAXIMUM	9	9	9	9	9	9	9	9	8	8	9	10	10	10	10	9	7	7	6	4	4	4	6	6	6	6	4	4	4	4	4	--	7
	MINIMUM	8	8	8	9	8	8	9	8	8	8	8	9	10	9	9	7	6	4	4	4	4	5	6	6	4	4	4	4	4	4	4	--	7
DECEMBER	MAXIMUM	4	4	3	3	4	4	4	6	6	6	6	5	4	4	5	5	6	5	5	4	4	3	3	4	5	6	6	6	5	5	5	5	5
	MINIMUM	4	3	3	3	3	4	4	4	6	6	6	5	4	4	4	5	5	5	5	4	3	3	3	3	4	5	5	5	4	5	5	4	4
JANUARY	MAXIMUM	5	6	6	6	6	6	6	6	6	5	5	5	5	6	7	6	6	5	4	6	6	6	6	6	6	7	7	5	4	3	4	3	6
	MINIMUM	5	5	6	6	6	6	6	6	5	4	4	5	6	6	6	6	4	4	5	6	6	6	5	5	5	6	5	4	3	3	2	5	5
FEBRUARY	MAXIMUM	4	4	4	4	3	4	5	5	5	6	6	6	6	5	4	6	6	6	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	3	4	3	2	2	3	4	4	4	5	5	5	4	4	4	3	4	4	6	5	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH	MAXIMUM	--	--	--	--	6	6	6	6	5	5	6	6	6	6	6	6	6	7	7	7	8	9	8	8	8	8	8	8	8	8	8	7	
	MINIMUM	--	--	--	--	5	5	4	4	4	4	4	4	4	4	4	4	6	5	5	5	5	6	6	6	6	5	6	6	6	6	6	5	5
APRIL	MAXIMUM	8	6	7	8	7	7	8	9	8	9	10	8	8	7	8	9	9	9	9	9	10	8	7	6	8	9	10	9	9	9	--	8	
	MINIMUM	5	5	5	5	5	4	5	5	6	6	6	6	6	6	5	5	6	6	5	6	6	6	6	4	4	4	5	5	6	6	5	--	5
MAY	MAXIMUM	9	8	8	9	10	10	10	10	10	10	10	9	9	9	10	10	10	10	10	10	10	11	11	10	10	9	10	11	11	11	11	11	10
	MINIMUM	5	5	5	5	6	6	6	6	6	6	6	6	6	5	5	6	6	6	6	5	6	5	6	7	7	7	7	7	7	7	7	7	6
JUNE	MAXIMUM	11	12	12	12	13	12	12	11	10	10	10	12	13	13	13	13	12	12	13	14	14	15	15	15	13	13	14	14	15	16	--	13	
	MINIMUM	7	8	8	9	9	9	9	9	9	9	9	9	11	10	10	11	11	11	11														

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LOCATION.--Lat 39°22'48", long 121°08'19", in SW¼NE¼ sec.36, T.18 N., R.7 E., Yuba County, Plumas National Forest, temperature recorder at gaging station on right bank, 1.1 miles downstream from New Bullards Bar Dam, and 2 miles northwest of North San Juan.

PERIOD OF RECORD.--Water temperatures: October 1966 to September 1969 (discontinued).

EXTREMES, 1966-68.--Water temperatures: Maximum, 25°C July 7, 9, 21, 1968; minimum, 2°C on many days during December 1967 to February 1968.

REMARKS.--Where no maximum or minimum is shown, temperature is once-daily reading.

[illegible]

11-4215. YUBA RIVER AT MARYSVILLE, CALIF.

LOCATION.--Lat 39°08'31", long 121°34'30", T.15 N., R.4 E., Yuba County, temperature recorder at Simpson Lane Bridge in Marysville, 4.2 miles downstream from gaging station near Marysville, and approximately 2 miles upstream from mouth.

DRAINAGE AREA.--1,339 sq mi (at gaging station).

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1963.

Water temperatures: October 1963 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 29°C on several days during July and August.

EXTREMES, 1963-69.--Water temperatures: Maximum (1963-67, 1968-69), 29°C on several days during July 1964, August 1966, and July and August 1969; minimum (1963-68), 4°C Feb. 17, 1966.

REMARKS.--Recorder malfunction Oct. 1-4, Nov. 7-12, Jan 10-17, Mar. 13-27, Apr. 17-25, June 12-16.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																AVER- AGE
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER																																	
MAXIMUM	--	--	--	--	22	21	20	19	19	19	18	18	17	17	17	19	20	19	20	20	19	19	20	20	19	19	19	18	16	18	18	19	
MINIMUM	--	--	--	--	19	19	18	17	16	16	17	17	17	16	14	16	16	17	17	17	17	16	17	17	17	17	17	17	16	16	16	17	
NOVEMBER																																	
MAXIMUM	17	16	16	17	17	16	--	--	--	--	--	--	--	13	12	12	13	14	14	13	13	13	13	13	12	12	12	12	11	11	--	13	
MINIMUM	15	16	16	14	15	14	--	--	--	--	--	--	--	11	11	12	12	12	14	13	12	13	12	12	12	11	11	9	10	11	--	12	
DECEMBER																																	
MAXIMUM	11	11	11	11	11	9	10	11	11	10	10	9	9	9	9	9	8	8	7	7	7	7	7	7	8	8	7	8	7	7	7	9	
MINIMUM	10	8	8	8	9	8	9	8	10	8	8	8	8	9	9	8	7	7	7	7	6	6	7	7	7	7	7	7	7	7	7	8	
JANUARY																																	
MAXIMUM	8	7	7	7	7	7	6	7	7	--	--	--	--	--	--	--	--	8	10	9	11	10	9	9	9	9	9	9	8	8	8	--	
MINIMUM	7	7	7	7	7	6	6	6	5	--	--	--	--	--	--	--	--	8	8	9	9	9	9	9	9	9	9	9	8	7	7	--	
FEBRUARY																																	
MAXIMUM	8	8	8	8	8	8	9	8	8	9	9	9	9	8	9	9	9	9	8	8	9	9	8	8	8	8	8	8	8	--	--	9	
MINIMUM	7	7	7	7	8	7	7	7	7	8	8	8	8	7	8	8	8	8	8	8	8	7	7	7	8	7	7	8	7	--	--	8	
MARCH																																	
MAXIMUM	9	8	9	10	11	11	11	11	9	9	11	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	13	13	--
MINIMUM	7	7	7	7	8	8	8	8	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	10	10	--
APRIL																																	
MAXIMUM	13	11	12	12	9	10	11	12	11	12	13	12	12	12	13	12	--	--	--	--	--	--	--	--	--	--	--	--	13	13	13	13	--
MINIMUM	9	9	9	9	9	9	9	9	9	9	9	10	9	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	10	9	9	10	--
MAY																																	
MAXIMUM	13	13	14	15	17	17	17	17	17	18	17	16	16	16	14	14	13	13	13	13	13	13	14	14	14	14	14	14	14	16	16	16	15
MINIMUM	10	10	10	10	11	12	13	12	13	13	13	13	12	12	12	11	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	13	12
JUNE																																	
MAXIMUM	16	16	17	18	18	19	19	18	17	18	19	--	--	--	--	--	22	21	22	22	22	22	23	23	23	22	22	22	23	23	--	20	
MINIMUM	13	13	13	13	13	14	14	14	14	14	11	--	--	--	--	--	17	17	17	17	17	17	18	18	19	18	18	19	19	20	--	16	
JULY																																	
MAXIMUM	23	23	23	23	24	24	26	27	26	27	28	28	28	27	28	28	29	29	29	29	29	29	29	28	28	27	28	28	28	28	28	27	
MINIMUM	21	20	21	22	23	23	23	24	23	23	24	24	24	24	24	24	24	26	26	26	26	26	26	26	26	24	23	24	24	24	24	24	
AUGUST																																	
MAXIMUM	28	28	28	29	28	28	28	27	28	28	28	28	28	28	28	27	27	27	26	27	27	27	28	27	26	26	26	26	26	26	26	26	27
MINIMUM	24	25	26	26	24	24	24	24	24	25	25	24	25	24	24	24	24	24	24	24	23	24	25	25	24	23	23	23	24	23	23	24	24
SEPTEMBER																																	
MAXIMUM	27	27	27	27	26	26	26	27	27	27	26	26	25	24	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	23	24	--	25
MINIMUM	24	24	25	24	24	23	24	24	24	24	24	24	23	22	22	22	21	21	22	22	20	21	21	21	21	22	22	22	21	21	22	--	23

SACRAMENTO RIVER BASIN

11-4240. BEAR RIVER NEAR WHEATLAND, CALIF.

LOCATION.--Lat 39°00'00", long 121°24'20", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.13 N., R.5 E., Yuba County, near gaging station at bridge on U.S. Highway 99E, 1 mile southeast of Wheatland, and 6.5 miles downstream from Rock Creek.

DRAINAGE AREA.--292 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV. 07...	1400	15	16	12.4	17	--	6.0	--	81	0	--	7.0
DEC. 13...	1040	10	7	13.1	17	--	5.8	--	81	0	--	6.7
JAN. 17...	1400	14	10	13.5	15	--	5.0	--	73	0	--	4.1
FEB. 05...	1245	2870	8	13.3	5.8	--	1.8	--	27	0	--	2.1
MAR. 05...	0945	1660	7	13.7	6.4	--	2.4	--	32	0	--	2.0
APR. 01...	1230	1130	16	10.7	6.9	--	2.7	--	33	0	--	2.4
MAY 09...	0945	260	18	9.4	8.1	--	2.8	--	32	0	--	4.5
JUNE 18...	1230	101	22	8.6	7.8	--	3.2	--	35	0	--	3.9
JULY 01...	1345	21	27	8.7	14	--	4.2	--	63	0	--	4.4
AUG. 07...	1220	18	27	8.8	15	--	5.5	--	73	0	--	5.5
SEPT. 03...	0930	18	23	8.5	12	7.5	4.6	.4	60	0	14	5.1

DATE	NITRATE (NO ₃) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO ₃ (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 07...	--	--	--	--	83	17	24	.4	66	8.2	188
DEC. 13...	--	--	--	--	90	24	23	.4	66	7.7	193
JAN. 17...	--	--	--	--	85	25	23	.4	60	7.8	172
FEB. 05...	--	--	--	--	28	6	21	.2	22	7.7	65
MAR. 05...	--	--	--	--	31	5	25	.3	26	7.1	73
APR. 01...	--	--	--	--	32	5	25	.3	27	7.4	75
MAY 09...	--	--	--	--	31	5	23	.3	26	7.7	78
JUNE 18...	--	--	--	--	34	5	26	.3	29	7.7	83
JULY 01...	--	--	--	--	62	10	21	.3	52	7.9	129
AUG. 07...	--	--	--	--	74	14	24	.4	60	8.2	169
SEPT. 03...	.0	10	74	.10	61	12	14	.3	49	7.6	146

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LOCATION.--Lat 38°51'39", long 121°37'22", in SW¼NE¼ sec.27, T.12 N., R.3 E., Sutter County, temperature recorder on left bank, 3.8 miles downstream from gaging station at Nicolaus, 3.9 miles southwest of Nicolaus, 6.6 miles north-east of Knights Landing, and at mile 5.6.

PERIOD OF RECORD.--Chemical analyses: March 1951 to June 1966.

Water temperatures: March 1951 to September 1958, November 1959 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 28°C on several days during July; minimum, 6°C Dec. 21-23, Jan. 9, 10.

EXTREMES, 1951-58, 1959-69.--Water temperatures: Maximum, 34°C July 21, 1961; minimum (1951-58, 1959-66, 1967-69), freezing point Jan. 3-6, 1961.

REMARKS.--Prior to 1964 water year thermograph located at gaging station 3.8 miles upstream at highway bridge at Nicolaus, and 2.9 miles downstream from Bear River. Clock stopped Nov. 15-29, Feb. 1-14; temperature ranges, 9°C to 12°C and 8°C to 9°C, respectively. Recorder malfunction Aug. 7-10, Aug. 31 to Sept. 3, Sept. 5, 9, 10, 14-30; no temperature ranges available.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	MAXIMUM	21	21	21	21	21	20	20	19	18	18	18	17	17	16	16	17	17	18	18	18	18	18	18	18	18	18	18	18	17	16	16	18
	MINIMUM	19	19	19	19	19	19	18	17	17	16	16	17	17	16	15	14	15	16	17	16	17	17	16	16	17	17	17	17	16	15	14	17
NOVEMBER	MAXIMUM	15	15	15	15	16	15	15	15	16	16	16	16	16	14	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--
	MINIMUM	14	15	14	14	14	14	14	14	14	14	15	15	14	12	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--
DECEMBER	MAXIMUM	10	10	9	9	9	9	8	10	11	11	11	10	9	10	10	10	9	9	9	8	7	6	7	8	9	8	8	8	8	8	8	9
	MINIMUM	9	9	8	8	8	8	8	8	10	11	9	9	8	9	9	9	8	8	8	7	6	6	6	7	8	8	7	7	8	7	7	8
JANUARY	MAXIMUM	8	8	8	8	8	8	8	8	7	7	7	8	9	9	9	8	8	8	9	10	10	11	10	9	9	10	10	9	8	8	8	9
	MINIMUM	7	8	8	8	8	8	8	7	6	6	7	7	8	9	8	8	8	8	8	10	10	11	10	9	9	9	9	8	7	8	7	8
FEBRUARY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9	9	9	9	9	9	9	9	8	8	8	8	8	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	8	8	9	9	9	8	8	8	8	8	8	8	--	--	--	
MARCH	MAXIMUM	9	8	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	10	10	10	11	11	11	11	12	13	13	14	14	11
	MINIMUM	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	9	9	9	9	10	10	11	12	12	13	9
APRIL	MAXIMUM	13	12	12	12	12	12	13	13	13	14	14	13	13	13	13	14	14	15	15	15	16	15	15	15	15	14	13	14	15	15	--	14
	MINIMUM	12	12	11	12	11	11	11	11	12	12	13	13	12	12	12	12	12	13	14	14	14	14	15	14	14	13	13	13	14	14	--	13
MAY	MAXIMUM	14	15	15	16	17	18	18	18	19	19	19	18	17	17	17	16	15	15	15	16	16	15	16	16	16	16	16	17	18	19	19	17
	MINIMUM	14	14	14	14	15	16	16	16	17	18	18	17	16	16	16	16	15	14	14	14	14	15	15	15	15	15	15	15	16	17	18	15
JUNE	MAXIMUM	19	19	19	20	20	20	20	19	19	20	20	21	22	23	24	25	24	23	23	24	24	24	25	25	25	25	24	24	25	26	--	22
	MINIMUM	18	17	17	17	18	18	18																									

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LOCATION.--Lat 38°56'03", long 120°52'21", in SW¼NW¼ sec.33, T.13 N., R.10 E., El Dorado County, temperature recorder at gaging station on right bank, 0.7 mile downstream from West Canyon, and 2.6 miles northwest of Georgetown.
DRAINAGE AREA.--12.5 sq mi.
PERIOD OF RECORD.--Water temperatures: July 1966 to September 1969.
EXTREMES, 1968-69.--Water temperatures: Maximum, 19°C on several days during July and August; minimum, 4°C Dec. 21, 22, Jan. 31, Feb. 3, 6.
EXTREMES, 1966-69.--Water temperatures: Maximum, 23°C July 22, 1966; minimum, 1°C Dec. 17, 18, 1967.

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	MAXIMUM	13	13	13	13	13	13	12	11	11	11	11	10	10	10	10	10	10	10	10	11	11	10	11	10	10	10	9	9	9	9	9	11
	MINIMUM	11	11	11	12	12	11	11	10	9	9	10	10	10	10	9	8	9	9	8	9	9	9	9	9	9	9	9	9	9	9	9	10
NOVEMBER	MAXIMUM	9	9	10	10	10	9	9	9	9	9	9	9	8	8	8	8	9	9	9	9	9	10	10	9	9	8	8	7	7	7	--	9
	MINIMUM	8	9	9	10	9	8	9	9	9	9	9	9	9	8	6	7	8	8	9	8	8	9	8	9	8	7	7	6	6	7	--	8
DECEMBER	MAXIMUM	7	7	6	6	6	6	6	7	7	8	8	8	7	7	7	7	6	6	6	5	5	6	7	7	7	7	7	7	7	6	7	
	MINIMUM	7	6	6	6	6	6	6	6	7	7	8	7	6	6	6	7	6	6	6	5	4	4	5	6	7	7	6	6	6	6	6	
JANUARY	MAXIMUM	6	6	6	6	6	6	6	7	6	6	6	6	7	8	8	8	7	7	8	9	10	9	9	8	9	8	6	6	6	5	7	
	MINIMUM	5	5	6	6	6	5	6	6	5	5	5	6	7	8	8	7	6	6	8	9	9	8	9	8	7	8	8	6	5	5	4	6
FEBRUARY	MAXIMUM	6	6	5	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	6	7	7	7	--	--	7	
	MINIMUM	5	5	4	5	5	4	6	6	7	7	7	7	7	6	6	7	7	6	7	7	7	6	6	5	6	5	6	6	--	--	--	6
MARCH	MAXIMUM	7	7	7	7	8	8	7	7	7	7	7	7	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	10	11	12	12	9
	MINIMUM	6	6	6	6	6	7	6	6	6	6	6	6	6	6	6	6	8	8	9	9	9	8	8	8	8	8	8	8	10	10	11	7
APRIL	MAXIMUM	12	10	11	11	11	10	11	11	11	11	11	11	11	10	11	11	11	11	12	12	13	12	12	11	11	11	12	12	12	--	--	11
	MINIMUM	10	10	10	9	9	9	9	9	9	9	9	10	9	9	8	9	9	9	10	10	10	11	11	10	10	9	9	10	10	10	--	10
MAY	MAXIMUM	12	12	11	12	13	13	14	14	15	15	15	15	15	14	14	14	15	15	15	15	14	14	15	16	15	16	15	15	15	16	16	14
	MINIMUM	10	10	10	10	10	11	12	12	13	13	14	14	14	14	13	12	12	13	13	13	12	13	13	14	14	14	13	14	13	14	14	13
JUNE	MAXIMUM	16	17	16	17	17	17	16	16	15	15	15	15	15	16	16	16	16	16	17	17	17	17	17	17	16	16	16	16	16	17	--	16
	MINIMUM	15	15	15	15	15	15	15	15	14	14	14	14	14	14	14	15																

SACRAMENTO RIVER BASIN

11-4395. SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CALIF.

LOCATION.--Lat 38°45'49", long 120°19'39", in SW¹/₄SW¹/₄ sec.29, T.11 N., R.15 E., El Dorado County, Eldorado National Forest, temperature recorder at gaging station on right bank beside U.S. Highway 50, 0.8 mile downstream from Silver Fork of South Fork, and 1.9 miles southwest of Kyburz.

DRAINAGE AREA.--193 sq mi.

PERIOD OF RECORD.--Water temperatures: August 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 22°C on several days during July and August; minimum, 2°C on several days during January.

EXTREMES, 1967-69.--Water temperatures: Maximum, 24°C June 26, 27, July 4, 8, 1968; minimum, 2°C on several days during January 1969.

REMARKS.--Recorder stopped Nov. 14-21, Jan. 7, 8, Apr. 13-15, Apr. 24 to May 7.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER-		
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																			
MAXIMUM		13	13	13	14	14	13	13	13	11	11	12	12	12	12	11	10	10	11	10	10	10	10	10	10	10	10	10	9	10	9	9	9	11	
MINIMUM		12	12	12	13	13	13	12	11	10	10	11	11	11	12	11	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	10	
NOVEMBER																																			
MAXIMUM		8	8	9	9	9	9	9	9	9	9	9	9	7	--	--	--	--	--	--	--	--	--	--	8	8	7	7	7	6	5	6	6	--	
MINIMUM		7	8	8	9	9	9	9	9	9	9	9	7	7	--	--	--	--	--	--	--	--	--	7	7	7	7	6	5	5	5	5	--		
DECEMBER																																			
MAXIMUM		6	4	4	4	4	4	4	6	6	6	6	4	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4		
MINIMUM		4	4	4	4	4	4	4	4	6	6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
JANUARY																																			
MAXIMUM		3	3	3	3	2	2	--	--	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	3	4	5	5	4	4	3	4	3	
MINIMUM		3	3	3	2	2	2	--	--	2	2	2	2	2	2	3	2	3	3	2	3	3	3	3	3	3	3	4	4	4	3	3	3	3	
FEBRUARY																																			
MAXIMUM		4	4	4	5	5	4	4	4	5	5	6	6	5	4	4	4	4	5	5	5	5	5	5	5	4	4	4	4	4	4	--	--	5	
MINIMUM		3	3	4	4	4	4	4	4	4	5	5	5	5	4	4	3	3	3	4	5	4	4	4	4	4	4	3	3	3	3	--	--	4	
MARCH																																			
MAXIMUM		4	4	4	5	5	5	5	6	4	6	6	6	6	7	7	7	7	7	8	8	7	8	10	9	9	9	9	9	9	8	8	8	7	
MINIMUM		3	3	3	4	4	4	4	4	5	5	5	5	5	5	5	5	5	6	6	6	6	8	8	8	8	7	7	7	7	7	7	7	5	
APRIL																																			
MAXIMUM		9	8	8	9	8	8	8	8	8	9	9	9	--	--	--	9	9	10	10	11	11	10	10	--	--	--	--	--	--	--	--	--	--	
MINIMUM		7	8	8	8	7	7	8	8	8	8	8	8	9	--	--	--	8	9	9	10	9	9	10	10	10	10	--	--	--	--	--	--	--	
MAY																																			
MAXIMUM		--	--	--	--	--	--	10	9	9	8	8	8	9	8	8	6	9	9	9	9	10	10	10	10	10	10	10	7	9	10	10	11	10	--
MINIMUM		--	--	--	--	--	--	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	8	7	7	7	7	--
JUNE																																			
MAXIMUM		10	11	10	11	11	11	10	10	10	10	9	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	--	10
MINIMUM		7	8	8	8	8	8	9	10	10	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	--	10
JULY																																			
MAXIMUM		11	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	16	16	16	16	16	14
MINIMUM		11	11	11	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	14	14	14	14	14	15	15	15	16	16	16	16	16	16	16	14
AUGUST																																			
MAXIMUM		22	20	20	20	20	20	20	20	21	20	22	21	21	22	22	22	22	22	21	20	21	21	21	21	21	20	20	19	19	19	18	18	19	20
MINIMUM		16	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	16	16	17	17	17	17	16	16	15	15	15	15	15	17
SEPTEMBER																																			
MAXIMUM		20	20	20	20	19	20	18	19	20	19	19	19	18	17	17	16	17	17	16	15	15	15	16	16	16	16	16	16	16	16	16	15	--	18
MINIMUM		15	16	17	17	16	16	17	16	17	17	16	16	16	15	15	14	14	14	14	15	15	13	14	14	14	14	14	14	14	14	14	--	15	

LOCATION.--Lat 38°38'08", long 121°13'36", in SE 1/4 sec.17, T.9 N., R.7 E., Sacramento County, temperature recorder at gaging station on right bank 2,100 ft downstream from Nimbus Dam, 2.4 miles east of Fair Oaks, 8.1 miles downstream from South Fork, and at mile 22.2.

PERIOD OF RECORD.--Chemical analyses: January to December 1906, March 1951 to September 1958, November 1959 to September 1962.

Water temperatures: March 1951 to September 1958, November 1959 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 19°C on several days in October; minimum, 7°C Mar. 15.

EXTREMES, 1951-58, 1959-69, 1965-69), 27°C July 27, Aug. 3, 1954;
minimum, freezing point Nov. 25, 26, 1957, Nov. 25-29, 1958.

REMARKS.--Recorder malfunctioned Apr. 6, 7, 18, 19, 28, 29.

		DAY																														AVER- AGE	
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	MAXIMUM	19	18	19	19	19	19	19	19	18	18	18	18	17	17	17	17	17	18	18	18	18	18	18	17	16	17	16	16	16	16	16	18
	MINIMUM	18	18	18	18	18	18	18	18	18	17	17	17	17	17	17	17	16	17	17	17	17	17	17	16	15	16	15	15	15	15	15	17
NOVEMBER	MAXIMUM	16	15	15	15	16	15	15	15	15	15	15	16	15	14	14	14	14	14	15	15	15	15	15	15	15	14	14	14	14	--	15	
	MINIMUM	14	15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	15	15	15	15	14	14	14	14	14	--	14		
DECEMBER	MAXIMUM	14	14	13	14	14	13	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	11	12	
	MINIMUM	14	13	13	13	13	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	10	11	12	
JANUARY	MAXIMUM	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	10	10	10	10	10	9	10	10	
	MINIMUM	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	10	
FEBRUARY	MAXIMUM	9	9	9	9	9	9	9	9	9	9	9	9	8	9	9	9	9	8	9	9	9	9	8	8	9	9	8	8	--	--	--	9
	MINIMUM	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	--	--	8
MARCH	MAXIMUM	8	8	8	8	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	8
	MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
APRIL	MAXIMUM	9	9	9	9	--	--	10	10	10	10	10	10	9	10	10	10	--	--	--	12	12	12	12	11	12	12	12	--	--	11	--	10
	MINIMUM	8	9	9	9	--	--	9	9	9	9	9	9	9	9	9	9	--	--	--	11	11	11	11	10	11	11	11	--	--	11	--	10
MAY	MAXIMUM	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	13	14	13	13	13	13	13	14	14	14	14	13
	MINIMUM	11	11	11	11	12	12	12	12	12	12	13	13	12	12	12	12	12	12	13	13	13	13	12	13	13	13	12	12	13	13		

SACRAMENTO RIVER BASIN

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11-4475. SACRAMENTO RIVER AT SACRAMENTO, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 38°35'12", long 121°30'16", T.9 N., R.4 E., Sacramento County, at gaging station 1,000 ft upstream from I Street Bridge, in city of Sacramento, and 0.5 mile downstream from American River.

DRAINAGE AREA.--23,530 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1952 to May 1960.

Water temperatures: May 1955 to September 1969.

Sediment records: October 1956 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 28°C Aug. 21; minimum, 6°C on several days during December and January.

Sediment concentrations: Maximum daily, 430 mg/l Jan. 15; minimum daily, 14 mg/l Dec. 8.

Sediment loads: Maximum daily, 100,000 tons Jan. 22; minimum daily, 467 tons Oct. 12.

EXTREMES, 1955-69.--Water temperatures: Maximum (1955-62, 1963-66, 1967-69), 28°C Aug. 21, 1969; minimum, 4°C Jan. 30, 31, Feb. 1, 1957.

Sediment concentrations (1956-69): Maximum daily, 1,960 mg/l Dec. 24, 1964; minimum daily 11 mg/l (estimated)

Nov. 30, 1959.

Sediment loads (1956-69): Maximum daily, 525,000 tons Dec. 24, 1964; minimum daily, 200 tons (estimated) Dec. 14, 1959.

REMARKS.--The chemical-quality data and the maximum-minimum temperature record for the auxiliary station approximate 8 miles downstream, 11-4476.5, Sacramento River at Freeport, Calif., are considered as being part of this IHD station.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	18	18	18	18	--	18	--	18	17	--	17	17	16	15	15	16	17	--	--	18	17	17	17	17	17	--	17	17	16	16	16	17	
NOVEMBER.	--	--	--	14	14	14	14	14	15	15	14	14	13	12	11	--	12	12	12	12	13	13	13	13	12	13	12	12	11	11	--	13	
DECEMBER.	11	10	10	10	9	9	9	10	11	11	12	11	10	9	9	9	9	8	7	6	6	6	7	7	8	6	8	7	6	6	9		
JANUARY..	--	7	7	7	--	8	7	9	6	7	7	9	9	12	9	9	7	8	9	11	10	9	--	8	11	9	9	8	7	7	7	8	
FEBRUARY.	8	9	8	7	8	8	--	6	9	9	10	9	9	9	9	10	9	9	8	9	9	8	8	8	8	8	9	8	--	--	--	9	
MARCH....	--	9	9	9	9	9	9	9	--	9	9	9	12	10	10	12	12	12	12	11	11	13	--	14	12	14	--	15	14	15	14	11	
APRIL....	11	13	13	13	11	11	13	12	11	13	15	13	12	13	13	16	15	14	15	16	18	17	17	14	13	--	14	15	15	14	--	14	
MAY.....	14	15	15	17	--	18	--	17	17	22	18	18	16	18	19	16	19	18	19	17	--	17	17	17	16	17	17	17	19	19	20	17	
JUNE.....	--	19	21	19	19	19	18	--	16	17	17	17	18	17	20	--	19	20	20	20	19	21	--	--	23	21	20	20	--	20	--	19	
JULY.....	21	21	21	25	21	22	22	22	22	24	24	24	22	23	24	23	--	24	25	--	25	26	24	24	24	25	24	22	23	--	23	23	
AUGUST...	25	--	--	--	24	23	--	23	23	25	23	25	25	--	22	24	27	23	27	23	28	24	22	21	25	23	22	22	22	--	22	24	
SEPTEMBER	--	--	22	--	20	20	22	21	22	22	21	20	20	18	20	20	21	20	20	19	19	21	22	--	--	20	--	20	20	20	21	--	20

SACRAMENTO RIVER BASIN

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11-4475. SACRAMENTO RIVER AT SACRAMENTO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	12800	38	1310	12300	50	1660	13400	18	651
2	12900	25	871	12200	45	1480	13700	22	814
3	12700	29	994	12600	38	1290	13700	21	777
4	12200	28	922	12600	30	1020	13500	20	729
5	11600	26	814	12800	34	1180	13300	16	575
6	11200	24	726	12900	31	1080	13400	18	651
7	10800	23	671	13000	31	1090	13200	16	570
8	10500	28	794	12900	31	1080	13300	14	503
9	10300	24	667	12700	27	926	13300	18	646
10	10300	23	640	12700	21	720	13700	17	629
11	10400	19	534	12500	21	709	15300	40	1650
12	10800	16	467	12800	21	726	22600	160	9760
13	11100	16	480	12700	24	823	26400	360	25700
14	11600	23	720	13000	27	948	24100	220	14300
15	12500	31	1050	14100	26	990	23100	140	8730
16	12600	36	1220	14500	26	1020	27600	230	17100
17	12500	30	1010	14900	23	925	31000	240	20100
18	12300	28	930	14800	28	1120	30500	240	19800
19	11900	24	771	14700	26	1030	26600	180	12900
20	11800	17	542	15100	23	938	23900	140	9030
21	11900	25	803	15100	30	1220	21400	70	4040
22	11700	26	821	15200	32	1310	19600	45	2380
23	11500	19	590	14500	24	940	18400	45	2240
24	11500	16	497	14100	23	876	18100	45	2200
25	11200	18	544	14200	23	882	21800	80	4710
26	11400	24	739	14000	21	794	33200	280	25100
27	11400	20	616	14100	22	838	38000	340	34900
28	11300	20	610	14000	21	794	39100	230	24300
29	11800	22	701	13700	18	666	38100	165	17000
30	11900	31	996	13400	16	579	39000	145	15300
31	12100	47	1540	--	--	--	38700	180	18800
TOTAL	360500	--	24590	408100	--	29654	711000	--	296585
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	34500	155	14400	72900	165	32500	74600	115	23200
2	30200	105	8560	72200	150	29200	73800	90	17900
3	26800	100	7240	69100	140	26100	73100	78	15400
4	24400	70	4610	67000	145	26200	72200	120	23400
5	22900	60	3710	66100	130	23200	70800	108	20600
6	22200	57	3420	67400	205	37300	69400	97	18200
7	21600	59	3440	67900	195	35700	67900	95	17400
8	21100	78	4440	67200	160	29000	65800	87	15500
9	20400	78	4300	67100	155	28100	62900	92	15600
10	19600	55	2910	67100	145	26300	59500	102	16400
11	19000	39	2000	68100	130	23900	55400	110	16500
12	19400	50	2620	71400	145	28000	50300	130	17700
13	30800	250	20800	71600	145	28000	46100	125	15600
14	51000	310	42700	71600	265	51200	44000	95	11300
15	62000	430	72000	73200	230	45500	41600	83	9320
16	68400	340	62800	76300	130	26800	39900	92	9910
17	69300	240	44900	76900	120	24900	38400	86	8920
18	67400	200	36400	76900	110	22800	36700	85	8420
19	68500	200	37000	76400	100	20600	36600	81	8000
20	78500	220	46600	75100	85	17200	37500	71	7190
21	93500	360	90900	73800	85	16900	38900	88	9240
22	95200	390	100000	73000	85	16800	40500	86	9400
23	94400	325	82800	72400	93	18200	42900	97	11200
24	83300	190	42700	73500	125	24800	43100	128	14900
25	81800	130	28700	74800	108	21800	41500	99	11100
26	87600	145	34300	75100	120	24300	38500	80	8320
27	87000	170	39900	73400	100	19800	36300	73	7150
28	85100	130	29900	72700	110	21600	35400	68	6500
29	78400	130	27500	--	--	--	35300	91	8670
30	77200	120	25000	--	--	--	35900	125	12100
31	76000	140	28700	--	--	--	36800	155	15400
TOTAL	1717500	--	955250	2010200	--	746700	1541600	--	410440

11-4475. SACRAMENTO RIVER AT SACRAMENTO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	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	38000	160	16400	41700	56	6310	35200	75	7130			
2	39400	150	16000	40700	57	6260	34600	64	5980			
3	40200	140	15200	39600	66	7060	34000	55	5050			
4	42700	145	16700	35500	130	12500	32100	58	5030			
5	46500	130	16300	33300	135	12100	29900	60	4840			
6	49800	130	17500	32700	86	7590	27900	65	4900			
7	52800	135	19200	32700	70	6180	26900	75	5450			
8	54400	120	17600	31800	62	5320	26400	77	5490			
9	54600	88	13000	31500	62	5270	25400	70	4800			
10	54000	70	10200	32400	75	6560	24400	75	4940			
11	52600	65	9230	34000	91	8350	24300	64	4200			
12	50400	68	9250	36000	112	10900	23800	59	3790			
13	49400	68	9070	37300	92	9270	23600	68	4330			
14	48700	69	9070	38000	86	8820	23500	93	5900			
15	48100	67	8700	40300	86	9360	23400	89	5620			
16	47400	70	8960	44500	84	10100	23100	73	4550			
17	46300	63	7880	45700	88	10900	22300	65	3910			
18	44600	73	8790	46600	96	12100	20900	64	3610			
19	43100	89	10400	48500	95	12400	20100	78	4230			
20	42600	86	9890	49800	90	12100	19600	70	3700			
21	41300	78	8700	50200	83	11200	18900	74	3780			
22	40400	54	5890	50100	70	9470	18500	91	4550			
23	39600	63	6740	49500	60	8020	18500	97	4850			
24	39700	42	4500	48000	88	11400	18300	98	4840			
25	40400	56	6110	46000	83	10300	17500	87	4110			
26	41300	96	10700	44600	85	10200	17100	75	3460			
27	43100	105	12200	42700	77	8880	16400	63	2790			
28	43300	77	9600	40800	70	7710	16000	74	3200			
29	43200	60	7000	39900	68	7330	15600	78	3290			
30	42600	50	5750	38000	89	9130	15500	70	2930			
31	--	--	--	36400	90	8850	--	--	--			
TOTAL	1360500	--	325930	1258800	--	281940	693700	--	135250			

	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	15500	56	2340	15400	62	2580	21600	77	4490
2	15400	50	2080	15500	69	2890	21700	73	4280
3	15000	47	1900	15500	69	2890	22100	66	3940
4	14500	57	2230	15600	67	2820	22700	67	4110
5	13900	64	2400	16100	60	2610	22500	70	4250
6	13700	50	1850	17100	55	2540	22600	63	3840
7	13600	33	1210	17500	54	2550	22400	60	3630
8	14000	48	1810	17300	56	2620	21600	57	3320
9	14000	50	1890	17900	65	3140	21400	60	3470
10	13700	47	1740	18000	58	2820	21200	56	3210
11	13700	50	1850	17500	56	2650	21200	51	2920
12	13800	43	1600	17700	55	2630	21100	53	3020
13	13700	35	1290	18200	67	3290	21000	57	3230
14	13900	42	1580	18400	68	3380	21100	52	2960
15	14000	45	1700	18400	55	2730	21200	50	2860
16	13800	37	1380	18400	60	2980	21200	60	3430
17	13600	38	1400	18400	60	2980	21500	64	3720
18	13600	43	1580	18800	66	3350	21500	67	3890
19	13400	40	1450	18800	77	3910	21300	65	3740
20	13300	36	1290	19000	63	3230	21400	59	3410
21	13500	42	1530	18900	59	3010	21200	50	2860
22	13700	42	1550	19000	60	3080	20900	44	2480
23	13500	36	1310	19500	63	3320	20500	47	2600
24	14100	40	1520	19700	64	3400	20300	47	2580
25	14700	55	2180	19700	67	3560	19900	45	2420
26	15000	55	2230	19700	62	3300	19600	42	2220
27	15000	50	2030	19800	63	3370	19600	40	2120
28	15200	47	1930	20100	68	3690	19600	36	1910
29	15300	47	1940	20500	70	3870	18700	34	1720
30	15300	57	2350	21000	73	4140	17900	40	1930
31	15300	55	2270	21300	76	4370	--	--	--
TOTAL	440700	--	55410	568700	--	97700	630500	--	94560

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

11701800
3454009

11-4475. SACRAMENTO RIVER AT SACRAMENTO, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 19, 1968	1115	--	26900	184	13400	28	38	51	60	65	79	98	100	--	--	--	VBWC	
JAN 16, 1969	1210	9	61900	378	63200	39	52	59	62	65	70	80	92	99	100	--	SBWC	
JAN 22.....	1010	9	95200	195	50100	6	13	29	34	36	47	68	87	98	100	--	SBWC	
FEB 3.....	1110	12	69100	112	20900	27	40	56	57	59	62	74	92	99	100	--	SBWC	
MAR 6.....	1350	--	75200	63	12800	22	31	49	55	59	65	73	92	100	--	--	SBWC	
MAR 13.....	1215	--	45500	85	10400	4	18	25	36	43	63	75	89	99	100	--	SBWC	
MAY 19.....	--	--	D 48500	59	7730	14	24	44	60	75	85	94	98	100	--	--	SBWC	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
NOV 8, 1968	1010	13	3 D	12900	23	42	56	97	100	--	--	--	--	--	--	S	

D Daily mean discharge.

SACRAMENTO RIVER BASIN

11-4476.5. SACRAMENTO RIVER AT FREEPORT, CALIF.

LOCATION.--Lat 38°27'20", long 121°30'07", in sec. 14, T.7 N., R.4 E., Sacramento County, at drawbridge at Freeport, approximately 11 miles south of Sacramento.

PERIOD OF RECORD.--Chemical analyses: June 1960 to September 1969.

Water temperatures: June 1960 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 23°C on several days during July and August; minimum, 7°C on many days during December to February.

EXTREMES, 1960-69.--Water temperatures: Maximum, 24°C June 16, 17, 1961; minimum, 5°C Jan. 24-27, 1962.

REMARKS.--Chemical-quality samples collected by California Department of Water Resources. Temperature recorder located on right bank 1.9 miles northwest of Freeport, and 7.5 miles southwest of State Capitol building in Sacramento. Records of discharge given for 11-4475, Sacramento River at Sacramento. Data collected at this site are considered as being part of the International Hydrological Station, 11-4475. Sacramento River at Sacramento, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	LITHIUM (LI) (UG/L)	STRON- TIUM (SR) (UG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT.												
02...	12900	18	9.1	--	10	12	6.3	10	--	--	--	77
NOV.												
06...	12900	14	10.1	--	0	12	6.8	11	--	--	--	77
DEC.												
04...	13500	10	11.5	--	0	12	6.1	9.2	--	--	--	74
JAN.												
08...	21100	8	11.8	--	--	12	8.0	9.8	1.6	--	--	74
FEB.												
05...	66100	7	12.4	16	50	11	5.2	6.2	1.1	20	80	61
MAR.												
05...	70800	9	11.7	15	10	12	5.6	5.1	1.1	20	80	64
APR.												
09...	54600	12	12.0	15	50	9.9	4.6	5.5	1.0	10	70	54
MAY												
07...	32700	15	10.4	15	30	9.3	4.5	6.3	.8	10	80	53
JUNE												
04...	32100	20	9.0	15	40	8.8	4.2	5.7	.8	10	80	49
JULY												
09...	14000	21	8.9	18	40	11	6.3	9.3	1.1	10	70	68
AUG.												
06...	17100	23	7.6	16	30	11	6.5	10	1.0	10	100	73
SEPT.												
03...	22100	21	9.1	17	20	11	6.8	11	1.2	10	90	74

DATE	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	HARD- NESS (CA, MG) (MG/L)	HARD- CAR- BONATE MESS (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
02...	0	4.9	4.5	.1	.5	.42	60	56	18	--	7.7	155
NOV.												
06...	0	9.7	7.1	.1	.9	.61	110	58	20	--	7.8	167
DEC.												
04...	0	6.1	6.4	.1	.9	.39	60	55	19	--	7.7	156
JAN.												
08...	0	14	7.0	--	2.7	.40	50	63	2	--	7.9	179
FEB.												
05...	0	8.0	3.2	.0	1.1	.15	0	49	0	82	7.4	124
MAR.												
05...	0	8.0	2.3	.0	1.7	.17	60	53	1	83	7.4	116
APR.												
09...	0	5.0	3.3	.0	2.5	.13	0	44	0	74	7.4	109
MAY												
07...	0	7.0	2.8	.2	1.7	.18	0	42	0	74	7.4	117
JUNE												
04...	0	7.0	2.7	.0	.0	.23	60	40	0	68	7.2	104
JULY												
09...	0	9.0	4.8	.2	1.3	.62	50	54	0	94	7.5	161
AUG.												
06...	0	7.0	5.4	.1	.4	.48	100	54	0	94	7.5	155
SEPT.												
03...	0	8.0	6.2	.0	.9	.38	120	56	0	98	7.3	157

11-4476.5. SACRAMENTO RIVER AT FREEPORT, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD-SORPTION RATIO	ALKALINITY AS CaCO3 (MG/L)	TURBIDITY (MG/L)
OCT. 02...	.11	28	.6	38	--
NOV. 06...	.16	29	.6	38	--
DEC. 04...	.14	27	.5	36	--
JAN. 08...	.15	25	.5	61	43
FEB. 05...	.11	21	.4	50	94
MAR. 05...	.11	17	.3	52	140
APR. 09...	.10	21	.4	44	30
MAY 07...	.10	24	.4	43	10
JUNE 04...	.09	24	.4	40	20
JULY 09...	.13	27	.6	56	10
AUG. 06...	.13	28	.6	60	10
SEPT. 03...	.13	30	.6	61	20

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER																																
MAXIMUM	18	18	18	18	18	18	18	18	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	15	14	17
MINIMUM	18	18	18	18	18	18	18	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	15	14	14	16
NOVEMBER																																
MAXIMUM	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	--	13
MINIMUM	14	14	14	13	13	14	14	14	14	14	14	14	14	14	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	--	13
DECEMBER																																
MAXIMUM	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	10	9	8	8	8	8	8	8	8	8	8	7	7	7	7	8	9
MINIMUM	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	9	8	8	8	8	8	8	8	8	8	7	7	7	7	7	9
JANUARY																																
MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	8	8	8	8	8	9	9	9	8	7	8
MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	8	8	8	8	8	8	9	8	8	7	8
FEBRUARY																																
MAXIMUM	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	7	7	7	7	7	7	8	8	--	--	--	7
MINIMUM	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	7	7	7	7	7	7	8	8	--	--	--	7
MARCH																																
MAXIMUM	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	11	11	12	12	13	13	10
MINIMUM	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	11	11	12	12	13	9
APRIL																																
MAXIMUM	13	13	13	13	13	13	11	12	12	12	13	13	13	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	14	14	--	13
MINIMUM	13	13	13	13	13	11	11	11	12	12	12	13	13	13	13	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	--	13
MAY																																
MAXIMUM	14	14	14	14	14	14	16	16	16	17	17	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	18	16
MINIMUM	14	14	14	14	14	14	16	16	16	16	16	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	18	16
JUNE																																
MAXIMUM	19	19	19	19	19	19	18	18	18	18	18	18	18	17	17	18	19	19	19	19	19	19	19	19	19	19	19	19	18	19	--	19
MINIMUM	18	19	19	19	19	18	18	18	18	18	18	18	17	17	17	18	19	19	19	19	19	19	19	19	19	19	19	18	18	18	19	--
JULY																																
MAXIMUM	19	19	19	19	19	19	19	19	19	19	19	19	21	21	21	22	22	22	22	22	22	22	23	23	23	23	23	22	23	23	23	21
MINIMUM	19	19	19	19	19	19	19	19	19	19	19	19	19	21	21	21	22	22	22	22	22	22	23	23	23	23	22	22	23	23	23	21
AUGUST																																
MAXIMUM	23	23	23	23	23	23	22	22	22	22	21	21	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	22
MINIMUM	23	23	23	23	23	22	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
SEPTEMBER																																
MAXIMUM	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	20	19	19	19	19	19	18	18	18	18	18	18	18	--	20
MINIMUM	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	20	19	19	19	19	18	18	18	18	18	18	18	18	--	20

SACRAMENTO RIVER BASIN

11-4490.1. HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF.

LOCATION.--Lat 38°56'54", long 122°54'03", in NE 1/4 sec.30, T.13 N., R.9 W., Lake County, at outlet of Highland Creek Dam, 500 ft (revised) upstream from gaging station, and 4.0 miles southwest of Kelseyville.

DRAINAGE AREA.--14.2 sq mi.

PERIOD OF RECORD.--Water temperatures: November 1966 to September 1969.

Sediment records: December 1965 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 145 mg/l Jan. 13; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 218 tons Jan. 13; minimum daily, 0 tons on many days.

EXTREMES, 1965-69.--Sediment concentrations: Maximum daily, 182 mg/l Jan. 5, 1966; minimum daily, no flow for many days in 1966-69.

Sediment loads: Maximum daily, 270 tons Jan. 5, 1966; minimum daily, 0 tons on many days in 1966-69.

REMARKS: --Miscellaneous chemical analyses for this station were incorrectly published in 1968 water year under station 11-4489.00. Highland Creek above Highland Creek Dam. No flow Oct. 1 to Nov. 11, Nov. 13 to Dec. 9, May 21 to June 14, June 19, 20, July 12-14, 17-19, Aug. 27-30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE {CFS}	TEMP- ERATURE {DEG. C}	SILICA {SI02} {MG/L}	CAL- CIUM {CA} {MG/L}	MAG- NES- IUM {NA} {MG/L}	SODIUM {NA} {MG/L}	PO- TAS- SIUM {K} {MG/L}	BICAR- BONATE {HCO3} {MG/L}	CAR- BONATE {CO3} {MG/L}	SULFATE {SO4} {MG/L}
JAN. 17...	1210	34	7	--	9.4	6.2	3.7	1.2	60	0	--
FEB. 07...	1400	105	7	--	11	7.7	4.0	.9	73	0	--
MAR. 06...	1200	52	9	16	12	9.3	4.6	.7	80	0	4.0

DATE	CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PH	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	ALKALINITY AS CaCO3 (MG/L)
JAN. 17...	1.0	82	.11	49	0	7.4	106	14	.2	49
FEB. 07...	1.0	84	.12	59	0	7.7	127	12	.2	60
MAR. 06...	2.0	86	.12	63	0	8.2	142	14	.3	66

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

11-4490.1. HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1				0	--	0	0	--	0
2				0	--	0	0	--	0
3				0	--	0	0	--	0
4				0	--	0	0	--	0
5				0	--	0	0	--	0
6				0	--	0	0	--	0
7				0	--	0	0	--	0
8				0	--	0	0	--	0
9				0	--	0	0	--	0
10				0	--	0	171	18	11
11				0	--	0	52	50	7.0
12				.12	5	0	16	40	1.7
13				0	--	0	19	33	1.5
14				0	--	0	82	33	6.9
15				0	--	0	388	24	25
16				0	--	0	129	83	31
17				0	--	0	34	68	6.2
18				0	--	0	19	60	3.1
19				0	--	0	12	40	1.3
20				0	--	0	8.4	25	.57
21				0	--	0	6.4	21	.36
22				0	--	0	4.8	20	.26
23				0	--	0	91	25	7.6
24				0	--	0	406	104	112
25				0	--	0	247	67	45
26				0	--	0	163	30	13
27				0	--	0	67	20	3.6
28				0	--	0	65	38	6.7
29				0	--	0	46	43	5.3
30				0	--	0	34	42	3.9
31				--	--	--	24	43	2.8
TOTAL	0	--	0	.12	--	0	2084.6	--	295.79

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	20	43	2.3	73	31	6.1	251	20	14
2	16	42	1.8	57	39	6.0	146	21	8.2
3	12	40	1.3	48	35	4.5	113	19	5.8
4	11	35	1.0	43	38	4.4	82	18	4.0
5	8.4	31	.70	130	43	15	63	17	2.9
6	7.8	35	.74	295	69	54	52	18	2.5
7	7.2	31	.60	126	31	11	44	18	2.1
8	6.8	30	.55	107	31	9.0	40	18	1.9
9	6.4	28	.48	213	52	30	34	18	1.7
10	6.0	18	.29	449	58	70	31	18	1.5
11	48	16	1.8	510	31	43	26	17	1.2
12	364	56	61	266	32	23	25	17	1.1
13	557	145	218	123	33	11	23	16	.99
14	465	111	143	78	35	7.4	20	16	.86
15	88	85	21	202	49	27	18	15	.73
16	49	78	10	131	62	22	16	15	.65
17	34	75	6.9	96	37	9.6	18	15	.73
18	84	61	12	75	32	6.5	16	13	.56
19	413	54	63	57	32	4.9	14	10	.38
20	510	46	63	48	35	4.5	14	8	.30
21	567	42	64	41	30	3.3	19	9	.46
22	562	20	30	37	22	2.2	15	9	.36
23	365	21	19	84	41	8.9	11	8	.24
24	78	28	5.9	170	52	24	9.8	7	.17
25	180	32	16	169	39	18	8.4	7	.16
26	475	81	105	113	21	6.4	7.8	7	.15
27	179	35	17	124	21	6.9	7.2	7	.14
28	96	38	9.8	317	43	37	6.8	7	.13
29	72	34	6.6	--	--	--	6.0	6	.10
30	67	44	8.0	--	--	--	6.0	5	.08
31	54	31	4.5	--	--	--	5.7	4	.06
TOTAL	5408.6	--	895.26	4182	--	475.6	1148.7	--	54.17

SACRAMENTO RIVER BASIN

11-4490.1. HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	5.4	4	.06	6.4	6	.10	0	--	0
2	6.8	5	.09	6.4	6	.10	0	--	0
3	9.8	4	.11	5.4	6	.09	0	--	0
4	7.2	4	.08	5.7	6	.09	0	--	0
5	44	10	1.2	6.0	6	.10	0	--	0
6	42	10	1.1	5.7	6	.09	0	--	0
7	27	10	.73	5.1	6	.08	0	--	0
8	21	8	.45	4.8	6	.08	0	--	0
9	19	8	.41	5.4	7	.10	0	--	0
10	16	8	.35	5.1	7	.10	0	--	0
11	12	8	.26	4.8	7	.09	0	--	0
12	11	8	.24	4.8	7	.09	0	--	0
13	9.8	7	.19	4.8	8	.10	0	--	0
14	9.0	7	.17	4.8	8	.10	0	--	0
15	8.4	7	.16	4.6	8	.10	.03	1	0
16	8.4	6	.14	4.3	8	.09	.15	7	0
17	7.8	5	.11	4.1	8	.09	.19	9	0
18	7.2	4	.08	3.6	7	.07	.12	6	0
19	6.8	4	.07	3.8	7	.07	0	--	0
20	6.4	4	.07	2.0	4	.03	0	--	0
21	6.4	4	.07	0	--	0	.01	9	0
22	5.7	3	.05	0	--	0	.01	9	0
23	22	7	.42	0	--	0	.01	9	0
24	26	5	.35	0	--	0	.01	9	0
25	15	6	.24	0	--	0	.02	9	0
26	9.8	5	.13	0	--	0	.02	9	0
27	9.0	5	.12	0	--	0	.02	9	0
28	7.8	5	.11	0	--	0	.01	9	0
29	7.2	4	.08	0	--	0	.01	9	0
30	6.4	4	.07	0	--	0	.01	9	0
31	--	--	--	0	--	0	--	--	--
TOTAL	400.3	--	7.71	97.6	--	1.76	.62	--	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	.01	9	0	.05	20	0	.01	31	0
2	.01	9	0	.05	21	0	.02	31	0
3	.01	9	0	.05	22	0	.01	31	0
4	.01	9	0	.05	23	0	.02	31	0
5	.02	9	0	.05	24	0	.02	31	0
6	.02	9	0	.05	25	0	.02	31	0
7	.01	9	0	.03	26	0	.02	31	0
8	.02	9	0	.07	26	0	.02	31	0
9	.05	9	0	.23	26	.02	.03	31	0
10	.03	9	0	.28	26	.02	.03	31	0
11	.03	5	0	.28	26	.02	.05	31	0
12	0	--	0	.33	26	.02	.07	31	.01
13	0	--	0	.44	26	.03	.09	31	.01
14	0	--	0	.44	26	.03	.09	31	.01
15	.03	3	0	.44	26	.03	.09	31	.01
16	.05	10	0	.33	26	.02	.12	31	.01
17	0	--	0	.33	26	.02	.12	31	.01
18	0	--	0	.33	26	.02	.12	31	.01
19	0	--	0	.33	26	.02	.12	31	.01
20	.01	8	0	.33	26	.02	.15	31	.01
21	.01	8	0	.33	26	.02	.15	31	.01
22	.01	9	0	.33	26	.02	.15	31	.01
23	.01	9	0	.09	26	.01	.12	31	.01
24	.01	9	0	.02	26	0	.12	31	.01
25	.02	10	0	.01	26	0	.12	31	.01
26	.03	11	0	.01	26	0	.09	31	.01
27	.09	15	0	0	--	0	.09	31	.01
28	.09	16	0	0	--	0	.09	31	.01
29	.09	17	0	0	--	0	.09	31	.01
30	.07	18	0	0	--	0	.09	31	.01
31	.05	19	0	.01	31	0	--	--	--
TOTAL	.79	--	0	5.29	--	.32	2.33	--	.19

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)13330.95
1730.80

11-4490.1. HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 7, 1969	1300	7	7.2	30	.58	--	--	--	--	--	90	93	96	98	100	--	S
JAN 17.....	1210	8	34	66	6.1	78	97	99	99	99	100	--	--	--	--	--	SBWC
FEB 7.....	1400	6	105	37	10	70	88	96	97	98	99	100	--	--	--	--	SBWC

11-4520. CACHE CREEK NEAR CAPAY, CALIF.

LOCATION.--Lat 38°43'40", long 122°06'15", in Canada de Capay Grant, Yolo County, at gaging station 1.8 miles up-
 stream from Clear Lake Water Company's diversion dam, 3.2 miles northwest of Capay, and 5.4 miles northwest of
 Esparto.

DRAINAGE AREA.--1,044 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1952 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 09...	0900	71	14	10.1	32	--	32	--	215	0	--	35
MAR. 06...	1300	5190	8	12.4	26	--	15	--	178	0	--	9.9
SEPT. 17...	1330	220	23	10.3	25	18	18	1.7	174	0	11	15

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	--	--	--	--	178	2	47	1.6	176	8.2	477
MAR. 06...	--	--	--	--	153	7	33	.8	146	8.2	350
SEPT. 17...	1.3	1120	176	.24	138	0	22	.7	143	7.4	337

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LOCATION.--Lat 38°30'55", long 122°04'51", in NE¹₄NE¹₄ sec.28, T.8 N., R.2 W., Yolo County, temperature recorder at gaging station 1.3 miles downstream from Monticello Dam, 6 miles west of Winters, and 8 miles downstream from Capell Creek.

PERIOD OF RECORD,--Chemical analyses: October 1952 to September 1966.

PERIOD OF RECORD.--Chemical analyses: October 1952 to
Water temperatures: November 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 18°C on several days in April.

EXTREMES, 1965-69.--Water temperatures: Maximum, 18 C on several days in April.
EXTREMES, 1965-69.--Water temperatures: Maximum, 22°C May 21, 1967; minimum (1966-68), 7°C on several days during December 1967 and January 1968.

REMARKS.--Recorder malfunction Jan. 7 to Mar. 20, June 13-17, June 23 to July 3.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER-	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER	MAXIMUM	12	12	12	12	12	12	12	12	12	12	11	12	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	12	12	12	
	MINIMUM	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
NOVEMBER	MAXIMUM	12	11	12	12	12	11	12	12	12	12	11	12	11	11	9	9	10	16	11	11	11	11	11	11	10	9	9	9	9	9	--	11	
	MINIMUM	11	11	11	11	11	11	11	11	11	11	10	11	9	9	9	9	10	10	10	11	11	11	11	10	10	9	8	8	8	8	--	10	
DECEMBER	MAXIMUM	9	9	9	9	9	10	9	10	10	11	10	9	8	8	9	9	9	9	10	9	9	9	9	10	10	10	9	10	10	10	10	9	
	MINIMUM	9	8	8	8	8	9	9	9	10	10	9	8	8	8	8	8	8	9	9	9	8	8	9	9	10	9	9	9	9	9	9	9	
JANUARY	MAXIMUM	9	9	9	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	9	9	9	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MARCH	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
APRIL	MAXIMUM	15	15	15	14	14	14	14	14	14	14	15	15	15	15	16	16	16	17	17	18	18	18	18	17	17	17	17	18	18	17	--	16	
	MINIMUM	14	15	14	14	13	13	13	13	14	14	14	15	15	15	15	16	16	16	17	17	18	18	18	17	17	17	17	17	17	17	16	--	15
MAY	MAXIMUM	16	16	15	15	15	14	14	13	13	13	13	13	13	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12
	MINIMUM	16	15	15	14	14	14	13	13	13	13	13	12	12	11	11	11	11	11	10	11	11	11	11	11	11	11	11	11	11	11	11	10	12
JUNE	MAXIMUM	11	11	11	11	11	11	11	11	11	10	10	10	--	--	--	--	--	10	10	10	10	11	11	--	--	--	--	--	--	--	--	--	
	MINIMUM	10	10	11	11	11	11	11	11	10	10	10	10	--	--	--	--	--	10	10	10	10	10	11	--	--	--	--	--	--	--	--	--	
JULY	MAXIMUM	--	--	--	10	10	10	10	10	10	10	11	10	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	MINIMUM	--	--	--	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
AUGUST	MAXIMUM	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	MINIMUM	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
SEPTEMBER	MAXIMUM	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	11	
	MINIMUM	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	11

SACRAMENTO RIVER BASIN

11-4554. SACRAMENTO RIVER AT RIO VISTA, CALIF.

LOCATION.--Lat 38°09'44", long 121°41'24", T.4 N., R.3 E., Sacramento County, at Highway 12 drawbridge, 1.1 mile upstream from tidal gaging station just south of Rio Vista, and approximately 2.1 miles downstream from Steamboat Slough.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

REMARKS.--Records furnished by U.S. Bureau of Reclamation and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SI02) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 30...	1320	17	8.8	18	--	--	--	--	--	--	--	40
NOV. 25...	1135	11	9.6	21	--	--	--	--	--	--	--	8.0
DEC. 18...	1515	7	10.8	20	6.0	7.0	10	1.0	65	0	9.0	6.0
JAN. 28...	1315	6	11.2	15	--	--	--	--	--	--	--	2.0
FEB. 25...	1330	8	11.4	18	--	--	--	--	--	--	--	6.0
MAR. 29...	1430	14	10.2	16	15	7.8	9.0	1.2	84	0	14	8.0
MAY 08...	1020	17	9.8	17	--	--	--	--	--	--	--	4.0
JUNE 10...	1645	19	9.1	20	--	--	--	--	--	--	--	--
JULY 22...	1315	25	8.7	18	--	--	--	--	--	--	--	5.0
AUG. 19...	1220	22	8.0	17	--	--	--	--	--	--	--	3.0
SEPT. 18...	1140	20	8.1	16	11	6.9	11	1.5	76	0	8.0	6.0
DATE	NITRATE (NO3) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	AMMONIA (NH4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	ALKA- LITY AS CAC03 (MG/L)	PH (UNITS)	SPEC I- FIC COND- UCTANCE (MICRO- MHOS)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)
OCT. 30...	3.1	--	--	.18	.03	--	--	--	--	8.2	260	1.0
NOV. 25...	1.8	.63	--	.31	.06	--	--	--	--	7.6	180	1.2
DEC. 18...	2.2	.62	.40	1.1	.25	43	0	33	53	7.3	150	1.1
JAN. 28...	1.3	1.2	--	.21	.15	--	--	--	--	7.5	150	1.4
FEB. 25...	.9	.36	--	.23	.14	--	--	--	--	7.5	170	1.4
MAR. 29...	.9	.41	.48	.20	.15	70	1	22	69	7.5	170	1.1
MAY 08...	.9	.30	.26	.21	.17	--	--	--	--	7.5	130	.7
JUNE 10...	.9	.40	--	.16	.12	--	--	--	--	7.7	160	1.4
JULY 22...	.4	.50	.14	.40	.30	--	--	--	--	7.9	190	2.5
AUG. 19...	.4	.18	.05	.44	.11	--	--	--	--	7.5	160	.9
SEPT. 18...	.5	.20	.04	.27	.23	56	0	29	62	7.5	170	.6

MORSES CREEK BASIN

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MISCELLANEOUS ANALYSES OF STREAMS IN MORSES CREEK BASIN

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
11-4601.6. MORSES CREEK AT BOLINAS, CALIF. (LAT 37°55'09", LONG 122°40'09")																	
NOV 4, 1968	1335	12	.04	16	0	--	--	--	--	--	--	--	--	--	--	--	
NOV 15.....	1000	12	.20	1	0	--	--	--	--	--	--	--	--	--	--	--	
DEC 4.....	1405	12	.01	36	0	--	--	--	--	--	--	--	--	--	--	--	
DEC 10.....	1530	12	7.7	84	1.7	--	--	--	--	--	--	--	--	--	--	--	
DEC 11.....	1030	11	4.6	14	.17	--	--	--	--	--	--	--	--	--	--	--	
DEC 12.....	1000	11	2.3	6	.04	--	--	--	--	--	--	--	--	--	--	--	
DEC 14.....	1100	11	3.3	16	.14	--	--	--	--	--	--	--	--	--	--	--	
DEC 15.....	1100	11	6.0	58	.94	--	--	--	--	--	--	--	--	--	--	--	
DEC 16.....	1100	11	4.8	12	.16	--	--	--	--	--	--	--	--	--	--	--	
DEC 28.....	0945	10	10	171	4.6	11	28	33	41	47	64	78	87	93	100	--	VBWC
DEC 29.....	1045	10	4.3	23	.27	--	--	--	--	--	--	--	--	--	--	--	
DEC 31.....	1000	11	1.8	6	.03	--	--	--	--	--	--	--	--	--	--	--	
JAN 7, 1969	1605	11	.28	2	0	--	--	--	--	--	--	--	--	--	--	--	
JAN 13.....	1130	11	5.4	78	1.1	--	--	--	--	--	52	70	89	99	100	--	S
JAN 13.....	1545	10	18	77	3.7	--	--	--	--	--	--	--	--	--	--	--	
JAN 14.....	1030	11	12	18	.58	--	--	--	--	--	--	--	--	--	--	--	
JAN 15.....	1400	11	7.8	7	.15	--	--	--	--	--	--	--	--	--	--	--	
JAN 19.....	1130	11	15	32	1.3	--	--	--	--	--	--	--	--	--	--	--	
JAN 21.....	1030	11	21	98	5.6	--	--	--	--	--	--	--	--	--	--	--	
JAN 22.....	1015	11	14	27	1.0	--	--	--	--	--	--	--	--	--	--	--	
JAN 23.....	1045	11	9.6	7	.18	--	--	--	--	--	--	--	--	--	--	--	
JAN 25.....	1115	12	8.3	5	.11	--	--	--	--	--	--	--	--	--	--	--	
JAN 26.....	1100	12	14	26	.98	--	--	--	--	--	--	--	--	--	--	--	
JAN 27.....	1100	12	11	8	.24	--	--	--	--	--	--	--	--	--	--	--	
JAN 28.....	1330	10	9.1	4	.10	--	--	--	--	--	--	--	--	--	--	--	
FEB 5.....	1100	11	3.5	15	.14	--	--	--	--	--	--	--	--	--	--	--	
FEB 6.....	1100	11	6.0	9	.15	--	--	--	--	--	--	--	--	--	--	--	
FEB 9.....	1200	11	4.9	3	.04	--	--	--	--	--	--	--	--	--	--	--	
FEB 11.....	1130	11	8.8	29	.69	--	--	--	--	--	--	--	--	--	--	--	
FEB 11.....	1605	11	11	35	1.0	--	--	--	--	--	--	--	--	--	--	--	
FEB 15.....	1000	11	13	107	3.8	11	15	30	33	35	44	63	82	94	100	--	SBWC
MAR 5.....	1335	12	1.0	4	.01	--	--	--	--	--	--	--	--	--	--	--	
MAR 11.....	1245	10	.25	1	0	--	--	--	--	--	--	--	--	--	--	--	
APR 9.....	1320	15	.32	2	0	--	--	--	--	--	--	--	--	--	--	--	
APR 30.....	1015	12	.03	2	0	--	--	--	--	--	--	--	--	--	--	--	
JUL 7.....	1155	14	.04	4	0	--	--	--	--	--	--	--	--	--	--	--	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALY- SIS
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
NOV 4, 1968	1355	12	5	.04	1	2	4	12	22	31	41	57	80	92	100	S
JAN 13, 1969	1555	10	5	18	--	1	3	8	14	22	31	49	73	100	--	S

AUDUBON CREEK BASIN

MISCELLANEOUS ANALYSES OF STREAMS IN AUDUBON CREEK BASIN

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED										METHOD OF ANALY- SIS	
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00		2.00
11-4601.65, AUDUBON CREEK NEAR BOLINAS, CALIF. (LAT 37°55'47", LONG 122°40'51")																	
OCT 4, 1968	1230	19	.01	6	0	--	--	--	--	--	--	--	--	--	--	--	
NOV 4.....	1155	14	.21	30	.02	--	--	--	--	--	--	--	--	--	--	--	
NOV 15.....	1015	12	.75	2	0	--	--	--	--	--	--	--	--	--	--	--	
DEC 4.....	1250	11	.13	1	0	--	--	--	--	--	--	--	--	--	--	--	
DEC 10.....	1345	11	4.2	68	.77	--	--	--	--	--	--	--	--	--	--	--	
DEC 11.....	1045	11	1.8	4	.02	--	--	--	--	--	--	--	--	--	--	--	
DEC 12.....	1015	11	.55	2	0	--	--	--	--	--	--	--	--	--	--	--	
DEC 14.....	1115	11	1.6	3	.01	--	--	--	--	--	--	--	--	--	--	--	
DEC 15.....	1115	11	2.7	10	.07	--	--	--	--	--	--	--	--	--	--	--	
DEC 16.....	1100	11	2.0	3	.02	--	--	--	--	--	--	--	--	--	--	--	
DEC 28.....	1000	10	10	94	2.5	--	--	--	--	--	--	--	--	--	--	--	
DEC 29.....	1100	10	6.3	10	.17	--	--	--	--	--	--	--	--	--	--	--	
DEC 31.....	1115	11	3.9	5	.05	--	--	--	--	--	--	--	--	--	--	--	
JAN 7, 1969	1520	10	.30	4	0	--	--	--	--	--	--	--	--	--	--	--	
JAN 13.....	1145	11	10	191	5.2	--	--	5	10	17	27	43	78	98	100	--	SBWC
JAN 13.....	1435	11	11	145	4.3	--	--	--	--	--	--	--	--	--	--	--	
JAN 14.....	1045	11	12	7	.23	--	--	--	--	--	--	--	--	--	--	--	
JAN 15.....	1415	11	9.5	4	.10	--	--	--	--	--	--	--	--	--	--	--	
JAN 19.....	1145	11	30	28	2.3	--	--	--	--	--	--	--	--	--	--	--	
JAN 20.....	1130	11	18	153	7.4	--	--	--	--	--	--	--	--	--	--	--	
JAN 21.....	1045	11	19	75	3.8	--	--	--	--	--	--	--	--	--	--	--	
JAN 22.....	1030	11	16	13	.56	--	--	--	--	--	--	--	--	--	--	--	
JAN 23.....	1100	11	13	13	.46	--	--	--	--	--	--	--	--	--	--	--	
JAN 25.....	1130	12	13	5	.18	--	--	--	--	--	--	--	--	--	--	--	
JAN 26.....	1115	12	15	13	.53	--	--	--	--	--	--	--	--	--	--	--	
JAN 27.....	1115	12	13	4	.14	--	--	--	--	--	--	--	--	--	--	--	
JAN 28.....	1400	10	12	35	1.1	--	--	--	--	--	--	--	--	--	--	--	
FEB 5.....	1115	11	8.8	3	.07	--	--	--	--	--	--	--	--	--	--	--	
FEB 6.....	1115	11	11	12	.36	--	--	--	--	--	--	--	--	--	--	--	
FEB 9.....	1215	11	9.5	10	.26	--	--	--	--	--	--	--	--	--	--	--	
FEB 11.....	1145	11	12	23	.75	--	--	--	--	--	--	--	--	--	--	--	
FEB 11.....	1505	12	8.8	50	1.2	--	--	--	--	--	--	--	--	--	--	--	
FEB 15.....	1015	11	23	68	4.2	--	--	--	--	--	--	--	--	--	--	--	
MAR 5.....	1225	11	2.1	3	.02	--	--	--	--	--	--	--	--	--	--	--	
MAR 11.....	0945	9	.71	2	0	--	--	--	--	--	--	--	--	--	--	--	
APR 9.....	1200	12	.62	6	.01	--	--	--	--	--	--	--	--	--	--	--	
APR 30.....	1055	13	.18	2	0	--	--	--	--	--	--	--	--	--	--	--	
JUL 7.....	1120	15	.06	1	0	--	--	--	--	--	--	--	--	--	--	--	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												METHOD OF ANALY- SIS
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
NOV 4, 1968	1200	14	5	.21	1	2	7	15	20	25	32	45	69	84	100		S
JAN 13, 1969	1440	11	5	11	--	--	1	2	3	5	10	28	58	87	100		S

11-4601.7. PINE CREEK AT BOLINAS, CALIF.

LOCATION.--Lat 37°55'07", long 122°41'31", in Las Baulines Grant, Marin County, at gaging station 100 ft upstream from highway bridge, 0.4 mile upstream from mouth, and 0.9 mile north of Bolinas.

DRAINAGE AREA.--7.83 sq mi.

PERIOD OF RECORD.--Water temperatures: May 1967 to September 1969.

Sediment records: June 1967 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 7°C Dec. 22.

Sediment concentrations: Maximum daily, 3,010 mg/l Dec. 28; minimum daily, 1 mg/l on many days.

Sediment loads: Maximum daily, 3,430 tons Dec. 28; minimum daily, 0 tons on many days.

EXTREMES, 1967-69.--Water temperatures: Minimum, 4°C Dec. 14, 1967.

Sediment concentrations: Maximum daily, 3,010 mg/l Dec. 28, 1968; minimum daily, no flow Sept. 22, 1968.

Sediment loads: Maximum daily, 3,430 tons Dec. 28, 1968; minimum daily, 0 tons on many days each year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	14	--	--	--	13	--	--	13	13	--	13	--	--	--	13	--	--	--	13	--	--	12	--	--	13	--	--	--	--	--
NOVEMBER..	12	12	--	13	13	--	--	15	--	--	--	12	--	10	11	--	--	14	--	--	--	12	--	--	12	--	11	--	--	10	--	--	
DECEMBER.	10	--	--	9	10	--	--	11	--	11	11	11	--	11	11	11	10	10	10	--	--	7	10	--	--	10	10	10	10	11	11	--	
JANUARY..	10	--	--	10	--	10	9	10	--	--	10	10	11	11	11	11	11	11	11	12	11	11	11	11	11	12	12	12	10	11	11	11	
FEBRUARY..	11	11	11	--	11	11	11	11	11	11	11	11	11	11	--	11	--	11	11	11	11	11	11	11	11	--	11	11	--	--	--	11	
MARCH....	11	11	12	--	12	--	--	10	--	11	9	11	--	11	--	--	12	--	--	--	10	--	--	14	--	--	15	--	--	--	13	--	--
APRIL....	--	12	--	--	--	--	12	--	12	--	--	--	--	12	--	--	--	--	--	--	14	--	--	--	12	--	--	--	--	12	--	--	
MAY.....	--	--	--	--	--	--	14	--	--	--	--	14	--	--	14	--	--	--	--	14	--	--	--	--	--	--	15	--	--	17	--	--	
JUNE.....	--	--	--	--	--	14	--	14	--	--	--	15	--	--	15	--	--	16	--	--	--	--	16	--	--	--	--	16	--	--	--	--	
JULY.....	--	--	--	--	--	16	14	--	--	15	--	--	16	--	--	--	16	--	--	--	--	--	16	--	--	--	--	--	15	--	--	--	
AUGUST....	--	--	15	--	--	14	16	--	--	--	16	--	--	15	--	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	
SEPTEMBER	--	--	14	--	--	--	--	15	--	--	--	--	--	--	15	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--	16	--	

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	.18	1	0	2.2	2	.01	2.4	3	.02
2	.21	1	0	4.8	32	.55	2.1	3	.02
3	.23	1	0	3.3	14	.12	2.0	3	.02
4	.21	1	0	2.7	4	.03	2.1	3	.02
5	.21	1	0	2.3	2	.01	2.2	2	.01
6	.21	1	0	2.1	2	.01	2.2	2	.01
7	.18	1	0	2.0	2	.01	2.4	5	.03
8	.14	1	0	2.0	2	.01	5.1	22	.31
9	.14	1	0	1.9	2	.01	7.6	26	.79
10	.12	1	0	1.9	2	.01	51	378	84
11	.37	2	0	2.0	4	.02	31	146	14
12	8.2	84	3.2	2.7	5	.04	15	40	1.6
13	3.1	6	.05	2.0	4	.02	14	36	1.8
14	2.7	3	.02	3.2	8	.17	20	53	3.0
15	2.4	3	.02	9.5	58	2.1	36	350	53
16	2.2	3	.02	3.7	15	1.5	26	80	5.6
17	2.1	4	.02	2.8	10	.08	18	20	.97
18	2.0	5	.03	2.8	5	.04	14	15	.57
19	2.0	4	.02	2.6	4	.03	12	12	.39
20	2.0	4	.02	2.5	3	.02	10	11	.30
21	1.9	3	.02	2.4	2	.01	9.2	10	.25
22	2.0	1	.01	2.2	2	.01	8.6	7	.16
23	1.9	1	.01	2.1	2	.01	8.2	9	.20
24	1.9	1	.01	2.5	1	.01	27	116	11
25	1.8	1	0	2.2	1	.01	27	66	5.1
26	1.8	1	0	2.1	2	.01	28	55	4.3
27	1.8	1	0	2.0	2	.01	26	43	5.8
28	1.9	1	.01	1.9	2	.01	320	3010	3430
29	2.4	7	.05	2.0	4	.02	78	398	98
30	2.7	4	.03	2.4	6	.04	46	100	12
31	2.3	2	.01	--	--	--	36	60	5.8
TOTAL	51.30	--	3.55	80.8	--	4.93	889.1	--	3739.07

PINE CREEK BASIN

11-4601.7. PINE CREEK AT BOLINAS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JANUARY			FEBRUARY			MARCH		
	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	29	42	3.3	50	65	8.8	53	70	10
2	25	30	2.0	41	45	5.0	49	42	5.6
3	22	25	1.5	38	25	2.6	46	39	4.8
4	20	20	1.1	36	30	2.9	42	35	4.0
5	18	20	.97	50	159	17	38	32	3.3
6	15	17	.69	55	99	15	31	25	2.1
7	13	12	.42	49	70	9.3	27	23	1.7
8	13	8	.28	46	45	5.6	25	21	1.4
9	13	7	.25	63	229	42	24	25	1.6
10	12	5	.16	78	175	37	22	25	1.5
11	19	80	4.8	178	930	448	21	20	1.1
12	20	41	2.4	110	300	89	21	26	1.5
13	114	631	267	81	160	35	19	20	1.0
14	76	225	46	124	641	326	18	16	.78
15	51	140	19	165	600	286	18	16	.78
16	41	70	7.7	111	210	63	17	15	.69
17	36	50	4.9	78	150	32	23	41	2.8
18	50	144	31	62	130	22	18	22	1.1
19	122	792	283	54	92	14	16	20	.86
20	204	1000	586	46	70	8.7	20	55	3.4
21	173	757	373	44	65	7.7	20	28	1.5
22	111	350	105	41	45	5.0	18	18	.87
23	80	210	45	40	55	5.9	17	10	.46
24	67	180	33	43	139	16	16	8	.35
25	78	190	40	42	90	10	15	8	.32
26	133	613	252	40	58	6.3	14	8	.30
27	94	160	41	41	54	6.1	13	8	.28
28	84	120	27	51	126	18	12	8	.26
29	70	80	15	--	--	--	12	7	.23
30	65	120	21	--	--	--	11	6	.18
31	56	60	9.1	--	--	--	11	5	.15
TOTAL	1924	--	2223.57	1857	--	1543.9	707	--	54.91

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	11	5	.15	5.8	2	.03	3.9	2	.02
2	12	18	.58	5.8	2	.03	3.9	2	.02
3	11	20	.59	5.5	2	.03	3.7	2	.02
4	10	12	.32	5.5	2	.03	3.2	2	.02
5	15	39	1.6	5.5	2	.03	2.9	2	.01
6	14	20	.76	5.5	2	.03	2.7	2	.01
7	12	18	.58	5.5	2	.03	2.7	2	.01
8	12	14	.45	5.2	2	.03	2.9	2	.01
9	12	20	.65	5.2	3	.03	3.2	2	.02
10	11	18	.53	5.2	3	.03	3.2	2	.02
11	11	15	.45	5.2	3	.03	2.9	2	.01
12	10	12	.32	5.2	3	.03	2.7	2	.01
13	10	10	.27	5.0	2	.03	2.7	2	.01
14	9.6	7	.18	5.0	2	.03	2.5	2	.01
15	8.9	6	.14	4.7	2	.03	2.7	2	.01
16	8.6	5	.12	4.7	2	.03	2.5	2	.01
17	8.3	5	.11	4.5	2	.02	2.7	2	.01
18	8.3	4	.09	4.5	2	.02	1.7	6	.02
19	8.0	3	.06	4.5	2	.02	2.2	2	.01
20	7.7	3	.06	4.2	2	.02	2.5	2	.01
21	7.7	3	.06	4.2	2	.02	2.5	2	.01
22	7.4	3	.06	4.2	2	.02	2.3	2	.01
23	9.3	10	.25	4.2	2	.02	2.3	2	.01
24	7.7	6	.12	4.2	2	.02	2.2	2	.01
25	7.1	5	.10	3.9	2	.02	2.0	3	.02
26	6.7	4	.07	4.2	2	.02	2.0	3	.02
27	6.4	3	.05	3.9	2	.02	2.0	3	.02
28	6.4	3	.05	3.7	2	.02	1.9	3	.02
29	6.1	3	.05	3.7	2	.02	1.9	3	.02
30	6.1	3	.05	3.4	2	.02	1.9	3	.02
31	--	--	--	3.7	2	.02	--	--	--
TOTAL	281.3	--	8.87	145.5	--	.78	78.4	--	.43

11-4601.7. PINE CREEK AT BOLINAS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	3	.02	.85	8	.02	.60	2	0
2	1.9	3	.02	.80	8	.02	.70	2	0
3	1.7	2	.01	.60	8	.01	.70	2	0
4	1.7	2	.01	.75	5	.01	.75	2	0
5	1.7	2	.01	.60	3	0	.70	2	0
6	1.4	2	.01	.65	1	0	.65	2	0
7	1.9	3	.02	.70	3	.01	.65	2	0
8	1.9	3	.02	.70	3	.01	.60	2	0
9	1.6	4	.02	.70	4	.01	.65	2	0
10	1.7	4	.02	.70	5	.01	.60	2	0
11	1.9	3	.02	.70	6	.01	.70	2	0
12	1.4	3	.01	.65	5	.01	.70	2	0
13	1.6	3	.01	.60	4	.01	.75	2	0
14	1.7	4	.02	.60	4	.01	.70	2	0
15	1.6	5	.02	.60	4	.01	.65	2	0
16	1.3	6	.02	.65	3	.01	.65	2	0
17	1.3	6	.02	.70	3	.01	.60	2	0
18	1.3	5	.02	.70	3	.01	.70	2	0
19	1.4	4	.02	.65	3	.01	.75	2	0
20	1.3	4	.01	.70	3	.01	.70	2	0
21	1.3	4	.01	.70	3	.01	.75	2	0
22	1.4	4	.02	.65	3	.01	.70	2	0
23	1.3	4	.01	.65	3	.01	.65	2	0
24	1.3	4	.01	.65	3	.01	.65	2	0
25	1.6	5	.02	.60	2	0	.65	2	0
26	1.6	6	.03	.60	2	0	.65	2	0
27	1.3	7	.02	.60	2	0	.65	2	0
28	1.3	8	.03	.60	2	0	.75	3	.01
29	1.3	8	.03	.55	2	0	.85	3	.01
30	1.3	8	.03	.55	2	0	.80	3	.01
31	1.2	8	.03	.55	2	0	--	--	--
TOTAL	47.1	--	.57	20.30	--	.24	20.60	--	.03
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									6102.40
TOTAL LOAD FOR YEAR (TONS)									7580.85

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
DEC 10, 1968	1400	11	106	1310	375	23	32	38	53	66	76	94	100	--	--	--	VPWC
JAN 13, 1969	1300	11	210	1010	573	21	30	35	46	54	67	85	95	98	100	--	VPWC
JAN 20.....	1215	12	236	815	519	18	27	33	43	51	62	84	94	100	--	--	VPWC
JAN 27.....	1130	12	94	149	38	--	--	--	--	--	24	40	56	93	100	--	S
FEB 11.....	1215	11	160	618	267	22	31	39	47	56	68	87	97	100	--	--	VBWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE											METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
NOV 4, 1968	1545	13	5	2.5	1	2	5	11	19	30	49	70	88	98	100	S
JAN 20, 1969	1230	12	6	236	--	1	4	14	25	39	54	73	89	100	--	S

SALMON CREEK BASIN

11-4609.2. SALMON CREEK AT BODEGA, CALIF.

LOCATION.--Lat 38°20'54", long 122°58'45", in Estero Americano Grant, Sonoma County, temperature recorder at gaging station on left bank, 100 ft upstream from private road bridge, 0.3 mile upstream from unnamed tributary, and 0.4 mile northwest of Bodega.

DRAINAGE AREA.--15.7 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1964 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C May 5; minimum, freezing point Dec. 20-22.

EXTREMES, 1964-69.--Water temperatures: Maximum, 23°C May 8; minimum, freezing point Dec. 20-22; point on many days during winter period.

REMARKS.--No flow Oct. 1-11, 20-28, July 19, Aug. 1 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	16	16	13	13	14	14	14	13	--	--	--	--	--	--	--	--	--	13	13	13	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	10	12	9	9	9	9	9	8	--	--	--	--	--	--	--	--	--	11	11	11	--
NOVEMBER																																		
	MAXIMUM	11	12	13	11	12	11	12	13	16	16	14	13	11	7	10	11	11	12	14	12	13	13	13	12	11	9	9	8	7	7	--	11	
	MINIMUM	9	10	11	8	10	10	8	9	12	11	11	9	6	5	6	7	9	11	10	10	10	10	10	9	7	4	3	2	3	4	--	8	
DECEMBER																																		
	MAXIMUM	9	7	6	6	7	8	6	8	10	11	9	8	6	9	9	8	8	7	6	5	4	2	3	8	7	8	5	8	7	8	8	7	
	MINIMUM	6	2	1	1	2	5	5	6	7	9	6	3	4	6	6	3	2	2	2	0	0	0	2	3	6	3	2	4	5	3	3	4	
JANUARY																																		
	MAXIMUM	9	8	10	7	7	7	8	8	6	6	8	9	10	8	8	8	8	11	11	11	8	6	6	10	11	8	7	5	7	7	8		
	MINIMUM	6	4	5	5	5	5	3	2	1	4	8	5	4	2	4	2	5	8	10	8	5	3	5	6	6	4	4	1	3	1	4		
FEBRUARY																																		
	MAXIMUM	10	10	8	6	8	11	10	9	13	12	12	11	10	9	13	13	10	12	12	11	8	9	10	11	11	10	8	11	--	--	--	10	
	MINIMUM	4	4	2	4	4	6	4	5	9	10	9	6	4	8	9	9	6	9	9	7	6	5	5	7	7	6	6	8	--	--	--	6	
MARCH																																		
	MAXIMUM	12	10	11	12	11	11	10	11	9	11	10	8	11	11	13	10	12	14	14	10	12	14	17	18	19	20	19	17	17	16	13		
	MINIMUM	5	6	5	5	4	4	4	3	3	4	2	5	3	2	5	6	8	9	6	8	6	5	7	9	7	8	8	9	11	11	12	6	
APRIL																																		
	MAXIMUM	16	12	14	12	12	14	15	15	14	16	16	16	13	15	16	17	16	17	17	19	18	14	14	15	16	18	20	18	16	14	--	16	
	MINIMUM	8	9	5	5	8	6	6	6	10	8	8	10	7	7	7	8	9	9	8	8	10	11	10	8	7	7	9	11	9	7	--	8	
MAY																																		
	MAXIMUM	16	16	14	18	21	17	16	16	18	17	16	14	14	16	17	20	17	17	17	17	16	16	15	16	17	17	17	17	19	20	18	17	
	MINIMUM	7	9	9	7	10	13	13	13	11	13	12	12	12	12	13	13	15	15	12	12	14	14	13	12	14	16	13	12	15	17	15	12	
JUNE																																		
	MAXIMUM	17	16	16	16	17	18	16	16	15	16	16	17	17	17	17	17	17	17	16	16	16	17	18	17	18	17	16	15	16	17	18	--	17
	MINIMUM	15	14	14	15	15	14	15	14	14	14	15	14	15	15	14	15	16	15	15	15	15	14	15	15	15	15	13	12	11	12	12	--	14
JULY																																		
	MAXIMUM	17	17	18	18	17	17	16	16	16	17	18	18	17	17	16	18	18	17	--	--	16	16	17	17	17	17	16	17	17	16	16	16	17
	MINIMUM	14	13	12	13	14	13	12	13	13	14	14	13	13	12	11	12	12	12	--	--	13	13	13	14	15	15	14	13	13	13	12	12	13
AUGUST																																		
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER																																		
	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

RUSSIAN RIVER BASIN

279

11-4615. EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF.

LOCATION.--Lat 39°14'48", long 123°07'45", in NW¼ sec.18, T.16 N., R.11 W., Mendocino County, temperature recorder at gaging station on left bank 0.1 mile downstream from Cold Creek, and 3.9 miles east of Calpella.

DRAINAGE AREA.--92.2 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1952 to September 1958.

Water temperatures: March 1964 to September 1969.

Sediment records: March to September 1964, October 1966 to September 1968.

EXTREMES, 1968-69.--Water temperatures: Maximum, 22°C June 16, 22-24; minimum, 4°C on several days during January and February.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-66, 1967-69), 26°C June 16, 18, 19, 1968; minimum (1965-67, 1968-69), 4°C on several days in 1965 and 1969.

REMARKS.--No record Jan. 1-10, bulb buried. Samples for periodic turbidity data collected by Pacific Gas and Electric Company and U.S. Forest Service.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGF		
OCTOBER																																		
MAXIMUM	21	21	20	19	20	19	18	18	18	18	18	18	18	17	17	17	17	17	17	17	17	17	17	17	17	17	16	16	16	16	16	18		
MINIMUM	18	17	18	18	19	18	17	17	16	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	16	15	14	16		
NOVEMBER																																		
MAXIMUM	15	15	16	15	16	15	13	14	15	14	14	14	13	12	11	11	11	11	12	12	11	11	11	11	11	10	10	10	9	9	9	--	12	
MINIMUM	14	14	15	14	14	12	13	13	14	14	14	13	12	11	9	9	11	11	11	11	11	11	10	11	10	10	9	9	8	8	--	11		
DECEMBER																																		
MAXIMUM	9	8	8	7	9	8	8	9	9	11	9	8	8	9	9	8	9	9	8	8	7	8	9	8	8	10	11	9	9	9	10	9		
MINIMUM	8	7	7	6	7	7	7	8	9	9	7	8	7	7	7	8	8	8	8	6	7	7	5	6	7	7	8	8	8	8	9	7		
JANUARY																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	6	7	7	7	7	7	8	8	8	9	9	9	9	9	8	8	7	6	5	6	6	--		
MINIMUM	--	--	--	--	--	--	--	--	--	--	5	6	6	5	6	6	6	5	5	8	7	6	7	7	6	6	5	4	4	4	4	--		
FEBRUARY																																		
MAXIMUM	6	7	7	6	6	7	8	7	9	9	9	9	8	9	8	8	8	8	9	9	9	8	8	9	9	7	8	7	7	--	--	8		
MINIMUM	5	5	5	5	4	4	6	6	7	9	8	7	6	7	6	6	6	7	8	8	7	7	6	7	5	5	6	7	6	--	--	6		
MARCH																																		
MAXIMUM	8	7	8	8	8	8	8	8	7	8	7	7	7	8	8	8	8	9	9	8	10	10	10	10	10	10	10	10	11	11	11	9		
MINIMUM	5	6	5	5	6	6	5	5	5	5	5	5	5	5	5	5	6	7	6	7	7	7	7	7	7	7	8	8	8	8	8	6		
APRIL																																		
MAXIMUM	11	10	10	10	10	10	11	11	10	12	12	12	10	11	11	12	11	12	12	12	12	13	12	12	12	12	13	13	13	14	13	--	12	
MINIMUM	7	9	8	8	8	9	8	9	9	10	10	10	10	8	9	9	10	10	9	9	10	10	11	10	10	10	10	11	11	12	12	--	10	
MAY																																		
MAXIMUM	13	13	13	13	14	15	15	15	18	18	17	17	16	15	16	16	16	16	17	17	16	17	18	19	19	17	18	17	18	19	20	20	16	
MINIMUM	11	11	11	11	12	12	13	13	13	13	13	13	13	14	13	14	14	15	15	14	14	16	17	17	16	16	15	15	16	17	18	14		
JUNE																																		
MAXIMUM	20	20	20	20	19	18	18	18	17	18	19	19	19	20	20	21	22	20	20	21	21	21	22	22	22	21	20	20	20	19	19	--	20	
MINIMUM	18	18	18	18	18	17	17	17	16	16	17	17	18	18	18	19	18	18	18	18	18	17	18	19	18	17	17	17	16	15	15	--	17	
JULY																																		
MAXIMUM	19	19	19	19	19	20	21	20	21	20	21	20	21	20	20	20	20	21	21	21	21	21	21	21	21	21	20	20	20	20	20	20		
MINIMUM	15	15	14	14	15	15	15	16	16	17	16	17	17	17	16	16	16	16	17	17	17	17	17	17	17	17	17	16	16	16	16	16		
AUGUST																																		
MAXIMUM	20	20	20	20	20	19	19	20	20	20	20	19	20	19	20	20	20	19	20	20	20	20	20	20	19	19	19	19	19	19	19	20		
MINIMUM	15	16	16	16	15	15	15	16	16	16	16	16	16	16	16	16	16	17	16	16	16	16	16	17	16	16	15	16	15	15	16	16		
SEPTEMBER																																		
MAXIMUM	19	20	20	21	20	19	19	19	20	21	20	20	20	20	20	20	20	21	19	19	18	20	20	20	20	20	21	20	20	20	--	20		
MINIMUM	16	17	17	17	16	17	18	17	18	19	19	19	19	19	18	18	18	18	19	18	18	18	18	18	18	19	19	19	18	19	18	--	18	

PERIODIC DETERMINATIONS OF TURBIDITY

DATE OF COLLECTION	TIME (24-HR)	WATER TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	TURBIDITY (MG/L SILICA)	
				TOTAL	RESIDUAL <u>1/</u>
DEC. 18, 1968.....	1245	8	360	367	25
DEC. 20.....	1100	6	325	287	30
DEC. 27.....	1230	7	705	190	29
JAN. 3, 1969.....	--	8	--	120	16
JAN. 10.....	--	8	--	75	18
JAN. 17.....	--	8	--	124	24
JAN. 24.....	--	8	--	119	20
JAN. 31.....	--	6	--	97	17
FEB. 7.....	--	8	--	76	7.1
FEB. 14.....	0915	9	816	91	7.8
FEB. 20.....	--	9	--	67	6.8
FEB. 28.....	--	--	--	118	12
MAR. 7.....	--	8	--	44	5.6
MAR. 14.....	--	--	--	48	6.4
MAR. 21.....	--	10	--	43	3.2
MAR. 29.....	1015	10	381	41	4.2
APR. 4.....	--	10	--	43	5.5
APR. 11.....	--	--	--	72	2.2
MAY 9.....	0945	18	318	33	.5

1/ Turbidity measured after a 7-day settling period.

RUSSIAN RIVER BASIN

11-4625. RUSSIAN RIVER NEAR HOPLAND, CALIF.

LOCATION.--Lat 39°01'35", long 123°07'45", in Rancho de Sanel Grant, Mendocino County, temperature recorder at gaging station on right bank, at abandoned highway bridge, 0.2 mile downstream from McNab Creek, and 4 miles north of Hopland.

DRAINAGE AREA.--362 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1965.

Water temperatures: September 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C on several days in September.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-66, 1968-69), 24°C on several days in September 1969; minimum (1965-68), 6°C Feb. 8, 9, 1966.

REMARKS.--Recorder stopped Oct. 1-4 and July 26 to Aug. 8; probe inoperative Jan. 12 to Feb. 4, May 17-22.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	--	--	--	--	20	22	20	19	19	19	19	19	19	19	18	17	17	16	17	17	17	16	17	17	17	17	17	17	17	17	17	17	18	
MINIMUM	--	--	--	--	18	19	17	16	16	16	16	16	18	17	17	15	15	16	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	
NOVEMBER																																		
MAXIMUM	16	16	16	15	16	15	15	15	15	15	15	15	15	15	14	13	13	13	13	14	14	14	14	14	13	14	13	12	12	11	11	--	14	
MINIMUM	15	15	15	14	15	14	14	14	14	14	15	15	15	14	13	13	12	12	12	13	13	13	13	13	13	13	12	12	11	11	11	--	13	
DECEMBER																																		
MAXIMUM	11	11	11	10	10	11	12	12	12	12	12	12	12	12	11	11	11	11	11	11	12	12	10	9	8	9	9	9	9	9	9	10	11	
MINIMUM	11	11	10	10	10	10	11	11	11	11	11	11	11	11	11	10	10	10	10	11	11	10	8	8	7	8	8	8	8	8	9	9	10	
JANUARY																																		
MAXIMUM	10	10	10	10	10	10	11	11	10	11	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	9	9	9	10	9	10	10	10	9	10	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																		
MAXIMUM	--	--	--	--	8	8	8	8	9	9	9	9	8	8	8	8	8	8	8	9	9	9	9	9	8	8	8	8	8	--	--	--	8	
MINIMUM	--	--	--	--	7	7	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	--	--	8	
MARCH																																		
MAXIMUM	8	8	8	7	7	8	8	8	8	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	8	
MINIMUM	8	8	7	6	6	7	7	7	7	7	8	8	7	7	7	7	7	7	7	7	8	8	7	7	7	7	7	7	7	7	8	8	7	
APRIL																																		
MAXIMUM	9	9	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	10	10	11	--	11	
MINIMUM	8	9	9	9	10	9	10	10	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	10	10	9	9	9	9	9	--	10	
MAY																																		
MAXIMUM	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	--	--	--	--	--	--	--	18	18	16	15	14	15	15	16	16	13
MINIMUM	10	10	10	10	10	9	10	11	10	10	10	10	10	11	10	10	--	--	--	--	--	--	--	--	14	14	13	11	11	10	10	11	11	11
JUNE																																		
MAXIMUM	16	15	17	16	16	16	15	15	14	15	16	17	17	17	18	18	17	16	17	17	18	18	18	18	18	17	17	17	18	18	19	--	17	
MINIMUM	11	11	11	12	12	12	12	12	12	12	12	12	13	12	12	12	13	13	13	13	13	13	13	13	14	13	13	13	13	13	13	--	12	
JULY																																		
MAXIMUM	19	18	18	19	18	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	--	--	--	--	--	--	19	
MINIMUM	13	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	15	15	15	15	--	--	--	--	--	14	
AUGUST																																		
MAXIMUM	--	--	--	--	--	--	--	--	21	21	20	21	21	21	21	22	22	22	22	23	23	23	22	22	22	22	22	22	22	23	23	--	--	
MINIMUM	--	--	--	--	--	--	--	--	16	16	16	16	16	16	16	16	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	--	
SEPTEMBER																																		
MAXIMUM	24	24	24	23	23	24	24	24	23	23	23	23	23	23	22	22	22	22	21	21	22	22	22	22	22	23	23	23	22	22	22	--	23	
MINIMUM	19	19	19	20	19	19	21	20	20	19	19	19	19	19	19	19	18	20	19	19	19	19	19	19	19	19	19	20	19	20	19	--	19	

LOCATION.--Lat 38°52'55", long 123°03'15", in SW $\frac{1}{4}$ sec.14, T.12 N., R.11 W., Mendocino County, at gaging station at Lambert Ranch, 400 ft downstream from Cummiskey Creek, and 5 miles northwest of Cloverdale.

DRAINAGE AREA.--502 sq mi.

Sediment records: November 1963 to September 1966, January 1967 to September 1968.

EXTREMES, 1966-69.--Water temperatures: Maximum (1966-68), 26°C May 28, 1968; minimum, 4°C Jan. 3, 12, 1968.
REMARKS --Where no maximum or minimum is shown, temperature is once daily reading.

REMARKS.--Where no maximum or minimum is shown, temperature is once-daily reading.

MONTH	DAY																																	AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	
MAXIMUM	20	20	19	21	21	19	19	18	18	19	18	18	18	17	17	18	18	18	18	18	18	17	17	18	18	18	18	17	17	16	16	16	16	
MINIMUM	18	18	18	18	19	17	16	16	15	16	16	17	17	17	15	14	15	16	16	16	16	16	15	15	16	16	16	16	16	15	15	14	14	16
NOVEMBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	16	15	16	16	16	16	16	17	18	18	17	16	14	12	13	14	14	14	14	14	14	14	14	13	13	12	12	10	10	10	--	14		
MINIMUM	14	14	15	14	14	14	14	15	16	16	16	16	14	12	10	10	12	13	13	13	13	13	12	12	11	11	10	10	9	9	--	--	13	
DECEMBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	10	9	9	9	11	11	11	12	12	12	11	11	10	9	11	11	10	10	10	10	9	9	9	8	8	9	10	10	10	11	11	10	10	
MINIMUM	9	8	8	8	9	10	10	11	11	11	9	10	8	8	9	8	9	9	9	8	8	7	8	6	7	8	8	10	10	10	10	9	9	
JANUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	10	11	11	11	11	12	12	12	10	10	9	10	11	11	11	11	11	10	10	10	10	11	11	11	11	11	10	10	9	9	9	9	10	
MINIMUM	9	10	10	9	9	11	11	10	9	8	8	9	10	10	10	10	10	10	10	10	10	10	11	11	11	10	10	9	9	8	8	8	10	
FEBRUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	9	9	8	8	8	8	6	8	8	8	8	8	8	8	8	8	8	8	8	9	9	8	7	8	8	8	8	8	8	--	--	--	8	
MINIMUM	8	8	7	7	7	7	7	7	6	8	8	8	7	7	7	8	7	7	7	7	8	7	7	6	7	7	7	7	--	--	--	--	7	
MARCH....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	8	8	8	8	7	9	9	9	8	8	8	8	8	9	10	10	11	11	11</															

RUSSIAN RIVER BASIN

11-4640. RUSSIAN RIVER NEAR HEALDSBURG, CALIF.

LOCATION.--Lat 38°36'48", long 122°50'07", in Sotoyome Grant, Sonoma County, temperature recorder at gaging station on left bank, 2 miles east of Healdsburg, and 3.5 miles upstream from Dry Creek.

DRAINAGE AREA.--793 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1965.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 7°C Feb. 6.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-68), 26°C on several days in 1966-68; minimum, 6°C Dec. 21-23, 1965, Jan. 26, 1966.

REMARKS.--Recorder stopped June 15 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	21	21	19	22	22	21	21	20	19	19	18	19	19	17	18	18	19	19	19	19	19	19	19	19	19	19	19	19	17	17	17	19	
	MINIMUM	16	18	18	18	18	17	16	15	14	14	18	17	17	14	14	14	15	16	15	15	15	15	15	16	16	16	16	16	16	16	15	15	16
NOVEMBER	MAXIMUM	16	16	17	17	17	16	17	18	19	19	18	16	14	12	14	14	16	16	16	16	16	16	15	15	14	14	13	12	12	12	--	15	
	MINIMUM	14	15	16	15	16	15	14	15	17	17	16	14	12	11	13	14	14	15	15	15	15	15	15	13	13	12	11	10	10	10	--	14	
DECEMBER	MAXIMUM	13	12	11	11	12	13	13	14	14	14	14	12	12	11	12	11	12	12	12	11	10	10	10	10	10	11	10	9	11	11	11	12	
	MINIMUM	12	9	9	9	10	11	12	13	13	14	14	11	11	11	11	11	10	9	11	11	11	10	9	9	8	8	10	9	9	10	9	9	10
JANUARY	MAXIMUM	10	10	11	11	12	12	12	12	10	10	10	10	12	11	10	10	10	9	9	11	13	13	12	10	10	11	10	10	9	9	9	9	11
	MINIMUM	9	9	9	10	11	11	11	10	9	8	10	10	10	10	10	8	8	8	9	9	9	11	11	9	9	9	10	9	9	8	8	8	9
FEBRUARY	MAXIMUM	10	10	9	9	9	8	9	9	10	10	11	11	10	9	9	10	10	10	10	10	10	10	10	9	8	9	9	9	--	--	--	10	
	MINIMUM	9	8	8	9	8	7	8	9	9	9	9	11	10	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	--	--	--	9
MARCH	MAXIMUM	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	11	12	12	12	12	12	12	12	13	13	13	14	14	14	15	15	11
	MINIMUM	8	9	8	8	9	9	9	9	9	9	9	10	10	9	10	10	10	10	11	11	11	11	11	11	12	12	12	13	13	13	13	14	10
APRIL	MAXIMUM	15	14	13	13	13	13	13	14	14	14	14	15	15	14	14	15	16	16	16	16	16	16	16	15	14	14	15	16	16	17	16	--	15
	MINIMUM	12	12	11	12	12	12	12	13	14	13	14	13	14	14	13	12	13	14	14	14	14	14	14	15	15	14	13	13	13	15	15	--	13
MAY	MAXIMUM	17	18	17	17	21	21	20	21	22	21	22	21	20	19	18	20	21	22	23	23	23	24	23	24	22	23	23	22	23	24	24	25	21
	MINIMUM	14	16	16	15	17	18	18	18	19	17	19	19	19	18	17	18	19	20	19	18	18	18	19	19	18	19	19	17	18	21	22	23	18
JUNE	MAXIMUM	25	22	21	21	22	22	22	21	19	19	19	20	21	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	22	19	20	20	19	19	20	19	18	18	19	18	19	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUGUST	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SEPTEMBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

11-4645. DRY CREEK NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°44'59", long 123°05'28", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.10 N., R.11 W., Sonoma County, temperature recorder at gaging station on left bank 500 ft downstream from Smith Creek, and 5 miles southwest of Cloverdale.

DRAINAGE AREA.--87.8 sq mi.

PERIOD OF RECORD.--Water temperatures: May 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 32°C sometime during period Aug. 11-15, and Aug. 16, 20-22; minimum, 7°C Dec. 3, 20-22.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-66, 1967-69), 33°C Aug. 6, 7, 1966; minimum (1966-69), 3°C on several days in 1967 and 1968.

REMARKS.--Recorder stopped July 18 to Aug. 15; temperature range, 18°C to 32°C.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	21	21	20	21	21	19	19	18	18	18	18	19	19	18	18	19	19	19	18	18	18	18	19	19	19	18	18	16	16	17	18	19		
MINIMUM	16	17	17	16	16	14	14	13	12	13	16	16	16	14	13	13	13	14	13	13	13	13	13	13	13	13	13	14	14	14	13	13		
NOVEMBER																																		
MAXIMUM	15	14	16	16	16	17	15	17	18	19	18	17	16	15	11	13	14	15	15	16	17	16	15	16	15	14	13	13	13	12	11	--		
MINIMUM	13	13	14	14	13	14	13	13	13	14	14	14	12	11	10	10	12	13	13	13	13	14	14	12	12	11	10	10	9	8	9	9	--	
DECEMBER																																		
MAXIMUM	13	12	11	12	14	13	12	12	13	13	13	13	12	11	12	12	11	11	10	9	8	10	10	11	11	11	10	11	11	11	11	11		
MINIMUM	8	8	7	8	9	9	10	11	12	13	12	12	11	11	11	11	11	10	10	8	7	7	7	8	9	10	9	9	10	10	10	10		
JANUARY																																		
MAXIMUM	10	11	11	11	11	11	11	12	10	11	11	12	12	11	11	11	11	10	10	12	12	13	13	12	11	12	12	12	10	9	9	9		
MINIMUM	9	10	9	10	10	11	11	10	10	9	10	11	11	10	10	10	10	9	9	10	12	12	12	10	11	11	11	10	9	8	8	8		
FEBRUARY																																		
MAXIMUM	10	10	11	11	10	10	10	10	10	12	12	12	11	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	10	--	--	--		
MINIMUM	9	9	9	10	8	8	9	10	10	10	11	11	9	10	10	10	10	10	11	11	11	11	10	10	10	8	9	9	9	--	--	--		
MARCH																																		
MAXIMUM	11	10	11	11	12	13	12	12	12	12	12	12	11	12	12	12	12	13	14	14	13	13	14	15	15	15	15	16	16	16	16	16		
MINIMUM	9	9	9	9	9	10	10	10	10	10	10	10	11	10	10	10	10	12	12	12	12	12	12	12	12	12	13	13	13	14	14	14		
APRIL																																		
MAXIMUM	16	14	15	15	14	15	15	18	16	19	20	19	17	19	20	20	19	21	21	22	22	19	17	20	20	21	22	22	22	21	--	19		
MINIMUM	14	13	13	14	13	13	14	14	13	12	13	14	12	12	12	12	13	13	13	13	14	15	14	13	13	12	13	14	15	15	14	--		
MAY																																		
MAXIMUM	22	22	20	22	24	25	22	23	25	26	25	25	22	24	25	26	26	25	25	27	26	28	27	25	25	26	21	25	25	26	28	29		
MINIMUM	13	14	13	13	15	16	17	17	16	17	18	18	17	16	16	17	18	17	17	17	16	18	17	18	18	19	17	17	17	18	20	17		
JUNE																																		
MAXIMUM	26	27	27	27	24	27	24	22	19	24	25	26	27	28	28	28	25	25	27	26	28	28	27	27	27	26	25	27	28	28	--	26		
MINIMUM	20	20	20	20	20	19	19	19	18	18	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	19	19	18	17	18	19	--		
JULY																																		
MAXIMUM	28	27	28	28	27	28	29	28	28	29	29	30	29	29	28	29	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
AUGUST																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32	30	30	30	32	32	32	30	30	30	31	30	30	29	30	30	--		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	21	21	20	20	21	20	21	20	21	18	19	19	19	19	18	--		
SEPTEMBER																																		
MAXIMUM	31	30	30	30	27	29	28	30	29	29	27	27	27	26	26	26	27	24	23	22	26	26	25	26	26	26	24	25	26	25	--	27		
MINIMUM	19	19	19	19	19	17	19	19	19	19	19	18	18	17	17	17	16	19	17	16	16	16	16	17	17	17	18	16	18	17	--	18		

RUSSIAN RIVER BASIN

285

11-4652. DRY CREEK NEAR GEYSERVILLE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	.10	1	0	12	3	.10	39	2	.21
2	.10	2	0	71	18	6.0	37	1	.10
3	.10	1	0	67	12	2.5	30	1	.08
4	.10	1	0	31	2	.16	27	1	.07
5	.10	1	0	21	2	.11	26	1	.07
6	.10	1	0	17	2	.09	24	1	.06
7	.10	1	0	16	2	.09	23	1	.06
8	.10	1	0	13	3	.11	54	12	2.1
9	.10	1	0	12	4	.13	74	5	1.0
10	.10	1	0	12	4	.13	2990	1000	12100
11	.10	1	0	12	6	.19	968	345	1020
12	.35	1	0	12	5	.16	361	96	100
13	.35	1	0	16	1	.04	378	40	90
14	12	4	.23	19	6	.55	1480	229	1030
15	9.0	1	.04	123	47	17	4110	866	13200
16	5.1	1	.01	57	11	1.7	1480	321	1380
17	3.3	3	.03	37	5	.50	711	132	253
18	2.1	4	.02	36	3	.29	418	79	89
19	1.3	3	.01	51	2	.28	311	35	29
20	1.1	2	.01	37	4	.40	249	45	30
21	.64	1	0	30	4	.32	203	25	14
22	.50	2	0	26	2	.14	180	23	11
23	.35	4	0	23	2	.12	1710	394	2850
24	.50	4	.01	24	1	.06	5780	1560	27000
25	.35	4	0	31	1	.08	3270	835	7480
26	.35	3	0	30	2	.16	2180	458	2780
27	.35	3	0	26	3	.21	1320	224	798
28	.35	2	0	23	3	.19	1470	173	687
29	2.1	3	.02	21	1	.06	1010	97	265
30	16	4	.17	33	6	.55	797	75	161
31	13	2	.07	--	--	--	651	62	109
TOTAL	70.19	--	.62	939	--	32.42	32361	--	71479.75

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	510	52	72	1170	162	512	2800	1130	8800
2	402	41	45	985	108	287	2000	400	2160
3	325	32	28	835	100	225	1600	272	1180
4	275	19	14	739	72	144	1220	190	626
5	238	10	6.4	1780	388	3230	1010	122	333
6	220	9	5.3	3640	1110	12000	854	91	210
7	198	7	3.7	1980	323	1780	728	75	147
8	182	5	2.5	1690	248	1320	640	62	107
9	169	6	2.7	4740	1340	17900	560	46	70
10	158	5	2.1	2980	498	4080	495	36	48
11	2400	1240	18800	5910	835	14500	418	30	34
12	9240	2760	84600	3640	329	3310	402	27	29
13	13500	3820	154000	2180	240	1410	356	23	22
14	4050	1590	18000	1870	348	2020	304	20	16
15	2190	690	4250	2670	408	2980	269	21	15
16	1570	275	1170	2020	221	1210	249	19	13
17	1270	110	377	1600	228	985	311	41	34
18	1610	397	2670	1310	172	608	263	17	12
19	4180	1130	13400	1080	115	335	228	16	9.8
20	6800	2850	55100	894	97	234	225	15	9.1
21	10100	3390	99300	767	81	168	238	16	10
22	4330	1200	14700	684	49	90	208	10	5.6
23	2520	610	4240	1010	145	424	191	12	6.2
24	1780	360	1730	2270	353	2440	178	14	6.7
25	2250	716	4850	1880	257	1300	169	15	6.8
26	5000	1870	28300	1500	253	1020	160	6	2.6
27	2660	613	4460	1530	203	923	156	5	2.1
28	1990	370	1990	3330	2000	18100	154	5	2.1
29	1550	282	1180	--	--	--	145	10	3.9
30	1640	249	1100	--	--	--	135	10	3.6
31	1270	164	562	--	--	--	133	5	1.8
TOTAL	84577	--	514960.7	56684	--	93535	16799	--	13926.3

RUSSIAN RIVER BASIN

11-4652. DRY CREEK NEAR GEYSERVILLE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	129	5	1.7	86	2	.46	33	10	.89
2	147	8	3.2	86	4	.93	31	8	.67
3	160	7	3.0	86	5	1.2	31	6	.50
4	129	5	1.7	82	4	.89	30	4	.32
5	323	310	313	75	5	1.0	30	5	.41
6	256	142	104	71	4	.77	29	6	.47
7	201	11	6.0	68	3	.55	29	8	.63
8	180	5	2.4	65	3	.53	29	11	.86
9	180	6	2.9	63	2	.34	29	14	1.1
10	165	8	3.6	61	2	.33	29	16	1.3
11	151	4	1.6	60	2	.32	29	18	1.4
12	141	6	2.3	58	2	.31	29	16	1.3
13	133	4	1.4	58	6	.94	29	13	1.0
14	127	2	.69	55	10	1.5	29	11	.86
15	123	4	1.3	54	6	.87	29	8	.63
16	120	4	1.3	54	3	.44	26	6	.42
17	116	5	1.6	53	4	.57	25	4	.27
18	109	5	1.5	49	6	.79	22	3	.18
19	103	3	.83	48	8	1.0	21	4	.23
20	101	11	3.0	45	8	.97	21	5	.28
21	98	8	2.1	40	8	.86	21	6	.34
22	95	6	1.5	38	15	1.5	20	7	.38
23	183	18	9.4	37	22	2.2	19	8	.41
24	167	14	6.3	35	15	1.4	17	9	.41
25	125	7	2.4	35	10	.95	16	10	.43
26	109	4	1.2	35	5	.47	15	11	.45
27	101	3	.82	37	10	1.0	14	13	.49
28	95	3	.77	37	15	1.5	13	14	.49
29	93	8	2.0	37	11	1.1	13	16	.56
30	90	5	1.2	36	7	.68	11	17	.50
31	--	--	--	36	8	.78	--	--	--
TOTAL	4250	--	484.71	1680	--	27.15	719	--	18.18

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	11	18	.53	2.6	3	.02	.66	12	.02
2	11	18	.53	2.6	3	.02	.66	13	.02
3	8.7	17	.40	2.6	3	.02	.66	13	.02
4	7.7	16	.33	2.6	3	.02	.66	12	.02
5	7.2	15	.29	2.4	3	.02	.66	10	.02
6	6.7	14	.25	1.7	3	.01	.57	8	.01
7	6.7	13	.24	1.2	2	.01	.57	6	.01
8	6.7	12	.22	.85	2	0	.48	5	.01
9	6.7	11	.20	.75	5	.01	.48	4	.01
10	6.7	3	.05	.39	8	.01	.48	3	0
11	6.7	8	.14	.75	12	.02	.48	3	0
12	6.2	10	.17	.85	18	.04	.48	5	.01
13	5.8	13	.20	1.1	24	.07	.57	7	.01
14	5.8	16	.25	1.3	30	.11	.48	9	.01
15	5.4	18	.26	1.4	45	.17	.48	11	.01
16	4.7	20	.25	1.6	62	.27	.57	13	.02
17	3.8	17	.17	1.3	40	.14	.48	15	.02
18	3.8	14	.14	.85	35	.08	.48	13	.02
19	3.8	12	.12	.75	25	.05	.48	11	.01
20	3.5	10	.09	.57	15	.02	.39	9	.01
21	3.3	8	.07	.75	14	.03	.48	7	.01
22	3.3	6	.05	.66	15	.03	.48	5	.01
23	3.0	5	.04	.75	14	.03	.48	3	0
24	2.8	5	.04	.66	13	.02	.39	3	0
25	2.8	5	.04	.66	11	.02	.39	3	0
26	2.6	4	.03	.66	10	.02	.48	3	0
27	2.6	4	.03	.57	9	.01	.48	3	0
28	2.6	4	.03	.48	9	.01	.39	4	0
29	2.6	3	.02	.57	10	.02	.39	4	0
30	2.6	3	.02	.57	11	.02	.39	4	0
31	2.6	3	.02	.66	12	.02	--	--	--
TOTAL	159.4	--	5.22	35.15	--	1.34	15.12	--	.28

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)198288.86
694471.67

11-4652. DRY CREEK NEAR GEYSERVILLE, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
DEC 10, 1968	0830	12	2770	266	1990	37	49	61	73	83	90	96	100	--	--	--	SBWC
DEC 26.....	1300	8	2110	439	2500	22	31	41	51	60	69	79	93	100	--	--	VBWC
JAN 13, 1969	1010	10	17800	3220	155000	24	28	38	49	62	75	88	98	100	--	--	VPWC
JAN 13.....	1545	10	10600	2730	78100	18	19	27	37	48	63	84	97	99	100	--	VPWC
FEB 10.....	1215	11	3060	634	5240	19	21	31	39	47	54	63	80	98	100	--	VPWC
FEB 24.....	1700	10	2220	309	1850	14	34	47	57	66	83	94	99	100	--	--	SBWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE													METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED	.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
OCT 31, 1968	1300	16	5	14	1	2	5	8	11	18	28	44	69	92	100	S		
JAN 13, 1969	1630	10	5	10100	--	--	1	2	7	16	38	65	88	100	--	S		
FEB 10,.....	1300	11	5	3000	--	--	1	6	11	21	36	59	88	100	--	S		

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY,
WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date of collection	Concentration of suspended sediment (mg/l)	Turbidity (mg/l silica)	Date of collection	Concentration of suspended sediment (mg/l)	Turbidity (mg/l silica)
OCT. 2, 1968.....	2	2	JAN. 5.....	10	11
OCT. 3.....	1	1	JAN. 6.....	9	11
OCT. 4.....	1	1	JAN. 7.....	7	10
OCT. 7.....	1	1	JAN. 8.....	4	6
OCT. 9.....	1	1	JAN. 9.....	6	5
OCT. 14.....	1	1	JAN. 10.....	5	6
OCT. 16.....	1	1	JAN. 11.....	111	61
OCT. 18.....	4	2	JAN. 12.....	994	120
OCT. 21.....	1	2	JAN. 13.....	3220	332
OCT. 23.....	4	3	JAN. 14.....	1720	210
OCT. 25.....	4	3	JAN. 15.....	391	200
OCT. 28.....	2	2	JAN. 16.....	397	200
OCT. 30.....	4	3	JAN. 17.....	91	78
OCT. 31.....	2	2	JAN. 18.....	67	61
NOV. 1.....	3	5	JAN. 19.....	1120	190
NOV. 4.....	1	2			
NOV. 6.....	2	2			
NOV. 8.....	3	2	JAN. 22.....	1180	143
NOV. 11.....	6	3	JAN. 23.....	566	130
NOV. 13.....	1	1	JAN. 24.....	370	125
NOV. 18.....	3	2	JAN. 25.....	724	150
NOV. 20.....	3	3	JAN. 26.....	1680	114
NOV. 22.....	1	2	JAN. 27.....	1640	124
NOV. 25.....	1	2	JAN. 28.....	362	142
NOV. 27.....	3	3	JAN. 29.....	368	140
NOV. 29.....	1	2	JAN. 30.....	262	135
DEC. 2.....	1	2	JAN. 31.....	166	99
DEC. 4.....	1	2	FEB. 1.....	174	92
DEC. 6.....	1	1	FEB. 2.....	106	94
DEC. 9.....	5	1	FEB. 3.....	100	94
DEC. 10.....	266	121	FEB. 4.....	62	36
DEC. 13.....	18	28	FEB. 5.....	61	63
DEC. 16.....	302	128	FEB. 6.....	1050	144
DEC. 17.....	115	87	FEB. 7.....	282	135
DEC. 18.....	84	66	FEB. 8.....	276	135
DEC. 19.....	29	30	FEB. 9.....	1330	128
DEC. 20.....	56	22	FEB. 10.....	486	150
DEC. 21.....	25	20	FEB. 11.....	608	154
DEC. 26.....	459	120	FEB. 12.....	360	158
JAN. 4, 1969.....	19	20	FEB. 13.....	238	121

RUSSIAN RIVER BASIN

11-4652. DRY CREEK NEAR GEYSERVILLE, CALIF.--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY,
WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date of collection	Concentration of suspended sediment (mg/l)	Turbidity (mg/l silica)	Date of collection	Concentration of suspended sediment (mg/l)	Turbidity (mg/l silica)
FEB. 14.....	226	120	APR. 11.....	4	4
FEB. 15.....	956	132	APR. 12.....	7	5
FEB. 16.....	212	129	APR. 13.....	4	3
FEB. 17.....	233	128	APR. 14.....	2	2
FEB. 18.....	170	115	APR. 15.....	4	2
FEB. 19.....	106	89	APR. 16.....	4	2
FEB. 20.....	100	86	APR. 17.....	6	3
FEB. 21.....	68	39	APR. 18.....	4	3
FEB. 22.....	208	141	APR. 19.....	3	1
FEB. 23.....	210	149	APR. 20.....	14	3
FEB. 24.....	309	150	APR. 21.....	9	3
FEB. 25.....	262	145	APR. 22.....	6	4
FEB. 26.....	266	143	APR. 23.....	4	2
FEB. 27.....	134	97	APR. 24.....	15	-
FEB. 28.....	100	97	APR. 25.....	8	6
MAR. 1.....	1110	137	APR. 26.....	4	5
MAR. 2.....	389	156	APR. 27.....	3	3
MAR. 3.....	157	115	APR. 28.....	2	3
MAR. 4.....	186	117	APR. 29.....	9	2
MAR. 5.....	151	69	APR. 30.....	4	2
MAR. 6.....	87	60	MAY 1.....	2	2
MAR. 7.....	72	56	MAY 2.....	4	2
MAR. 8.....	58	45	MAY 5.....	5	2
MAR. 9.....	44	35	MAY 7.....	3	1
MAR. 10.....	37	30	MAY 9.....	2	1
MAR. 11.....	50	37	MAY 12.....	2	1
MAR. 12.....	40	33	MAY 14.....	10	4
MAR. 13.....	24	23	MAY 16.....	3	1
MAR. 14.....	19	17	MAY 19.....	8	2
MAR. 15.....	21	13	MAY 21.....	8	5
MAR. 16.....	18	18	MAY 23.....	22	7
MAR. 17.....	74	43	MAY 26.....	5	3
MAR. 18.....	14	12	MAY 28.....	15	6
MAR. 19.....	16	12	MAY 30.....	7	3
MAR. 20.....	14	11	JUNE 1.....	10	10
MAR. 21.....	16	9	JUNE 4.....	4	2
MAR. 22.....	10	7	JUNE 6.....	6	4
MAR. 23.....	12	8	JUNE 11.....	18	12
MAR. 24.....	14	4	JUNE 18.....	3	3
MAR. 25.....	17	5	JUNE 25.....	10	4
MAR. 26.....	5	3	JULY 2.....	18	9
MAR. 27.....	5	4	JULY 9.....	11	4
MAR. 28.....	4	3	JULY 10.....	3	3
MAR. 29.....	11	3	JULY 16.....	20	9
MAR. 30.....	11	3	JULY 23.....	5	2
MAR. 31.....	4	2	JULY 30.....	3	2
APR. 1.....	5	2	AUG. 8.....	2	2
APR. 2.....	4	4	AUG. 13.....	24	7
APR. 3.....	5	4	AUG. 16.....	62	8
APR. 4.....	5	3	AUG. 20.....	15	6
APR. 5.....	124	90	AUG. 27.....	9	4
APR. 6.....	198	93	SEPT. 3.....	13	5
APR. 7.....	11	10	SEPT. 8.....	5	1
APR. 8.....	5	5	SEPT. 10.....	3	2
APR. 9.....	6	7	SEPT. 17.....	15	2
APR. 10.....	9	6	SEPT. 24.....	3	1

11-4670. RUSSIAN RIVER NEAR GUERNEVILLE, CALIF.

LOCATION.--Lat 38°30'00", long 122°56'05", in NE¼ sec.35, T.8 N., R.10 W., Sonoma County, at gaging station 0.6 mile downstream from Hobson Creek, and 3.4 miles east of Guerneville.

DRAINAGE AREA.--1,340 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1965, November 1968 to September 1969.

Water temperatures: January 1964 to September 1969.

Sediment records.--November 1965 (revised) to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 28°C July 18; minimum, 8°C on several days during December to February.

EXTREMES, 1964-69.--Water temperatures: Maximum, 28°C on several days in 1964, 1968-69; minimum (1965-69), 4°C Dec. 15, 1967, Jan. 12, 1968.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Temperature recorder stopped Oct. 2 to Nov. 4, Apr. 17-28; temperature ranges, 14°C to 19°C and 13°C to 19°C respectively. No record for May 2-6, Sept. 6, 7, 19-22.

CHEMICAL ANALYSES, NOVEMBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV. 06...	0830	296	13	8.3	--	--	15	--	154	0	--	13
JAN. 07...	1030	1380	10	10.3	23	--	8.9	--	135	0	--	8.0
MAR. 13...	0845	2740	8	10.6	23	--	7.0	--	125	0	--	4.8
APR. 24...	1200	1730	14	9.9	24	12	8.8	1.2	126	0	15	5.5
JULY 03...	0930	199	23	7.6	26	--	11	--	159	0	--	7.6
SEPT. 16...	0630	152	17	8.8	27	--	11	--	153	0	--	7.5

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 06...	--	510	--	--	140	14	19	.6	126	8.1	327
JAN. 07...	--	330	--	--	116	5	25	.5	111	7.6	271
MAR. 13...	--	120	--	--	119	16	21	.4	103	7.9	249
APR. 24...	2.8	--	153	.21	108	5	15	.5	103	8.2	247
JULY 03...	--	--	--	--	134	4	27	.6	130	8.3	292
SEPT. 16...	--	--	--	--	136	10	26	.6	125	7.9	283

RUSSIAN RIVER BASIN

11-4670. RUSSIAN RIVER NEAR GUERNEVILLE, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
	MAXIMUM	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVEMBER																																		
	MAXIMUM	--	--	--	--	15	15	15	16	16	17	17	16	14	13	11	12	13	13	14	14	14	14	14	14	13	12	12	11	11	11	--	14	
	MINIMUM	--	--	--	--	14	13	14	14	15	16	16	14	12	11	11	11	12	13	13	14	14	14	14	13	12	12	11	11	11	11	--	13	
DECEMBER																																		
	MAXIMUM	11	11	10	10	10	11	11	11	12	12	12	11	10	10	10	10	10	10	10	9	9	8	8	8	8	8	8	8	8	9	9	10	
	MINIMUM	11	10	10	10	10	10	11	11	11	12	11	10	10	10	10	10	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	9	
JANUARY																																		
	MAXIMUM	8	9	9	9	10	10	11	10	10	10	9	9	10	10	10	9	9	9	9	10	11	11	10	9	9	10	10	9	9	8	8	10	
	MINIMUM	8	8	9	9	9	10	10	9	9	10	9	9	9	10	9	9	9	9	9	10	11	10	9	9	9	9	9	9	8	8	8	9	
FEBRUARY																																		
	MAXIMUM	9	9	9	9	9	9	9	9	10	11	11	10	9	10	10	10	10	10	10	10	10	10	10	10	9	9	9	9	--	--	--	10	
	MINIMUM	8	9	9	9	9	9	9	9	9	10	11	10	9	9	10	10	10	10	10	10	10	10	10	9	9	9	9	9	--	--	--	9	
MARCH																																		
	MAXIMUM	9	9	9	10	10	10	10	10	10	10	10	10	10	10	11	12	12	13	14	14	14	13	14	15	15	15	16	17	17	17	17	17	13
	MINIMUM	9	9	9	9	10	10	10	9	10	10	10	10	10	10	10	11	11	12	13	14	14	14	13	14	15	15	16	17	17	17	17	17	12
APRIL																																		
	MAXIMUM	17	16	13	13	13	15	15	15	16	16	16	16	14	16	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	19	--	--
	MINIMUM	15	13	12	13	12	12	13	14	15	14	15	16	14	13	14	16	--	--	--	--	--	--	--	--	--	--	--	--	--	17	17	--	--
MAY																																		
	MAXIMUM	18	--	--	--	--	--	20	18	20	21	21	20	19	19	20	22	22	22	22	22	21	21	21	20	20	22	22	21	22	24	24	24	21
	MINIMUM	16	--	--	--	--	--	18	17	17	19	19	18	18	17	18	19	20	20	20	20	21	21	21	20	19	20	20	19	20	22	22	23	19
JUNE																																		
	MAXIMUM	23	21	21	21	21	22	22	21	20	20	20	21	21	22	23	24	24	22	21	22	23	23	24	24	23	23	23	23	24	25	--	22	
	MINIMUM	20	20	21	20	21	20	21	20	19	18	19	20	20	21	22	23	21	21	21	21	21	21	23	23	23	22	22	21	21	21	22	--	21
JULY																																		
	MAXIMUM	25	25	26	26	26	25	25	24	24	25	26	26	26	26	27	27	27	28	27	27	26	26	25	24	24	24	24	24	24	24	25	25	
	MINIMUM	23	23	23	24	24	24	24	23	22	22	23	23	24	24	23	24	24	24	24	24	24	24	24	24	23	23	23	23	23	22	22	23	
AUGUST																																		
	MAXIMUM	25	26	27	27	26	26	25	25	26	25	26	26	25	25	25	24	23	24	25	25	25	25	23	23	24	24	24	24	24	24	24	25	
	MINIMUM	22	23	23	24	24	23	23	23	22	23	23	23	23	22	22	23	23	22	21	22	23	23	22	21	22	22	22	22	21	22	22	22	
SEPTEMBER																																		
	MAXIMUM	24	24	23	23	23	--	--	--	24	24	23	22	22	22	20	21	21	22	--	--	--	--	--	22	22	23	23	22	21	22	22	--	--
	MINIMUM	22	21	21	21	22	--	--	--	23	22	22	21	21	20	19	17	19	20	--	--	--	--	--	19	19	20	21	21	20	20	--	--	

MONTHLY AND ANNUAL SUMMARY OF SUSPENDED-SEDIMENT DISCHARGE,
WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DISCHARGE (CFS)	SEDIMENT DISCHARGE (TONS)
OCTOBER 1968.....	6,176	233.8
NOVEMBER.....	10,128	459.5
DECEMBER.....	201,220	249,425.8
JANUARY 1969.....	566,400	1,060,740
FEBRUARY.....	383,870	332,920
MARCH.....	136,640	92,860
APRIL.....	37,271	6,640
MAY.....	20,237	1,253
JUNE.....	9,022	433
JULY.....	6,048	286.2
AUGUST.....	5,861	280.9
SEPTEMBER.....	5,066	88.3
TOTAL FOR YEAR.....	1,387,939	1,745,620.5

11-4670. RUSSIAN RIVER NEAR GUERNEVILLE, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 11, 1968	1500	11	7550	700	14300	49	61	69	84	89	95	97	98	99	100	--	VPWC	
DEC 24.....	1715	8	33900	1580	145000	41	46	59	72	86	94	98	100	--	--	--	SPWC	
DEC 30.....	1415	8	5790	136	2130	35	49	58	68	78	88	95	97	98	100	--	SBWC	
JAN 12, 1969	1730	9	38800	1050	110000	31	41	55	69	81	92	98	100	--	--	--	SBWC	
JAN 13.....	1845	10	67700	1290	236000	41	57	72	85	93	98	100	--	--	--	--	SBWC	
JAN 15.....	1530	9	21400	469	27100	33	39	51	62	76	88	97	99	100	--	--	VPWC	
JAN 20.....	0930	11	37800	929	94800	29	40	53	66	79	91	99	100	--	--	--	VBWC	
JAN 23.....	0900	9	26300	445	31600	28	38	51	63	76	88	97	99	100	--	--	SBWC	
JAN 30.....	1445	8	14600	287	11300	21	32	43	54	59	80	95	99	100	--	--	SBWC	
FEB 13.....	1400	10	16700	448	20200	23	27	38	48	62	75	95	100	--	--	--	VPWC	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAMPLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALY- SIS
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
DEC 11, 1968	1425	11	5	7740	--	--	1	9	16	31	55	75	100	--	--	S
JAN 15, 1969	1645	9	5	20600	--	--	--	1	3	7	13	27	51	100	--	S

SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date of collection	Concentration of suspended sediment (mg/l)	Turbidity (mg/l silica)	Date of collection	Concentration of suspended sediment (mg/l)	Turbidity (mg/l silica)
OCT. 2, 1968.....	16	15	JAN. 21.....	944	114
OCT. 4.....	17	17	JAN. 23.....	445	142
OCT. 7.....	15	11	JAN. 25.....	402	134
OCT. 9.....	15	15	JAN. 30.....	287	135
OCT. 11.....	16	13	FEB. 8.....	194	110
OCT. 14.....	15	15	FEB. 12.....	470	143
OCT. 16.....	13	13	FEB. 13.....	427	138
OCT. 18.....	14	13	FEB. 22.....	170	70
OCT. 21.....	14	13	MAR. 1.....	574	132
OCT. 23.....	12	10	MAR. 4.....	245	108
OCT. 25.....	11	11	MAR. 7.....	214	121
OCT. 28.....	13	11	MAR. 18.....	93	40
NOV. 4.....	21	20	APR. 1.....	42	25
NOV. 29.....	6	7	APR. 7.....	68	48
DEC. 3.....	5	7	APR. 11.....	39	23
DEC. 11.....	714	798	MAY 6.....	24	11
DEC. 23.....	154	93	MAY 28.....	19	15
DEC. 24.....	1580	488	JUNE 11.....	18	14
DEC. 30.....	120	102	JULY 10.....	17	15
JAN. 6, 1969.....	43	37	AUG. 8.....	23	11
JAN. 10.....	22	20	SEPT. 8.....	7	7
JAN. 12.....	1050	608	SEPT. 23.....	5	7
JAN. 13.....	1290	960			
JAN. 15.....	458	274			
JAN. 20.....	929	290			

RUSSIAN RIVER BASIN

MISCELLANEOUS ANALYSES OF STREAMS IN RUSSIAN RIVER BASIN

PERIODIC DETERMINATIONS OF TURBIDITY

DATE OF COLLECTION	TIME (24-HR)	WATER TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	TURBIDITY (MG/L SILICA)	
				TOTAL	RESIDUAL <u>1/</u>
11-4620. EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF. (LAT 39°11'45", LONG 123°11'30") <u>2/</u>					
DEC. 18, 1968.....	1100	12	2830	54	6
DEC. 20.....	1000	10	27	62	10
DEC. 27.....	1130	9	--	150	38
JAN. 3, 1969.....	--	9	--	235	51
JAN. 10.....	--	9	--	96	33
JAN. 17.....	--	9	--	111	33
JAN. 24.....	--	10	--	109	59
JAN. 31.....	--	9	--	108	66
FEB. 7.....	--	9	--	131	17
FEB. 14.....	0915	9	648	105	25
FEB. 20.....	--	10	--	94	22
FEB. 28.....	--	10	--	72	6
MAR. 7.....	--	10	--	71	23
MAR. 14.....	--	10	--	58	21
MAR. 21.....	--	11	--	43	5
MAR. 28.....	0945	10	29	44	7
APR. 4.....	--	10	--	46	34
APR. 11.....	--	11	--	76	0
MAY 9.....	0915	12	482	52	4

1/ Turbidity measured after a 7-day settling period.2/ Samples collected by Pacific Gas and Electric Company, and U.S. Forest Service.

GARCIA RIVER BASIN

293

11-4676. GARCIA RIVER NEAR POINT ARENA, CALIF.

LOCATION.--Lat 38°55'35", long 123°37'45", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.12 N., R.16 W., Mendocino County, temperature recorder at gaging station on left bank, 0.9 mile downstream from North Fork, and 3.5 miles northeast of town of Point Arena.

DRAINAGE AREA.--98.5 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1963 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 7°C Dec. 21, 22.

EXTREMES, 1963-69.--Water temperatures: Maximum (1963-68), 22°C June 22, 1964, Aug. 29, 30, 1968; minimum, 5°C Dec. 14-16, 1967.

REMARKS.--Recorder malfunction Feb. 13 to Mar. 10; probe inoperative May 24 to Aug. 11.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER																																
MAXIMUM	17	17	17	17	17	16	15	16	15	17	16	16	16	15	15	16	16	15	16	15	16	16	16	16	16	16	16	15	16	15	14	16
MINIMUM	14	16	15	15	15	13	13	12	12	12	15	14	14	13	13	13	13	13	12	13	13	12	14	13	13	13	13	13	13	14	13	13
NOVEMBER																																
MAXIMUM	13	14	14	13	15	14	14	15	16	16	15	14	12	11	12	13	14	14	14	14	14	14	14	13	13	11	11	11	11	11	--	13
MINIMUM	11	12	13	12	13	12	12	13	15	14	14	12	11	10	10	12	12	13	13	12	13	12	12	12	11	10	9	9	9	9	--	12
DECEMBER																																
MAXIMUM	11	9	9	10	12	11	11	12	13	13	12	11	10	12	12	11	10	11	10	9	8	9	10	12	12	11	10	11	11	10	10	11
MINIMUM	9	8	8	8	9	10	10	11	11	12	11	10	10	10	11	10	10	9	9	8	7	7	9	10	11	10	9	10	10	9	9	10
JANUARY																																
MAXIMUM	10	11	11	11	12	12	12	10	10	11	11	12	12	11	10	10	10	10	12	13	13	12	10	11	12	12	10	10	9	9	10	11
MINIMUM	9	9	10	10	11	11	10	8	8	9	10	11	11	10	9	9	9	10	12	12	10	9	10	11	10	10	8	8	8	8	8	10
FEBRUARY																																
MAXIMUM	11	11	11	10	10	10	11	11	12	12	12	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	9	10	9	9	9	9	10	10	11	12	10	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	11	10	12	11	12	10	12	13	13	11	12	13	14	14	15	15	15	15	16	16	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	8	9	8	8	8	9	10	10	9	10	9	9	10	10	10	10	11	12	12	13	--
APRIL																																
MAXIMUM	15	12	14	13	12	13	14	14	13	15	15	14	13	15	15	15	15	16	16	17	16	14	14	15	15	16	17	18	16	16	--	15
MINIMUM	11	11	10	10	10	10	9	10	11	11	11	12	10	11	10	10	11	11	11	11	12	11	11	11	10	11	12	12	12	11	--	11
MAY																																
MAXIMUM	16	16	15	17	18	19	19	17	18	18	18	17	17	16	17	19	20	19	18	19	18	17	17	--	--	--	--	--	--	--	--	--
MINIMUM	11	11	11	11	12	13	14	14	13	13	14	14	14	16	13	14	13	15	13	14	14	14	14	--	--	--	--	--	--	--	--	--
JUNE																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	20	21	21	20	21	21	20	21	21	21	21	21	20	20	20	20	19	20	20	21	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	15	15	16	15	15	16	16	16	15	16	16	16	15	15	15	15	15	15	15	15	--
SEPTEMBER																																
MAXIMUM	21	21	21	20	20	20	20	21	20	20	19	19	19	19	19	18	19	19	19	19	19	19	19	20	20	20	19	19	19	19	--	20
MINIMUM	15	15	15	15	15	16	16	16	16	16	15	15	15	14	15	14	15	16	16	16	16	16	15	15	16	15	15	16	15	15	15	--

LOCATION.--Lat 39°10'15", long 123°39'55", in SE 1/4 sec.7, T.15 N., R.16 W., Mendocino County, temperature recorder at gaging station on left bank, 2.7 miles downstream from North Fork, 5.4 miles upstream from mouth, and 6.6 miles west of Navarro.

PERIOD OF RECORD.--Chemical analyses: January 1959 to July 1965.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1965-68.--Water temperatures: Maximum, 25°C Aug. 20, 1966, June 30, 1967; minimum (1967-68), 6°C on several days in 1967 and 1968.

REMARKS.--No record Jan. 13 to Sept. 30, probe buried. Where no maximum or minimum is shown, temperature is once-daily reading.

[illegible]

BIG RIVER BASIN

295

11-4685. NOYO RIVER NEAR FORT BRAGG, CALIF.

LOCATION (revised).--Lat 39°25'42", long 123°44'12", in NE¼ sec. 15, T.18 N., R.17 W., Mendocino County, temperature recorder at gaging station on right bank, 0.7 mile downstream from South Fork, and 3.5 miles east of Fort Bragg.

DRAINAGE AREA.--106 sq mi.

PERIOD OF RECORD.--Chemical analyses: January 1959 to September 1965.

Water temperatures: December 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum 21°C July 7, 8; minimum, 5°C Dec. 2, 3.

EXTREMES, 1965-69.--Water temperatures: Maximum, 22°C on several days in 1966-68; minimum, 2°C Dec. 17-21, 1965.

REMARKS.--No record Aug. 8 to Sept. 3.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	16	16	15	16	16	14	13	13	12	14	14	14	14	14	14	13	14	14	13	13	13	13	13	13	13	13	13	12	13	13	13	14	
MINIMUM	14	14	14	14	14	12	11	10	9	11	13	13	13	12	11	11	12	12	11	11	11	11	11	11	11	11	11	11	12	12	12	12	
NOVEMBER																																	
MAXIMUM	12	12	13	12	13	12	12	13	14	14	14	12	10	8	10	11	11	12	12	12	12	12	12	11	10	9	9	8	8	7	--	11	
MINIMUM	11	12	12	12	11	11	11	13	13	12	10	8	7	8	9	10	11	11	11	11	10	11	10	10	9	8	7	6	7	6	--	10	
DECEMBER																																	
MAXIMUM	8	6	7	8	9	10	10	10	11	12	11	10	9	10	11	11	10	10	9	8	6	7	10	10	10	10	10	10	10	9	9	9	
MINIMUM	6	5	5	6	8	9	8	10	10	10	10	9	9	9	10	10	9	9	8	6	6	6	7	10	10	10	9	10	9	9	8	8	
JANUARY																																	
MAXIMUM	9	10	10	10	10	10	11	10	8	8	10	11	11	11	10	10	9	10	11	12	12	12	10	10	11	11	10	9	9	9	9	10	
MINIMUM	9	9	9	9	9	9	10	7	7	8	8	10	11	10	9	9	8	8	10	11	11	10	10	10	10	10	9	9	8	8	8	9	
FEBRUARY																																	
MAXIMUM	10	10	9	9	8	9	9	9	10	10	10	10	9	9	9	9	9	10	9	8	8	7	8	8	8	8	8	8	--	--	--	9	
MINIMUM	9	9	9	8	8	7	8	9	9	10	10	9	8	8	9	9	9	9	9	8	8	7	7	7	7	8	8	8	--	--	--	8	
MARCH																																	
MAXIMUM	8	8	8	8	9	9	9	8	8	8	8	9	9	8	9	9	10	11	10	9	10	11	11	11	11	11	12	12	12	13	13	10	
MINIMUM	8	8	8	7	8	9	8	8	7	7	6	7	7	6	6	7	9	9	8	8	9	9	8	7	8	8	8	9	10	11	12	8	
APRIL																																	
MAXIMUM	12	11	11	11	10	11	11	11	12	13	13	13	12	12	13	13	12	14	14	14	13	13	12	13	13	13	14	15	14	13	--	13	
MINIMUM	10	9	8	8	9	9	8	8	10	10	10	11	9	9	9	9	11	10	10	11	11	11	10	9	9	9	10	11	11	10	--	10	
MAY																																	
MAXIMUM	13	14	13	14	15	16	17	16	15	15	16	15	14	16	16	17	18	17	17	18	17	16	15	15	17	16	18	18	19	19	20	16	
MINIMUM	9	10	10	10	10	12	13	14	13	13	14	13	13	13	13	13	13	14	13	14	14	15	14	13	14	14	14	14	15	15	15	13	
JUNE																																	
MAXIMUM	18	16	18	18	17	18	17	17	16	16	16	16	16	16	19	20	20	18	17	17	19	20	20	20	18	18	18	19	19	19	--	18	
MINIMUM	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	17	16	15	15	15	16	17	17	16	15	15	14	14	14	--	15	
JULY																																	
MAXIMUM	20	19	19	19	19	20	21	21	19	18	19	19	19	18	18	18	19	19	20	20	20	19	19	19	17	18	18	18	18	17	18	19	
MINIMUM	15	15	14	15	16	15	15	16	16	15	15	14	14	14	13	13	13	14	15	15	15	15	16	17	16	15	15	14	15	15	14	15	
AUGUST																																	
MAXIMUM	17	18	18	18	18	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	14	14	14	13	13	14	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER																																	
MAXIMUM	--	--	--	16	15	16	16	17	17	16	16	16	16	15	15	15	16	16	16	16	16	16	16	16	16	16	15	15	16	15	15	--	16
MINIMUM	--	--	--	13	13	12	14	15	14	14	14	13	12	12	12	11	13	15	15	15	14	13	13	15	13	13	14	13	13	12	--	13	

TENMILE RIVER BASIN

11-4686. MIDDLE FORK TENMILE RIVER NEAR FORT BRAGG, CALIF.

LOCATION (revised).--Lat 39°34'22", long 123°41'57", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.20 N., R.17 W., Mendocino County, temperature recorder at gaging station on right bank, 0.8 mile upstream from confluence with North Fork Tenmile River, and 10 miles northeast of Fort Bragg.

DRAINAGE AREA.--32.9 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1964 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 19°C on several days during June and July; minimum, 6°C Dec. 3.

EXTREMES, 1964-69.--Water temperatures: Maximum, 21°C June 14, 18, 1966; minimum (1964-65, 1966-69), 4°C on several days in 1967 and 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	14	15	14	14	15	14	13	12	12	13	13	13	13	13	12	12	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	13		
MINIMUM	14	14	14	13	13	12	12	10	10	11	13	13	13	13	12	12	11	12	12	12	12	11	11	11	11	11	11	11	12	12	12	12	12	
NOVEMBER																																		
MAXIMUM	12	12	12	12	12	12	12	12	13	13	12	12	12	11	10	9	11	11	12	12	11	11	11	11	11	10	9	9	8	8	7	--	11	
MINIMUM	11	12	12	12	12	11	11	12	12	12	12	11	10	9	9	9	11	11	11	11	11	10	11	10	10	9	8	8	8	7	7	--	10	
DECEMBER																																		
MAXIMUM	7	7	7	7	8	8	8	9	9	11	11	10	9	9	9	10	10	9	9	9	9	7	7	7	9	10	10	10	10	10	9	9	9	
MINIMUM	7	7	6	7	7	8	8	8	9	9	10	9	9	9	9	10	9	9	9	9	7	7	7	7	9	10	10	9	9	9	9	9	8	
JANUARY																																		
MAXIMUM	9	9	9	8	8	8	9	9	7	8	9	9	9	9	9	9	9	9	9	9	10	10	10	9	9	10	10	9	9	9	9	9	9	
MINIMUM	9	9	8	8	8	8	8	7	7	7	8	9	9	9	9	9	9	8	8	9	9	10	8	8	8	9	9	9	9	9	9	9	9	
FEBRUARY																																		
MAXIMUM	10	10	10	10	9	10	10	10	11	11	11	11	10	9	10	10	9	10	10	10	10	9	9	9	9	9	9	9	9	--	--	--	10	
MINIMUM	9	10	10	9	9	9	10	10	10	11	11	10	9	9	9	9	9	9	9	10	9	9	9	9	9	9	9	9	9	--	--	--	9	
MARCH																																		
MAXIMUM	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	11	11	11	11	9	
MINIMUM	9	9	9	9	9	9	9	8	8	8	8	7	8	7	7	7	8	8	9	8	8	9	9	9	10	9	9	9	9	9	10	10	8	
APRIL																																		
MAXIMUM	10	9	9	9	9	9	9	11	11	12	12	12	12	11	11	12	12	12	13	12	13	12	12	11	12	12	12	13	13	14	13	12	--	11
MINIMUM	9	9	8	8	8	8	8	10	10	10	10	11	9	9	9	10	11	11	11	11	11	11	11	11	10	9	9	11	11	12	11	--	10	
MAY																																		
MAXIMUM	12	12	12	12	14	14	14	13	14	15	15	15	14	13	14	14	16	16	15	16	16	16	16	16	16	14	15	14	16	16	17	18	18	15
MINIMUM	10	10	10	9	11	12	13	13	12	12	13	13	13	12	12	12	13	13	14	13	13	13	14	14	13	13	14	13	13	13	14	15	13	
JUNE																																		
MAXIMUM	16	16	16	16	16	16	16	16	16	16	16	16	16	16	19	19	18	18	17	17	19	19	19	18	18	17	17	17	17	18	18	--	17	
MINIMUM	15	15	14	14	16	15	14	15	16	15	15	15	15	15	16	16	17	17	17	17	17	17	17	17	17	17	17	16	16	16	16	17	--	16
JULY																																		
MAXIMUM	18	18	18	18	18	18	18	18	18	18	18	18	19	19	18	18	18	18	18	18	18	18	18	18	18	17	17	17	18	18	17	17	17	18
MINIMUM	17	17	17	17	17	17	17	17	16	16	16	16	16	16	16	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	16
AUGUST																																		
MAXIMUM	16	17	16	16	16	16	14	14	15	15	15	16	16	15	15	16	16	16	16	16	16	17	17	16	16	16	16	16	16	16	16	17	16	
MINIMUM	14	14	14	14	13	13	13	13	13	14	13	14	14	14	14	14	14	14	14	14	14	14	16	16	15	15	15	15	14	14	14	15	16	14
SEPTEMBER																																		
MAXIMUM	17	16	16	16	16	16	16	16	16	16	16	16	16	16	15	14	14	14	16	16	16	16	16	16	16	16	16	16	16	15	16	15	--	15
MINIMUM	15	15	14	14	14	14	15	15	15	15	15	14	14	14	13	14	13	14	14	15	15	15	15	14	14	16	14	14	15	14	14	14	--	14

11-4690. MATTOLE RIVER NEAR PETROLIA, CALIF.

LOCATION.--Lat 40°18'42", long 124°15'48", in NW $\frac{1}{4}$ sec.11, T.2 S., R.2 W., Humboldt County, at gaging station on right bank, 0.2 mile upstream from Clear Creek, 1.5 miles southeast of Petrolia, and 1.7 miles upstream from North Fork.

DRAINAGE AREA.--240 sq mi.

PERIOD OF RECORD.--Chemical analyses: January 1959 to September 1969.

Water temperatures: November 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 3°C Jan. 9.

EXTREMES, 1966-69.--Water temperatures: Maximum (1966-68), 27°C on several days in 1968; minimum, 3°C Jan. 9, 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Temperature probe inoperative May 14 to Aug. 11.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 02...	1050	38	17	11.2	--	--	9.5	--	120	0	--	5.0
NOV. 13...	1030	908	10	11.6	--	--	7.0	--	67	0	--	3.9
JAN. 21...	1235	12500	10	11.3	--	--	4.5	--	38	0	--	2.7
MAY 13...	1300	312	18	10.6	22	3.6	6.3	.8	78	0	14	4.7
SEPT. 09...	1305	36	--	13.7	33	5.2	9.7	1.2	106	0	25	4.6

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINIT- Y AS CA CO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 02...	--	130	--	--	128	30	14	.4	98	7.9	272
NOV. 13...	--	20	--	--	70	15	18	.4	55	7.9	168
JAN. 21...	--	50	--	--	39	8	20	.3	31	7.3	86
MAY 13...	.0	90	88	.12	70	6	16	.3	64	7.8	170
SEPT. 09...	.0	50	93	.13	104	17	17	.4	87	8.2	235

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER																																
MAXIMUM	21	20	19	18	19	20	19	18	18	19	17	16	17	17	17	18	18	17	17	18	16	17	18	18	18	18	18	16	16	16	15	18
MINIMUM	16	15	16	16	15	15	13	12	12	15	15	14	14	13	14	15	14	13	12	14	13	13	13	14	13	13	13	13	14	14	13	14
NOVEMBER																																
MAXIMUM	13	13	13	13	14	13	14	14	17	17	16	14	13	12	12	13	14	15	15	15	15	15	14	14	13	12	11	11	11	11	--	14
MINIMUM	12	12	12	12	12	12	14	14	14	14	14	13	10	10	10	12	13	14	14	14	14	14	13	13	12	11	11	10	11	10	--	12
DECEMBER																																
MAXIMUM	10	10	10	11	12	11	11	12	12	13	11	10	10	11	11	11	10	10	10	7	7	10	10	10	10	9	9	9	8	8	7	10
MINIMUM	10	9	9	9	11	10	11	11	11	11	10	9	9	10	11	10	10	9	7	7	6	7	7	10	9	9	9	8	8	7	7	9
JANUARY																																
MAXIMUM	8	8	8	9	9	9	9	7	6	7	8	9	9	9	10	11	9	9	9	10	10	9	10	11	11	11	10	10	10	9	9	9
MINIMUM	7	8	8	7	8	9	6	4	3	6	6	8	8	8	9	9	8	8	8	9	9	9	9	10	11	10	10	10	9	9	9	8
FEBRUARY																																
MAXIMUM	9	9	9	8	7	8	8	9	9	10	10	10	10	11	11	10	10	10	10	10	9	9	8	8	8	8	8	8	8	--	--	9
MINIMUM	8	8	8	7	7	7	7	8	9	9	10	10	10	10	10	10	10	10	10	9	8	8	8	8	8	8	8	8	--	--	--	9
MARCH																																
MAXIMUM	9	9	9	9	9	9	9	9	9	8	9	9	10	9	10	10	10	11	10	10	12	12	13	13	13	14	15	15	14	16	15	11
MINIMUM	9	9	9	9	9	8	8	7	8	7	7	8	8	8	8	8	9	10	8	9	9	10	10	10	10	11	12	12	13	13	14	9
APRIL																																
MAXIMUM	14	13	11	11	13	14	19	20	20	20	19	17	17	12	16	18	12	15	17	18	16	14	11	16	15	15	17	15	15	11	--	15
MINIMUM	12	11	8	10	10	10	8	9	11	10	10	10	9	10	10	9	10	10	9	10	10	9	10	11	11	10	9	8	11	11	10	10
MAY																																
MAXIMUM	14	14	10	16	19	19	18	20	17	18	13	16	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	9	9	9	9	10	10	9	11	11	10	9	12	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	20	20	20	20	20	20	20	20	20	19	19	19	19	19	19	19	19	19	19	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	18	18	18	18	18	19	18	18	18	17	17	18	18	18	18	18	17	17	17	--
SEPTEMBER																																
MAXIMUM	19	18	19	19	19	19	18	18	18	18	18	18	18	18	18	18	17	17	17	18	18	17	17	17	17	16	16	16	16	16	--	18
MINIMUM	17	17	17	17	17	17	18	17	17	16	16	17	17	18	18	16	17	16	17	17	16	17	17	17	16	15	15	15	15	15	--	17

EEL RIVER BASIN

11-4705. EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°24'29", long 122°58'13", in SE¼ sec.15, T.18 N., R.10 W., Lake County, Mendocino National Forest, temperature recorder at gaging station on left bank, 0.4 mile upstream from Soda Creek, 0.7 mile downstream from Scott Dam, and 9.7 miles northeast of town of Potter Valley.

DRAINAGE AREA.--290 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1963 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C on many days in September; minimum, 4°C on several days during January and February.

EXTREMES, 1963-69.--Water temperatures: Maximum, 23°C on several days in September 1967; minimum (1966-69), 4°C on several days during January and February 1969.

REMARKS.--No record May 26 to July 1. Samples for periodic turbidity analyses were collected by Pacific Gas and Electric Company and U.S. Forest Service.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	20	19	19	19	19	19	19	19	19	19	18	18	18	18	18	18	17	17	17	17	17	17	16	16	16	16	16	16	16	16	15	18	
MINIMUM	19	19	19	19	19	19	19	19	19	18	18	18	18	18	18	17	17	17	17	17	17	16	16	16	16	16	16	16	16	16	14	17	
NOVEMBER																																	
MAXIMUM	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	12	12	12	12	12	12	12	11	11	11	11	11	11	--	13	
MINIMUM	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	12	12	12	12	12	12	12	11	11	11	11	11	11	11	--	13	
DECEMBER																																	
MAXIMUM	11	10	10	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	7	7	6	6	6	6	6	6	6	8	
MINIMUM	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	7	7	6	6	6	6	6	6	6	8	
JANUARY																																	
MAXIMUM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	5	6	
MINIMUM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	5	6	
FEBRUARY																																	
MAXIMUM	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
MINIMUM	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
MARCH																																	
MAXIMUM	5	5	5	5	5	5	5	6	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	6	
MINIMUM	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	6	
APRIL																																	
MAXIMUM	8	8	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	--	8
MINIMUM	7	8	7	7	7	7	7	7	7	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	8
MAY																																	
MAXIMUM	8	9	9	9	9	9	9	9	9	9	9	10	10	10	10	10	11	10	11	11	11	11	11	11	11	11	--	--	--	--	--	10	
MINIMUM	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	10	9	9	10	10	10	11	11	11	11	--	--	--	--	--	9	
JUNE																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																	
MAXIMUM	--	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
MINIMUM	--	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
AUGUST																																	
MAXIMUM	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	18	19	19	19	20	20	18
MINIMUM	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	19	19	19	19	20	20	18
SEPTEMBER																																	
MAXIMUM	21	20	20	20	20	20	20	20	20	20	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	--	21	
MINIMUM	20	20	20	19	19	20	20	20	20	20	20	20	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	20	20	--	20

PERIODIC DETERMINATIONS OF TURBIDITY, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME (24-HR)	WATER TEM- PERA- TURE (°C)	DIS- CHARGE (CFS)	TURBIDITY (MG/L SILICA)	
				TOTAL	RESIDUAL <u>1/</u>
DEC. 18, 1968.....	1420	8	157	803	78
DEC. 20.....	1130	8	200	680	74
DEC. 27.....	1130	--	1220	437	66
JAN. 3, 1969.....	1030	6	644	283	51
JAN. 10.....	0900	4	735	297	56
JAN. 17.....	1000	4	1760	145	38
JAN. 24.....	1000	--	3180	189	51
JAN. 31.....	0930	4	1690	260	41
FEB. 7.....	1000	4	1600	135	37
FEB. 14.....	1000	5	2910	127	42
FEB. 21.....	0930	4	1390	112	25
FEB. 28.....	0900	4	1750	94	23
MAR. 7.....	0900	6	1180	76	21
MAR. 14.....	0900	6	774	72	17
MAR. 21.....	1000	--	1440	53	14
MAR. 28.....	0900	--	1790	53	11
APR. 11.....	1000	--	838	59	8
MAY 9.....	1000	--	987	21	1
JUNE 13.....	1015	20	316	8	1

1/ Turbidity measured after a 7-day settling period.

11-4710. POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°21'42", long 123°07'38", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.17 N., R.11 W., Mendocino County, temperature recorder at gaging station 100 ft downstream from powerhouse of Pacific Gas and Electric Company, 1.8 miles southwest of Van Arsdale Dam, and 2.9 miles northwest of town of Potter Valley.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1965.

Water temperatures: March 1964 to September 1969.

Sediment records: March 1964 to May 1968.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C June 22; minimum, 5°C on several days during December to February.

EXTREMES, 1964-69.--Water temperatures (1964-65, 1966-69): Maximum (1967-69), 24°C June 22, 1969; minimum, 4°C on many days in 1967 and 1968.

REMARKS.--Recorder stopped Nov. 5-7, Nov. 12 to Dec. 27, Mar. 24 to May 6; probe buried May 12 to June 1. Samples for periodic turbidity determinations were collected by Pacific Gas and Electric Company, and U.S. Forest Service.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	17	19	20	19	20	19	18	18	18	18	18	17	17	16	17	17	17	17	17	16	16	16	17	17	17	17	16	16	16	16	15	15	17	
MINIMUM	16	17	17	17	18	17	16	16	15	16	17	17	16	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	14	14	13	15		
NOVEMBER																																		
MAXIMUM	14	14	14	14	--	--	--	14	15	14	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MINIMUM	13	13	14	13	--	--	--	13	14	13	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
DECEMBER																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	6	--		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	5	--		
JANUARY																																		
MAXIMUM	7	7	7	7	7	7	7	7	6	6	6	7	7	8	7	7	7	7	8	8	9	8	8	8	8	8	8	7	6	6	6	7		
MINIMUM	5	6	6	6	6	6	6	6	5	5	6	6	6	7	7	6	6	6	7	8	8	8	8	8	7	7	7	6	5	6	5	6		
FEBRUARY																																		
MAXIMUM	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	8	8	7	7	7	7	7	7	7	7	7	--	--	7		
MINIMUM	6	5	5	6	6	5	6	6	6	7	7	7	7	6	6	6	6	6	7	7	6	6	6	6	6	6	6	6	6	--	--	6		
MARCH																																		
MAXIMUM	7	7	8	8	8	8	8	8	8	8	8	8	7	8	8	9	8	8	8	9	8	9	10	10	--	--	--	--	--	--	--	--		
MINIMUM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	8	8	--	--	--	--	--	--	--	--		
APRIL																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAY																																		
MAXIMUM	--	--	--	--	--	--	--	17	17	17	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	14	14	15	15	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE																																		
MAXIMUM	--	22	23	23	22	21	21	20	20	20	20	22	23	23	23	23	22	21	23	23	23	23	24	23	23	22	22	21	21	18	18	--	22	
MINIMUM	--	19	19	19	19	19	19	19	19	19	18	18	18	19	19	19	20	20	20	20	20	20	20	21	20	20	19	19	16	15	15	--	19	
JULY																																		
MAXIMUM	18	18	18	18	18	18	18	18	18	18	19	19	19	19	19	18	18	18	18	19	19	19	18	18	19	19	19	18	18	18	18	18	18	
MINIMUM	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	16	16	16	16	16	15	15	15	15	14	14	
AUGUST																																		
MAXIMUM	18	18	18	18	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	19	19	18	18	18	18	18	18	18	18	18	19	18	
MINIMUM	14	15	15	15	14	15	15	15	14	15	15	15	15	14	14	15	15	15	15	15	15	16	16	16	16	15	15	16	15	16	15	16	15	
SEPTEMBER																																		
MAXIMUM	19	19	19	19	19	19	19	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	--	21		
MINIMUM	16	16	16	17	17	16	17	17	16	17	18	18	19	18	18	18	18	20	19	19	18	18	18	18	19	19	19	18	18	19	18	--	18	

PERIODIC DETERMINATIONS OF TURBIDITY, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date of collection	Time (24-hr)	Tem- pera- ture (°C)	Discharge (cfs)	Turbidity (mg/l silica)	
				Total	Residual _{1/}
DEC. 20, 1968.....	0800	10	296	460	46
DEC. 27.....	1400	6	293	325	46
JAN. 3, 1969.....	0830	6	296	188	42
JAN. 10.....	0900	6	290	235	36
JAN. 17.....	1100	6	289	415	74
JAN. 24.....	1500	8	290	150	58
JAN. 31.....	0900	6	302	127	35
FEB. 7.....	0900	6	291	120	32
FEB. 21.....	0830	7	286	92	24
FEB. 28.....	0900	7	296	91	23
MAR. 7.....	0900	8	293	58	14
MAR. 14.....	0900	6	294	62	14
MAR. 21.....	1300	8	289	46	8
MAR. 28.....	0900	8	290	38	8
APR. 11.....	0900	10	291	38	7
MAY 9.....	0900	--	300	5	1
JUNE 13.....	0900	--	280	2	1
JUNE 19.....	0900	--	213	6	1

_{1/} Turbidity measured after a 7-day settling period.

EEL RIVER BASIN

11-4721.5. EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°37'30", long 123°20'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.21 N., R.13 W., Mendocino County, at gaging station 1,100 ft upstream from Outlet Creek, and 6.3 miles south of Dos Rios.

DRAINAGE AREA.--528 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

Water temperatures: October 1966 to September 1969.

Sediment records: October 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 2°C Dec. 21.

Sediment concentrations: Maximum daily, 3,000 mg/l Dec. 10; minimum daily, 1 mg/l on many days during October, November, and June to September.

Sediment loads: Maximum daily, 172,000 tons Jan. 13; minimum daily, 0.01 ton on many days during October, August, and September.

EXTREMES, 1966-69.--Water temperatures (1966-67, 1968-69): Minimum, 2°C Dec. 29, 1966, Dec. 21, 1968.

Sediment concentrations: Maximum daily, 3,590 mg/l Jan. 21, 1967; minimum daily, 1 mg/l on many days in 1966-69.

Sediment loads: Maximum daily, 204,000 tons Jan. 21, 1967; minimum daily, 0.01 ton on many days in 1966-69.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. During period October 1958 to September 1966, chemical quality station located at lat 39°37'36", long 123°20'36". Flow partly regulated by Lake Pillsbury and by diversion through Potter Valley powerhouse.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
03...	1050	4.4	18	8.7	--	--	11	--	113	0	--	7.3
NOV.												
14...	0915	37	8	11.2	--	--	12	--	136	0	--	8.2
DEC.												
04...	1535	63	6	12.8	--	--	9.4	--	111	0	--	5.8
JAN.												
22...	1205	16100	6	12.7	--	--	2.8	--	48	0	--	1.6
FEB.												
05...	0725	4170	5	12.5	--	--	3.6	--	55	0	--	2.0
MAR.												
05...	1315	2220	8	12.4	--	--	3.2	--	64	0	--	1.7
APR.												
09...	0925	1130	10	11.4	--	--	3.6	--	66	0	--	2.4
MAY												
14...	0805	410	14	10.5	17	4.7	4.0	.8	76	0	3.1	1.6
JUNE												
11...	1220	39	22	10.6	--	--	6.4	--	105	3	--	4.1
JULY												
16...	1045	13	22	9.1	--	--	8.9	--	137	0	--	4.5
AUG.												
06...	0910	5.1	18	9.2	--	--	9.6	--	117	0	--	5.4
SEPT.												
10...	1055	4.3	23	8.8	30	8.3	12	--	116	0	--	5.6

DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CAC03 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.												
03...	.3	.01	480	--	--	118	25	17	.4	93	8.0	268
NOV.												
14...	.0	.00	670	--	--	130	18	17	.5	112	8.2	291
DEC.												
04...	.1	.40	420	--	--	110	19	16	.4	91	8.3	229
JAN.												
22...	.6	.26	0	--	--	48	9	11	.2	39	7.7	88
FEB.												
05...	.2	.18	30	--	--	58	13	12	.2	45	7.7	107
MAR.												
05...	.1	.00	50	--	--	55	2	11	.2	52	7.4	120
APR.												
09...	.1	.09	0	--	--	56	2	12	.2	54	7.9	129
MAY												
14...	.1	.03	200	82	.11	62	0	12	.2	62	8.0	137
JUNE												
11...	.0	.02	260	--	--	100	9	12	.3	91	8.6	215
JULY												
16...	.1	.00	300	--	--	107	0	15	.4	112	8.3	240
AUG.												
06...	.2	--	350	--	--	109	13	16	.4	96	8.3	248
SEPT.												
10...	.0	--	390	124	.17	109	14	19	.5	95	8.2	256

EEL RIVER BASIN

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11-4721.5. EEL RIVER NEAR DOS RIOS, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	19	18	--	17	--	--	14	--	18	--	17	16	--	14	--	14	--	16	--	--	16	--	16	--	16	--	--	14	16	15	--	--	
NOVEMBER.	13	13	--	13	16	13	14	14	--	--	14	13	10	8	7	9	--	12	13	12	--	12	--	11	9	8	9	--	9	7	--	--	
DECEMBER.	8	6	--	7	7	8	7	8	10	11	8	6	7	8	8	7	7	7	7	4	2	3	6	8	6	5	6	6	7	6	7	7	
JANUARY..	6	7	7	6	7	7	6	5	4	5	7	8	8	7	7	7	7	6	8	9	9	7	6	7	8	7	6	6	5	5	5	7	
FEBRUARY.	6	7	7	6	6	6	7	7	7	8	9	7	7	7	7	8	7	7	8	7	7	6	7	6	5	6	6	7	--	--	--	7	
MARCH....	7	7	6	7	8	7	7	9	7	8	8	8	8	8	7	8	8	9	8	9	8	9	9	9	10	11	11	10	11	11	12	9	
APRIL....	11	10	10	11	10	10	11	12	11	12	14	13	10	12	12	13	14	13	13	13	14	15	12	12	11	12	14	14	13	14	--	12	
MAY.....	--	13	--	--	14	--	17	--	18	--	--	18	--	16	--	17	--	--	16	--	18	--	19	--	--	18	--	16	--	22	--	--	--
JUNE.....	--	21	--	22	--	21	--	--	16	--	18	--	20	--	--	21	--	22	--	24	--	--	25	--	22	--	22	--	--	21	--	--	--
JULY.....	--	22	--	22	--	--	25	--	27	24	21	--	--	27	--	24	--	28	--	--	29	--	24	--	23	--	--	24	--	24	--	--	--
AUGUST...	21	--	--	27	--	27	--	24	--	--	22	--	25	--	22	--	25	--	24	--	26	--	--	27	--	22	--	25	--	--	--	--	--
SEPTEMBER	23	--	22	--	27	--	--	22	--	23	--	27	--	--	22	--	20	--	22	--	--	19	--	21	--	22	--	--	21	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	3.7	1	.01	20	1	.05	111	37	11
2	4.4	1	.01	33	2	.18	50	30	12
3	4.4	1	.01	61	3	.49	96	10	2.6
4	4.4	1	.01	42	15	1.7	68	2	.37
5	5.5	1	.01	26	1	.07	54	2	.29
6	4.9	1	.01	20	3	.16	47	2	.25
7	4.0	1	.01	16	5	.22	47	2	.25
8	3.7	1	.01	13	1	.04	140	21	7.9
9	3.7	1	.01	11	1	.03	150	19	7.7
10	3.7	1	.01	9.6	1	.03	4600	3000	48900
11	5.8	1	.02	11	1	.03	2620	500	4080
12	20	7	.38	39	5	.53	1020	67	185
13	41	4	.44	35	1	.09	568	66	142
14	37	1	.10	47	10	1.3	1500	297	1200
15	23	1	.06	114	25	7.7	5000	1140	18000
16	16	1	.04	114	19	5.8	2260	339	2440
17	11	1	.03	86	15	3.5	1070	54	156
18	8.6	1	.02	102	14	3.9	556	24	36
19	8.3	1	.02	153	15	6.2	405	17	19
20	7.5	1	.02	88	12	2.9	302	9	7.3
21	7.0	1	.02	56	3	.45	242	8	5.2
22	6.5	1	.02	41	3	.33	262	15	11
23	6.5	1	.02	33	4	.36	9000	2360	60800
24	5.8	1	.02	41	7	.77	9000	1470	38900
25	5.8	1	.02	83	14	3.1	7000	322	6060
26	5.8	1	.02	96	14	3.6	5070	212	2900
27	5.8	1	.02	68	6	1.1	3540	144	1380
28	5.8	1	.02	49	2	.26	3620	150	1470
29	11	1	.03	39	2	.21	3300	119	1060
30	27	1	.07	52	10	1.4	2590	82	573
31	34	1	.09	--	--	--	2100	67	380
TOTAL	341.6	--	1.58	1598.6	--	46.50	66488	--	188746.86

EEL RIVER BASIN

11-4721.5. EEL RIVER NEAR DOS RIOS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1800	42	204	3200	132	1140	4040	180	1960
2	1640	40	177	3440	144	1340	3330	95	854
3	1550	31	130	2990	108	872	3360	104	943
4	1620	34	149	2890	110	858	2600	66	463
5	1900	45	231	4110	242	2690	2260	45	275
6	2010	45	244	5050	200	2730	2030	46	252
7	1930	38	198	3930	147	1560	1810	37	181
8	1770	28	134	3870	231	2990	1640	34	151
9	1550	30	126	9180	1070	26700	1460	34	134
10	1370	32	118	7600	490	10100	1360	29	106
11	6000	999	27500	10700	1330	41600	1240	25	84
12	23000	1980	120000	10700	820	24900	1120	25	76
13	28000	2270	172000	6460	370	6450	988	20	53
14	15000	1230	50500	4990	290	3910	884	18	43
15	7430	680	13600	6300	602	10700	812	19	42
16	4840	330	4310	6520	400	7040	871	21	49
17	3440	180	1670	4700	190	2410	1570	138	618
18	3270	161	1620	3540	130	1240	2130	91	523
19	13000	2000	86200	2830	110	841	1890	52	265
20	25000	2130	145000	2390	80	516	1700	38	174
21	27000	1940	144000	2030	60	329	1640	35	155
22	16000	1210	52300	1810	50	244	1480	29	116
23	8910	740	17800	1780	70	336	1420	25	96
24	5950	470	7550	1790	130	628	1440	24	93
25	6740	670	12200	2250	230	1400	1450	26	102
26	12500	1280	43000	2650	85	608	1450	28	110
27	8910	630	15200	2340	90	569	1550	31	130
28	6180	430	7170	4000	640	6910	1710	36	166
29	4560	280	3450	--	--	--	1830	43	212
30	3690	210	2090	--	--	--	1930	44	229
31	3080	80	665	--	--	--	1930	44	229
TOTAL	249640	--	929536	124040	--	161611	54925	--	8884

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	1780	39	187	300	8	6.5	52	4	.56
2	1610	32	139	330	7	6.2	52	4	.56
3	1500	28	113	360	6	5.8	49	3	.40
4	1270	26	89	350	6	5.7	37	3	.30
5	1700	58	281	290	6	4.7	27	3	.22
6	1670	31	140	240	6	3.9	25	3	.20
7	1380	22	82	274	5	3.7	33	3	.27
8	1190	18	58	363	5	4.9	33	2	.18
9	1130	18	55	377	4	4.1	37	2	.20
10	1080	18	52	598	5	8.1	39	2	.21
11	748	15	30	694	6	11	39	2	.21
12	736	14	28	688	8	15	33	2	.18
13	962	16	42	598	9	15	31	2	.17
14	242	14	9.1	449	10	12	25	2	.14
15	202	8	4.4	310	7	5.9	25	1	.07
16	242	6	3.9	242	6	3.9	24	1	.06
17	306	8	6.6	274	6	4.4	20	1	.05
18	514	14	19	298	5	4.0	22	1	.06
19	748	16	32	302	5	4.1	41	1	.11
20	780	16	34	302	4	3.3	35	1	.09
21	780	14	29	206	4	2.2	59	1	.16
22	262	13	9.2	126	4	1.4	31	2	.17
23	395	27	29	75	5	1.0	27	31	2.3
24	485	18	24	83	4	.90	27	15	1.1
25	600	15	24	93	4	1.0	27	4	.29
26	640	11	19	117	3	.95	25	3	.20
27	630	10	17	143	4	1.5	24	2	.13
28	330	10	8.9	133	4	1.4	22	2	.12
29	230	7	4.3	126	3	1.0	22	2	.12
30	270	11	8.0	93	3	.75	22	1	.06
31	--	--	--	59	4	.64	--	--	--
TOTAL	24412	--	1577.4	8893	--	144.94	965	--	8.89

11-4721.5. EEL RIVER NEAR DOS RIOS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	22	1	.06	4.4	1	.01	5.1	5	.07
2	20	1	.05	4.4	1	.01	5.1	3	.04
3	19	1	.05	4.4	1	.01	5.1	1	.01
4	19	1	.05	4.4	1	.01	4.9	2	.03
5	19	1	.05	4.4	1	.01	4.9	6	.08
6	15	1	.04	5.1	1	.01	4.6	4	.05
7	17	1	.05	5.1	1	.01	4.3	3	.03
8	17	1	.05	5.1	1	.01	4.3	1	.01
9	16	1	.04	5.8	1	.02	4.3	1	.01
10	16	1	.04	5.8	1	.02	4.3	1	.01
11	16	1	.04	5.8	2	.03	4.3	1	.01
12	15	1	.04	5.1	1	.01	4.3	1	.01
13	15	2	.08	5.1	2	.03	4.3	1	.01
14	14	4	.15	5.1	1	.01	4.1	1	.01
15	13	3	.11	5.1	1	.01	4.1	1	.01
16	13	1	.04	5.1	1	.01	4.1	1	.01
17	12	1	.03	5.1	1	.01	4.1	1	.01
18	12	1	.03	5.1	1	.01	4.9	1	.01
19	12	1	.03	5.1	1	.01	5.6	2	.03
20	11	1	.03	5.4	1	.01	5.9	1	.02
21	10	1	.03	5.4	1	.01	6.2	1	.02
22	9.6	1	.03	5.4	3	.04	6.2	1	.02
23	9.2	1	.02	5.4	2	.03	6.2	1	.02
24	8.9	1	.02	5.4	1	.01	6.2	1	.02
25	8.5	1	.02	5.4	1	.01	6.2	1	.02
26	8.5	1	.02	5.4	1	.01	6.2	6	.10
27	7.9	1	.02	5.4	1	.01	5.9	4	.06
28	7.9	1	.02	5.4	1	.01	5.6	3	.05
29	7.9	1	.02	5.4	1	.01	5.6	2	.03
30	7.9	1	.02	5.1	1	.01	5.4	1	.01
31	7.6	1	.02	5.1	1	.01	--	--	--
TOTAL	406.9	--	1.30	159.7	--	.42	152.3	--	.82

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

532022.1
1290559.71

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	0930	11	7550	3880	79100	30	36	50	65	78	88	97	100	--	--	--	VPWC	
DEC 10.....	1235	11	7370	5600	111000	29	31	40	54	68	76	87	94	100	--	--	VPWC	
DEC 15.....	0950	8	7500	1850	37500	20	32	41	55	70	80	92	100	--	--	--	VPWC	
JAN 11, 1969	1155	7	4560	777	9570	30	39	49	60	71	81	93	100	--	--	--	VBWC	
JAN 12.....	1135	8	22400	1750	106000	23	27	36	49	60	72	87	98	100	--	--	VPWC	
JAN 14.....	1040	7	14700	1160	46000	27	37	48	58	67	76	87	98	100	--	--	VBWC	
JAN 14.....	1425	8	13100	1210	42800	29	34	44	53	61	68	78	91	100	--	--	VPWC	
JAN 21.....	0930	9	30000	2040	165000	27	31	41	54	66	76	88	97	100	--	--	VPWC	
JAN 22.....	1130	7	16800	1170	53100	27	40	51	61	69	78	87	98	100	--	--	VBWC	
JAN 27.....	1140	6	8640	600	14000	32	44	54	62	70	79	87	97	100	--	--	VBWC	
JAN 29.....	1115	5	4340	251	2940	--	--	--	--	--	75	84	94	100	--	--	S	
JAN 31.....	1110	5	2910	75	589	--	--	--	--	--	77	85	94	100	--	--	S	
FEB 9.....	1130	7	9400	1020	25900	21	30	42	51	61	72	83	95	100	--	--	VBWC	
FEB 14.....	1430	7	4670	287	3620	28	40	49	56	59	72	80	88	96	100	--	SBWC	
MAR 17.....	0820	8	1480	185	739	28	53	71	82	87	98	99	100	--	--	--	SBWC	

EEL RIVER BASIN

11-4722. OUTLET CREEK NEAR LONGVALE, CALIF.

LOCATION.--Lat 39°37'05", long 123°21'20", in NE¼ sec.1, T.20 N., R.14 W., Mendocino County, at gaging station 0.2 mile downstream from Bloody Run Creek, 0.9 mile upstream from mouth and 8.2 miles downstream from Longvale.

DRAINAGE AREA.--161 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1966.

Water temperatures: October 1967 to September 1969.

Sediment records: October 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 3°C Dec. 22.

Sediment concentrations: Maximum daily, 1,430 mg/l Dec. 10; minimum daily, 1 mg/l on many days.

Sediment loads: Maximum daily, 41,200 tons Jan. 12; minimum daily, 0 tons on several days during October and July to September.

EXTREMES, 1967-69.--Water temperatures (1968-69): Minimum, 3°C Dec. 22, 1968.

Sediment concentrations: Maximum daily, 1,430 mg/l Dec. 10, 1968; minimum daily, 1 mg/l on many days each year.

Sediment loads: Maximum daily, 41,200 tons Jan. 12, 1969; minimum daily, 0 tons on many days each year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	21	20	--	18	--	--	17	--	16	--	17	16	--	14	--	13	--	--	--	--	16	--	14	--	15	--	--	13	14	14	--	--	
NOVEMBER..	12	12	--	10	13	13	13	14	--	--	16	13	10	8	8	10	--	12	13	13	--	12	--	10	9	8	8	--	8	7	--	--	
DECEMBER..	7	6	--	7	7	8	7	8	10	11	8	7	7	8	8	8	7	7	7	4	4	3	6	8	6	9	6	6	7	7	7	7	
JANUARY..	6	7	8	6	8	8	7	6	4	6	7	9	9	8	7	7	7	7	9	11	10	8	6	6	9	7	6	6	5	4	5	7	
FEBRUARY..	5	7	7	7	9	6	7	7	8	9	10	9	8	7	8	9	8	8	9	8	5	6	7	6	5	7	7	7	--	--	--	7	
MARCH....	7	7	6	8	9	8	8	10	8	9	9	8	8	7	8	9	9	11	9	9	9	9	11	10	10	12	13	14	12	13	17	10	
APRIL....	14	12	11	13	9	10	12	12	12	13	14	14	12	13	13	13	14	12	14	14	17	16	13	12	13	13	14	15	15	16	--	13	
MAY.....	--	15	--	--	16	--	18	--	20	--	--	20	--	17	--	18	18	--	18	--	19	--	21	--	--	19	--	18	--	23	--	--	
JUNE.....	--	22	--	22	--	20	--	--	19	--	18	--	21	--	--	23	--	22	--	24	--	--	24	--	23	--	22	--	--	22	--	--	
JULY.....	--	23	--	22	--	--	24	--	27	--	22	--	--	27	--	26	--	28	--	--	28	--	24	--	23	--	--	24	--	24	--	--	
AUGUST...	22	--	--	27	--	28	--	26	--	--	24	--	27	--	24	--	--	24	--	26	--	27	--	--	27	--	24	--	26	--	--	--	
SEPTEMBER	24	--	24	--	27	--	--	24	--	25	--	25	--	--	23	--	21	--	22	--	--	20	--	23	--	23	--	--	21	--	--	--	

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1.5	3	.01	9.8	5	.13	334	47	45
2	1.5	3	.01	36	4	.39	168	25	11
3	1.5	3	.01	40	4	.43	93	12	3.0
4	1.6	5	.02	29	11	.86	68	7	1.3
5	1.7	4	.02	21	1	.06	61	4	.66
6	1.6	3	.01	20	1	.05	58	3	.47
7	1.7	3	.01	17	2	.09	92	11	6.9
8	1.7	2	.01	15	2	.08	366	47	46
9	1.7	1	0	13	2	.07	205	39	22
10	1.7	2	.01	12	2	.06	6410	1430	29700
11	3.4	2	.02	12	2	.06	2900	386	3330
12	11	2	.06	66	15	2.7	1470	70	278
13	16	2	.09	41	7	.77	959	82	293
14	13	5	.18	37	7	.70	1120	80	242
15	10	5	.14	222	83	53	4910	826	12400
16	7.7	6	.12	92	26	7.0	2240	183	1220
17	6.9	2	.04	51	9	1.2	1090	39	115
18	5.7	1	.02	159	32	16	478	13	17
19	5.0	1	.01	97	15	3.9	341	9	8.3
20	4.3	1	.01	58	17	2.7	229	10	6.2
21	4.0	1	.01	42	12	1.4	165	7	3.1
22	3.7	1	.01	35	4	.38	304	13	11
23	3.4	1	.01	30	2	.16	10100	774	23200
24	3.4	1	.01	92	19	7.7	9460	734	19300
25	3.4	1	.01	215	27	18	6680	450	8310
26	3.4	1	.01	99	14	3.7	3890	230	2520
27	3.4	1	.01	62	19	3.2	2170	120	703
28	3.4	1	.01	49	11	1.5	2290	95	587
29	5.7	9	.14	44	7	.95	1540	34	141
30	11	2	.06	145	15	6.1	840	20	45
31	12	2	.06	--	--	--	521	11	15
TOTAL	156.0	--	1.14	1860.8	--	133.34	61552	--	102580.93

11-4722. OUTLET CREEK NEAR LONGVALE, CALIF.--Continued
 SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	387	9	9.4	1830	69	353	2280	86	527
2	309	7	5.8	1600	29	125	1950	69	381
3	249	6	4.0	1140	12	37	1730	54	252
4	204	4	2.2	1240	26	124	1190	21	67
5	168	5	2.3	2060	87	487	886	14	33
6	140	7	2.6	2510	73	495	725	12	23
7	120	4	1.3	1960	35	185	605	10	16
8	110	4	1.2	2390	69	808	512	9	12
9	95	3	.77	3960	217	2510	423	7	8.0
10	93	3	.75	2510	71	498	387	7	7.3
11	5470	618	14900	3470	139	1430	331	6	5.4
12	14700	1030	41200	2400	70	467	287	5	3.9
13	10700	604	18700	1550	31	130	254	4	2.7
14	3980	307	3480	1280	26	90	228	4	2.5
15	2220	110	680	1950	59	327	207	4	2.2
16	1380	30	112	1850	30	158	207	3	1.7
17	810	10	22	1290	15	52	566	21	34
18	1170	47	263	910	12	29	525	20	29
19	6980	521	13100	725	15	29	359	11	11
20	11400	722	22400	557	13	20	272	7	5.1
21	9260	502	12900	480	16	21	268	6	4.3
22	4380	280	3430	411	10	11	247	6	4.0
23	2390	115	742	543	17	25	201	4	2.2
24	1540	42	175	1330	60	215	192	4	2.1
25	2260	89	600	1720	56	260	170	5	2.3
26	3800	158	1680	1400	30	113	160	5	2.2
27	2500	75	506	1200	32	104	145	3	1.2
28	1950	36	190	2760	98	731	138	3	1.1
29	1380	22	82	--	--	--	126	3	1.0
30	1070	16	46	--	--	--	118	3	.96
31	928	16	40	--	--	--	114	3	.92
TOTAL	92143	--	135278.32	47026	--	9834	15803	--	1446.08

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	108	3	.87	83	3	.67	20	3	.16
2	118	3	.96	77	3	.62	19	2	.10
3	160	6	2.6	72	3	.58	18	3	.15
4	126	12	4.1	68	3	.55	17	4	.18
5	552	51	76	65	2	.35	17	3	.14
6	525	33	47	60	3	.49	18	2	.10
7	327	15	13	56	3	.45	19	2	.10
8	228	8	4.9	53	3	.43	20	2	.11
9	228	6	3.7	50	4	.54	20	2	.11
10	210	7	4.0	48	3	.39	20	3	.16
11	175	8	3.8	45	3	.36	20	4	.22
12	163	5	2.2	41	3	.33	20	3	.16
13	158	3	1.3	39	3	.32	19	2	.10
14	140	3	1.1	39	4	.42	17	2	.09
15	128	2	.69	38	3	.31	16	2	.09
16	116	3	.94	35	3	.28	14	2	.08
17	112	3	.91	33	3	.27	13	1	.04
18	116	3	.94	31	3	.25	13	1	.04
19	104	2	.56	29	3	.23	18	1	.05
20	96	4	1.0	29	3	.23	18	1	.05
21	88	4	.95	28	3	.23	17	1	.05
22	85	5	1.1	27	3	.22	14	1	.04
23	240	28	18	25	4	.27	12	1	.03
24	299	27	22	24	3	.19	11	1	.03
25	180	20	9.7	24	3	.19	9.6	2	.05
26	143	10	3.9	24	3	.19	9.3	1	.03
27	120	5	1.6	27	3	.22	8.9	1	.02
28	106	4	1.1	27	3	.22	8.6	1	.02
29	96	4	1.0	24	3	.19	8.6	1	.02
30	88	3	.71	23	3	.19	7.8	1	.02
31	--	--	--	21	3	.17	--	--	--
TOTAL	5335	--	230.63	1265	--	10.35	462.8	--	2.54

EEL RIVER BASIN

11-4722. OUTLET CREEK NEAR LONGVALE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	7.5	1	.02	1.7	2	.01	.95	2	.01
2	7.1	1	.02	1.6	2	.01	.95	2	.01
3	6.4	1	.02	1.2	2	.01	.83	2	0
4	6.1	2	.03	1.4	2	.01	.83	2	0
5	5.6	2	.03	1.4	2	.01	.83	2	0
6	5.3	2	.03	1.3	4	.01	.83	2	0
7	5.0	2	.03	1.3	3	.01	.83	2	0
8	4.2	1	.01	1.3	3	.01	.95	3	.01
9	4.2	1	.01	1.3	3	.01	.83	3	.01
10	3.9	1	.01	1.3	3	.01	.83	3	.01
11	3.5	2	.02	1.3	3	.01	.83	3	.01
12	3.5	1	.01	1.2	3	.01	.83	7	.02
13	3.4	1	.01	1.2	3	.01	.83	4	.01
14	3.2	1	.01	1.1	3	.01	.83	3	.01
15	3.1	1	.01	1.1	3	.01	.83	3	.01
16	2.9	2	.02	1.1	3	.01	.83	2	0
17	2.8	2	.02	1.1	2	.01	.95	2	.01
18	2.6	2	.01	.95	1	0	1.2	2	.01
19	2.6	2	.01	.95	1	0	1.2	2	.01
20	2.5	1	.01	.95	2	.01	1.3	2	.01
21	2.3	1	.01	.95	2	.01	1.6	2	.01
22	2.2	1	.01	.95	2	.01	1.6	2	.01
23	2.0	2	.01	.83	2	0	1.6	1	0
24	1.8	1	0	.78	2	0	1.6	1	0
25	1.9	1	.01	.83	2	0	1.4	1	0
26	2.0	1	.01	.95	2	.01	1.3	1	0
27	2.0	1	.01	.95	4	.01	1.2	1	0
28	1.5	2	.01	.95	3	.01	1.3	1	0
29	1.8	2	.01	.95	3	.01	1.3	2	.01
30	1.7	2	.01	.95	3	.01	1.3	2	.01
31	1.7	2	.01	.95	3	.01	--	--	--
TOTAL	106.3	--	.44	34.79	--	.26	32.49	--	.19

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

TOTAL LOAD FOR YEAR (TONS)

225777.18

249518.22

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	1010	11	12200	2020	66500	22	32	42	54	67	75	86	94	100	--	--	VPWC	
DEC 11.....	1235	8	2730	278	2050	--	--	--	--	--	94	97	99	100	--	--	V	
DEC 12.....	1045	7	1480	74	296	--	--	--	--	--	95	98	100	--	--	--	S	
DEC 15.....	1020	8	9240	1120	27900	23	30	41	53	68	76	85	94	99	100	--	VPWC	
DEC 23.....	0930	6	9240	1080	26900	22	29	39	48	58	68	79	90	98	99	100	SBWC	
JAN 11, 1969	1135	7	4850	855	11200	20	28	36	45	55	66	80	93	100	--	--	VBWC	
JAN 13.....	0930	9	12200	614	20200	25	35	44	52	61	73	83	93	99	100	--	VBWC	
JAN 14.....	1530	8	3500	270	2550	38	51	61	68	75	83	88	95	99	100	--	SBWC	
JAN 22.....	1205	8	4250	278	3190	44	58	69	76	83	88	93	97	100	--	--	SBWC	
FEB 6.....	1720	6	2650	54	386	--	--	--	--	--	70	84	96	100	--	--	S	
FEB 16.....	1310	9	1830	15	74	--	--	--	--	--	80	91	97	100	--	--	S	

11-4725. EEL RIVER ABOVE DOS RIOS, CALIF.

LOCATION.--Lat 39°41'20", long 123°21'30", in SW¼ sec.7, T.21 N., R.13 W., Mendocino County, temperature recorder at site of former gaging station on left bank, 1.8 miles upstream from Middle Fork, and 2.1 miles south of Dos Rios.

DRAINAGE AREA.--705 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1957 to September 1959, October 1960 to September 1965, May 1967 to September 1969.

Sediment records: October 1957 to September 1965.

EXTREMES, 1962-65, May to September 1966.--Water temperatures: Maximum, 29°C June 15, 1966; minimum (1962-65), 3°C Nov. 23, 1964.

REMARKS.--No records available for Oct. 1 to Nov. 1, Nov. 6 to Jan. 14, probe buried; Jan. 15 to Sept. 12, Sept. 18, 19, recorder malfunction.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER																																
MAXIMUM	--	8	8	8	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	7	7	7	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEBRUARY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	22	22	21	21	20	--	--	17	18	18	18	20	21	22	22	22	21	21	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	20	18	18	18	18	--	--	15	14	16	16	16	16	18	18	18	18	18	--

EEL RIVER BASIN

11-4728. MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'45", long 123°04'11", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.23 N., R.11 W., Mendocino County, at gaging station 1.2 miles upstream from Black Butte River, and 9.8 miles northeast of Covelo.

DRAINAGE AREA.--204 sq mi.

PERIOD OF RECORD.--Water temperatures: May to October 1966, October 1967 to September 1969.

Sediment records: October 1967 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 1°C on several days during December and January.

Sediment concentrations: Maximum daily, 3,650 mg/l Jan. 20; minimum daily, 1 mg/l on many days during October and June to September.

Sediment loads: Maximum daily, 329,000 tons Jan. 20; minimum daily, 0.02 ton on several days during October.

EXTREMES, 1966, 1967-69.--Water temperatures: Maximum (1966, 1967-68), 29°C July 5, 1968; minimum, 1°C on several days in 1968-69.

Sediment concentrations (1967-69): Maximum daily, 7,150 mg/l Jan. 14, 1968; minimum daily, 1 mg/l on many days in 1967-69.

Sediment loads (1967-69): Maximum daily, 329,000 tons Jan. 20, 1969; minimum daily, 0.02 ton on several days in 1967-68.

REMARKS.--No temperature record Oct. 1-7 and June 10 to Sept. 30; probe out of water. Where no maximum or minimum is shown, temperature is once-daily reading.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE-	
OCTOBER...	--	--	--	--	--	--	--	--	13	14	15	14	14	13	14	15	15	14	14	14	12	11	12	13	13	13	13	13	13	13	13	13	--
MAXIMUM	--	--	--	--	--	--	--	--	13	14	15	14	14	13	14	15	15	14	14	14	12	11	12	13	13	13	13	13	13	13	13	--	
MINIMUM	--	--	--	--	--	--	--	9	9	10	13	13	13	12	11	11	11	11	11	11	8	9	9	10	10	9	9	9	11	12	10	--	
NOVEMBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	13	11	12	11	12	11	12	12	13	12	12	12	11	8	8	7	7	8	8	8	8	8	9	8	8	7	6	5	6	6	--	9	
MINIMUM	9	11	11	9	10	9	10	10	12	11	11	11	8	8	6	6	7	7	8	8	7	7	8	7	7	6	5	4	5	5	--	8	
DECEMBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	5	4	4	4	5	5	5	6	6	7	5	4	4	5	5	5	5	5	5	2	1	1	3	4	4	3	2	1	1	1	1	4	
MINIMUM	4	4	4	3	4	5	5	5	6	5	4	3	3	4	5	5	5	5	5	2	1	1	1	3	3	1	1	1	1	1	1	3	
JANUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	2	2	2	3	3	3	3	3	4	4	4	6	6	7	6	4	3	6	6	7	7	6	4	6	7	6	4	4	4	3	2	4	
MINIMUM	1	1	2	2	3	3	3	3	3	3	4	4	4	6	6	4	3	3	5	6	6	3	3	4	6	4	4	4	3	2	3	4	
FEBRUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	4	4	3	4	3	4	4	4	6	7	6	6	6	5	6	6	6	6	7	7	7	5	5	5	5	5	5	6	--	--	5		
MINIMUM	3	2	2	3	3	3	3	3	4	6	6	6	6	5	5	6	6	6	6	7	5	4	5	5	4	4	4	5	--	--	5		
MARCH....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	5	5	5	5	6	6	5	5	5	5	5	5	5	6	6	7	7	7	7	7	7	7	8	8	8	8	9	9	10	9	8	7	
MINIMUM	4	4	4	4	4	5	4	5	4	4	4	4	4	4	5	6	6	6	7	6	6	7	7	7	6	6	7	6	6	7	7	5	
APRIL....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	9	8	8	8	8	9	9	9	9	10	10	9	7	8	10	11	9	10	10	11	11	10	8	8	9	11	12	11	10	10	--	9	
MINIMUM	7	7	6	6	6	6	6	7	8	7	7	7	6	6	6	7	8	7	7	7	8	8	6	6	6	7	8	8	8	7	--	7	
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	10	11	9	11	13	13	13	13	14	13	13	13	12	12	13	14	13	13	14	15	16	15	14	14	12	14	15	16	17	17	13	9	
MINIMUM	7	7	7	6	8	8	8	8	9	9	8	9	9	9	9	9	10	9	8	9	10	10	11	10	10	10	9	9	11	11	12	9	
JUNE.....	--	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--	--	17	--	16	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	17	18	19	19	18	19	19	20	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	12	12	13	13	13	13	14	13	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JULY.....	20	20	--	--	--	--	--	--	--	24	--	--	23	--	--	--	--	--	--	--	--	26	--	--	--	--	26	--	26	26	25	--	
MAXIMUM	20	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUGUST...	--	--	--	--	20	--	26	--	--	--	--	--	--	--	--	27	--	26	--	--	--	--	26	--	24	--	--	--	--	--	24	--	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--																				

11-4728. MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	8.0	1	.02	70	7	1.3	238	12	7.7
2	8.0	1	.02	419	217	343	195	8	4.2
3	8.0	1	.02	289	21	16	180	6	2.9
4	8.0	1	.02	139	12	4.5	174	5	2.3
5	8.0	1	.02	116	7	2.2	228	5	3.1
6	8.0	1	.02	105	4	1.1	269	5	3.6
7	8.0	1	.02	90	3	.73	240	14	9.1
8	8.0	1	.02	81	2	.44	629	90	153
9	8.0	2	.04	115	2	.62	496	20	27
10	8.4	4	.09	127	2	.69	15200	3610	234600
11	10	8	.22	151	10	4.1	876	960	2270
12	17	10	.46	558	68	102	100	245	66
13	10	15	.41	266	25	18	139	305	286
14	10	2	.05	195	16	8.4	273	504	371
15	10	2	.05	202	11	6.0	618	662	1470
16	10	1	.03	254	13	8.9	165	210	94
17	10	1	.03	352	15	14	173	150	70
18	10	1	.03	1440	285	1300	134	90	33
19	10	1	.03	600	45	73	100	45	12
20	10	1	.03	361	16	16	101	31	8.5
21	10	2	.05	260	10	7.0	97	19	5.0
22	10	2	.05	215	3	1.7	98	17	4.5
23	10	2	.05	191	8	4.1	7160	2080	64000
24	10	3	.08	198	13	6.9	8490	1440	33000
25	10	3	.08	218	8	4.7	4170	530	5970
26	10	5	.14	194	8	4.2	1800	205	996
27	10	5	.14	179	7	3.4	1090	125	368
28	10	7	.19	176	7	3.3	1100	130	386
29	12	7	.23	181	12	5.9	1040	60	168
30	17	8	.37	259	20	14	813	45	99
31	27	7	.51	--	--	--	807	30	65
TOTAL	323.4	--	3.52	8001	--	1976.18	47193	--	343954.9

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	663	26	47	1520	68	279	502	47	64
2	638	24	41	1380	98	365	493	28	37
3	730	28	55	1320	140	499	480	17	22
4	1010	50	136	1210	90	294	472	15	19
5	1100	64	190	1210	85	278	467	13	16
6	1180	66	210	1120	60	181	465	12	15
7	1040	55	154	965	30	78	460	11	14
8	870	40	94	1270	219	1050	455	11	14
9	747	30	61	2130	460	2780	450	9	11
10	674	25	45	1720	245	1140	445	9	11
11	2480	639	8600	3900	1190	12800	440	6	7.1
12	23400	3210	211000	3120	320	2700	435	6	7.0
13	23900	3420	245000	1710	170	785	430	6	7.0
14	4710	1400	17800	1320	140	499	425	6	6.9
15	1960	610	3230	1300	145	509	435	8	9.4
16	1140	330	1020	1180	70	223	555	13	19
17	1160	220	689	1040	40	112	1080	118	359
18	1190	230	739	902	31	75	1280	83	287
19	12700	2650	120000	825	27	60	1080	33	96
20	33600	3650	329000	742	22	44	1060	33	94
21	16600	3030	141000	665	19	34	944	36	92
22	2440	1890	12500	610	14	23	930	26	65
23	754	590	1200	610	20	33	1170	43	136
24	670	506	917	585	38	60	1300	52	183
25	2150	1000	6410	570	18	28	1410	64	244
26	7800	2040	48500	535	13	19	1630	81	356
27	3780	560	5720	507	31	42	2070	128	715
28	2620	450	3180	545	83	122	2460	187	1240
29	2120	190	1090	--	--	--	2920	248	1960
30	1820	115	565	--	--	--	3480	277	2600
31	1590	105	451	--	--	--	3200	209	1810
TOTAL	157236	--	1159644	34511	--	25112	33423	--	10516.4

EEL RIVER BASIN

11-4728. MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	2100	146	828	1860	70	352	802	14	30
2	1940	130	681	1650	55	245	760	14	29
3	1450	84	329	1600	43	186	718	12	23
4	1250	52	176	1380	28	104	682	12	22
5	1510	121	493	1550	40	167	640	4	6.9
6	1230	61	203	1900	104	534	555	2	3.0
7	1080	38	111	2300	184	1140	493	5	6.7
8	1050	30	85	2480	165	1100	440	7	8.3
9	1100	32	95	2610	189	1330	400	6	6.5
10	1140	37	114	2750	212	1570	360	5	4.9
11	1410	60	228	2540	181	1240	335	4	3.6
12	1790	109	527	2350	156	990	310	4	3.3
13	1510	62	253	2020	117	638	285	4	3.1
14	1260	42	143	1640	79	350	260	4	2.8
15	1140	35	108	1370	56	207	240	4	2.6
16	1210	36	118	1300	53	186	225	3	1.8
17	1470	61	242	1380	54	201	210	3	1.7
18	1740	90	423	1480	55	220	195	3	1.6
19	1590	55	236	1340	45	163	180	3	1.5
20	1760	79	375	1260	30	102	168	3	1.4
21	2140	105	607	1100	27	80	158	3	1.3
22	2900	178	1390	1060	35	100	148	3	1.2
23	2770	168	1260	1110	31	93	140	3	1.1
24	1910	94	485	1140	23	71	132	2	.71
25	1510	51	208	1020	24	66	126	2	.68
26	1410	38	145	970	23	60	119	2	.64
27	1520	46	189	950	24	62	114	2	.62
28	1960	84	445	870	16	38	108	1	.29
29	2290	98	606	810	23	50	102	1	.28
30	2040	72	397	900	28	68	98	1	.26
31	--	--	--	860	20	46	--	--	--
TOTAL	49180	--	11500	47550	--	11759	9503	--	170.78

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	93	2	.50	18	1	.05	11	1	.03
2	87	2	.47	18	1	.05	11	1	.03
3	91	2	.44	17	1	.05	11	1	.03
4	77	2	.42	17	1	.05	11	1	.03
5	73	3	.59	16	1	.04	10	1	.03
6	70	3	.57	16	1	.04	10	1	.03
7	67	3	.54	16	1	.04	10	1	.03
8	65	4	.70	15	1	.04	10	1	.03
9	61	4	.66	15	1	.04	10	1	.03
10	58	4	.63	15	1	.04	10	1	.03
11	56	3	.45	14	1	.04	10	1	.03
12	53	3	.43	14	1	.04	10	1	.03
13	50	2	.27	14	1	.04	10	1	.03
14	48	2	.26	13	1	.04	10	1	.03
15	45	2	.24	13	1	.04	10	1	.03
16	41	2	.22	13	1	.04	10	1	.03
17	38	1	.10	13	1	.04	9.8	1	.03
18	36	1	.10	12	1	.03	9.8	1	.03
19	34	1	.09	12	1	.03	9.8	1	.03
20	32	1	.09	12	1	.03	9.8	1	.03
21	30	1	.08	12	1	.03	9.8	1	.03
22	29	1	.08	12	1	.03	9.8	1	.03
23	27	1	.07	12	1	.03	9.8	1	.03
24	26	1	.07	12	1	.03	9.8	1	.03
25	24	1	.06	11	1	.03	9.8	1	.03
26	23	1	.06	11	1	.03	9.8	1	.03
27	22	1	.06	11	1	.03	9.8	1	.03
28	22	2	.12	11	1	.03	9.8	1	.03
29	21	2	.11	11	1	.03	9.8	1	.03
30	20	1	.05	11	1	.03	9.8	1	.03
31	19	1	.05	11	1	.03	--	--	--
TOTAL	1428	--	8.58	418	--	1.14	301.2	--	.90

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

389067.6
1564647.40

11-4728. MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- ERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALYSIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
NOV 2, 1968	1010	11	838	763	1730	42	54	67	78	87	96	100	--	--	--	--	VBWC
NOV 18.....	0750	8	2160	618	3600	16	28	40	53	61	81	94	99	100	--	--	VBWC
DEC 10.....	0800	7	30800	7410	616000	15	17	24	34	42	53	65	80	94	100	--	VPWC
DEC 10.....	1000	7	39000	8610	907000	14	17	23	32	40	49	62	79	93	100	--	VPWC
DEC 10.....	1400	7	27800	4420	332000	17	19	30	41	52	62	74	90	99	100	--	VPWC
DEC 11.....	0900	4	799	1090	2350	20	28	38	47	56	66	74	87	100	--	--	VBWC
FEB 12, 1969	1550	6	2470	301	2010	13	22	30	38	43	56	64	70	80	92	100	SBWC

11-4729. BLACK BUTTE RIVER NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'15", long 123°04'50", in SE¼ sec.28, T.23 N., R.11 W., Mendocino County, at gaging station 10 ft upstream from highway bridge, 0.5 mile upstream from mouth, and 9.5 miles east of Covelo.

DRAINAGE AREA.--162 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1964 to September 1966.

Specific conductance: October 1966 to September 1968.

Water temperatures: May 1964 to September 1969.

Sediment records: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, freezing point Dec. 20-23, Jan. 17.

Sediment concentrations: Maximum daily, 8,170 mg/l Jan. 20; minimum daily, 1 mg/l on many days during October, November, and July to September.

Sediment loads: Maximum daily, 218,000 tons Jan. 20; minimum daily, 0.01 ton on many days during October, November, and September.

EXTREMES, 1964-69.--Water temperatures: Maximum (1964-68), 32°C Aug. 23, 1964, Aug. 2, 1967; minimum (1965-69), freezing point on several days in 1965-69.

Sediment concentrations (1965-69): Maximum daily, 10,600 mg/l Jan. 4, 1966; minimum daily, 1 mg/l on many days in 1967-69.

Sediment loads (1965-69): Maximum daily, 218,000 tons Jan. 20, 1969; minimum daily, 0.01 ton on many days in 1967-69.

REMARKS.--No temperature record Jan. 20 to Sept. 13; probe out of water. Where no maximum or minimum is shown, temperature is once-daily reading.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM	23	24	24	22	23	22	21	21	21	21	15	15	17	14	17	18	18	18	18	17	17	18	19	19	19	18	18	14	14	15	19	
MINIMUM	15	15	15	15	15	14	13	13	12	13	14	13	11	11	10	11	11	11	10	11	10	10	10	11	11	10	10	10	11	9	9	12
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM	11	11	13	11	14	9	13	13	17	16	13	11	11	6	8	9	10	9	11	10	9	10	9	8	9	8	8	7	5	--	10	
MINIMUM	8	10	8	8	8	8	9	9	12	10	11	7	6	5	6	6	8	8	6	6	6	6	7	5	4	4	3	4	4	--	7	
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM	7	6	6	5	8	5	5	7	7	7	5	3	4	5	4	4	4	3	3	2	2	0	3	4	3	2	2	3	3	3	4	
MINIMUM	3	2	2	1	3	2	3	5	5	5	2	1	2	3	3	3	2	2	1	0	0	0	0	3	1	1	1	1	1	1	2	
JANUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7	4	4	4	4	7	4	4	4	3	--	
MAXIMUM	4	4	5	5	6	5	4	4	3	3	4	4	6	4	3	4	3	4	5	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	1	2	3	3	3	2	2	1	1	1	2	4	3	2	2	1	0	1	4	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY.	4	5	5	3	4	5	5	5	6	7	6	6	--	5	6	7	4	4	6	6	4	4	3	3	--	--	5	5	--	--	5	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MARCH....	--	--	--	7	4	--	7	--	4	--	--	3	8	--	4	6	7	8	3	6	7	4	8	4	4	10	9	6	6	9	9	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
APRIL....	6	7	8	5	6	7	4	5	7	11	11	8	6	8	6	6	9	--	11	7	12	11	8	8	9	7	12	--	7	7	--	8
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAY.....	--	--	7	12	13	11	11	12	12	13	--	9	14	13	--	15	--	11	14	--	11	--	--	--	13	--	16	--	--	20	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE.....	--	20	--	18	--	--	--	16	--	--	17	--	--	--	--	--	--	19	--	20	--	--	--	--	--	17	--	21	--	--	--	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JULY.....	--	21	--	--	--	--	--	--	--	26	--	--	25	--	--	--	--	--	--	--	23	--	--	--	--	--	--	26	27	27	27	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUGUST...	--	--	--	--	20	--	26	--	--	--	--	--	--	--	--	27	--	27	--	--	--	--	27	--	--	--	--	--	--	--	25	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SEPTEMBER	--	--	--	--	--	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	30	29	28	27	24	24	25	27	28	26	28	29	29	29	28	28	28	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	16	16	16	16	17	16	15	14	14	14	14	15	16	16	15	16	14	--	

EEL RIVER BASIN

11-4729, BLACK BUTTE RIVER NEAR COVELO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.0	1	.01	5.3	1	.01	79	12	2.6
2	3.0	1	.01	23	61	4.3	55	6	.89
3	3.0	1	.01	36	10	.97	44	3	.36
4	3.0	1	.01	21	4	.23	39	2	.21
5	3.0	1	.01	16	2	.09	50	4	.54
6	3.0	1	.01	15	2	.08	62	7	1.2
7	3.0	1	.01	14	1	.04	61	4	.66
8	3.3	1	.01	15	1	.04	145	35	14
9	3.3	1	.01	19	2	.10	111	3	.90
10	3.3	2	.02	20	2	.11	3490	3710	48100
11	5.0	3	.04	24	5	.55	702	580	1100
12	8.6	4	.09	71	15	3.0	156	130	55
13	14	6	.23	35	9	.85	170	362	374
14	12	4	.13	33	47	5.6	831	374	888
15	9.4	4	.10	45	74	9.4	2830	1600	16600
16	8.6	4	.09	54	68	9.9	1010	290	791
17	8.1	4	.09	70	18	3.4	250	95	64
18	7.1	4	.08	412	248	309	154	62	26
19	6.5	4	.07	140	19	7.2	125	37	12
20	6.2	3	.05	59	6	.96	75	20	4.1
21	5.9	3	.05	39	4	.42	54	11	1.6
22	5.9	3	.05	32	2	.17	55	10	1.5
23	5.6	3	.05	29	2	.16	4950	3820	61500
24	5.3	2	.03	49	18	2.7	3570	2160	21700
25	5.3	2	.03	94	15	4.4	2040	940	5180
26	5.3	2	.03	50	7	.95	930	340	854
27	5.0	2	.03	41	4	.44	398	152	163
28	5.0	1	.01	38	3	.31	494	355	527
29	5.2	1	.01	42	6	.80	574	176	273
30	5.3	1	.01	104	34	9.7	365	105	103
31	5.6	1	.02	--	--	--	270	76	55
TOTAL	175.8	--	1.40	1645.3	--	375.88	24139	--	158393.56

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	246	56	37	730	790	1560	750	231	468
2	227	50	31	720	750	1460	720	157	305
3	275	81	60	675	560	1020	574	123	191
4	720	226	439	693	570	1070	468	106	134
5	1150	227	705	740	660	1320	404	78	85
6	1190	204	655	770	690	1430	284	70	54
7	942	158	402	639	460	794	234	68	43
8	919	120	298	790	1450	4750	184	64	32
9	453	71	87	1840	2070	10600	162	67	29
10	340	55	50	1550	1290	5400	135	60	22
11	3270	3020	42300	3950	3690	40200	123	49	16
12	6180	3560	60900	2320	1580	9900	111	42	13
13	6500	4900	91900	1520	1100	4510	91	38	9.3
14	2650	1810	13000	1530	1000	4130	86	35	8.1
15	1580	910	3880	1800	1720	8360	95	44	11
16	1060	620	1770	1520	1360	5580	123	61	20
17	842	530	1200	1350	490	1790	462	599	807
18	1180	1190	5320	1220	420	1380	606	392	641
19	7200	6150	148000	1130	350	1070	432	206	240
20	9550	8170	218000	1040	290	814	450	218	265
21	8480	7570	177000	1040	275	772	376	171	174
22	3250	4020	35300	1010	280	764	320	132	114
23	1620	2460	10800	1040	252	708	415	158	177
24	1130	1980	6040	1000	260	702	398	198	213
25	3050	3510	31200	990	280	748	426	222	255
26	5370	4680	73900	886	275	658	720	366	712
27	1670	2210	9960	886	250	598	1030	640	1780
28	1340	1600	5790	908	380	932	1170	780	2460
29	1050	1060	3010	--	--	--	1460	905	3570
30	875	1040	2460	--	--	--	1830	1020	5040
31	693	920	1720	--	--	--	1720	840	3900
TOTAL	75002	--	946214	34287	--	113020	16359	--	21788.4

11-4729. BLACK BUTTE RIVER NEAR COVELO, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1290	645	2250	760	94	193	195	20	11
2	1110	490	1470	702	75	142	182	22	11
3	805	430	935	702	54	102	173	20	9.3
4	693	435	814	639	44	76	163	19	8.4
5	850	405	929	684	64	118	150	15	6.1
6	624	235	396	875	110	260	140	13	4.9
7	553	195	291	942	145	369	132	11	3.9
8	540	170	248	1010	131	357	122	9	3.0
9	567	134	205	1030	142	395	122	9	3.0
10	537	126	183	1080	159	464	127	8	2.7
11	593	158	253	1010	157	428	124	8	2.7
12	763	228	470	954	121	312	118	7	2.2
13	573	174	269	864	98	229	101	7	1.9
14	450	112	136	720	87	169	91	5	1.2
15	370	90	90	630	78	133	82	5	1.1
16	417	90	101	622	58	97	80	4	.86
17	569	112	172	630	58	99	73	3	.59
18	712	124	238	598	41	66	74	3	.60
19	648	98	171	543	31	45	94	3	.76
20	719	128	248	468	26	33	78	3	.63
21	987	168	448	438	22	26	76	3	.62
22	1460	300	1180	420	21	24	66	3	.53
23	1260	247	840	409	23	25	62	3	.50
24	757	180	368	370	24	24	61	2	.33
25	462	88	110	340	24	22	59	2	.32
26	469	86	109	313	16	14	58	2	.31
27	508	96	132	306	15	12	56	2	.30
28	752	131	266	249	13	8.7	53	2	.29
29	908	129	316	233	14	8.8	53	2	.29
30	800	101	218	228	15	9.2	51	3	.41
31	--	--	--	209	17	9.6	--	--	--
TOTAL	21746	--	13856	18978	--	4270.3	3016	--	79.74

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	49	3	.40	12	2	.06	6.4	1	.02
2	45	3	.36	12	2	.06	6.2	1	.02
3	43	3	.35	12	1	.03	5.8	1	.02
4	41	3	.33	12	1	.03	5.7	1	.02
5	39	4	.42	11	1	.03	5.6	1	.02
6	37	4	.40	11	1	.03	5.6	1	.02
7	35	4	.38	10	2	.05	5.6	1	.02
8	33	5	.45	9.8	2	.05	5.5	1	.01
9	32	5	.43	9.5	2	.05	5.5	1	.01
10	31	5	.42	9.4	2	.05	5.4	1	.01
11	29	4	.31	9.2	2	.05	5.4	1	.01
12	28	3	.23	9.0	3	.07	5.3	1	.01
13	26	2	.14	8.7	3	.07	5.3	1	.01
14	25	2	.14	8.6	3	.07	5.3	1	.01
15	24	2	.13	8.5	3	.07	5.3	1	.01
16	22	2	.12	8.5	3	.07	5.3	1	.01
17	21	2	.11	8.4	2	.05	5.3	1	.01
18	20	2	.11	8.4	1	.02	5.3	1	.01
19	18	2	.10	8.4	1	.02	5.3	1	.01
20	18	2	.10	8.1	1	.02	5.3	2	.03
21	17	2	.09	7.6	1	.02	5.2	2	.03
22	16	2	.09	7.2	1	.02	5.0	2	.03
23	16	2	.09	6.9	1	.02	5.0	2	.03
24	16	2	.09	6.7	1	.02	5.0	2	.03
25	15	2	.08	6.6	1	.02	5.4	1	.01
26	15	1	.04	6.6	1	.02	5.5	1	.01
27	14	1	.04	6.6	1	.02	5.2	1	.01
28	14	1	.04	6.6	1	.02	5.0	1	.01
29	14	1	.04	6.4	1	.02	5.0	1	.01
30	13	2	.07	6.4	1	.02	5.0	1	.01
31	13	2	.07	6.4	1	.02	--	--	--
TOTAL	779	--	6.17	268.5	--	1.17	161.7	--	.47

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

TOTAL LOAD FOR YEAR (TONS)

196557.3

1258007.09

315

LOCATION.--Lat 39°38'57", long 123°07'12", in NE 1/4 sec.30, T.21 N., R.11 W., Mendocino County, temperature recorder at gaging station on right bank, 300 ft upstream from unnamed tributary and 13.5 miles northeast of Hearst.
DRAINAGE AREA.--84.1 sq mi.
PERIOD OF RECORD.--Water temperatures: October 1964 to September 1969.
EXTREMES, 1968-69.--Water temperatures: Maximum, 22°C on many days during July and August.
EXTREMES, 1965-67, 1968-69.--Water temperatures: Maximum, 34°C Aug. 2, 1967; minimum (1966-67), 3°C Feb. 19-22, 1967.
REMARKS.--Temperature recorder malfunction Dec. 3 to Jan. 6.

TEMPERATURE (°C) OF WATER. WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
	MAXIMUM	18	18	18	18	18	18	17	17	16	16	16	16	15	15	13	13	13	14	14	13	13	13	13	13	13	14	14	13	13	13	13	15	
	MINIMUM	16	16	16	16	16	16	15	14	13	14	15	14	13	12	11	12	12	12	12	12	12	13	13	12	12	12	12	12	12	12	11	13	
NOVEMBER																																		
	MAXIMUM	12	13	13	12	12	12	13	13	15	15	14	14	13	12	10	11	12	13	13	13	12	11	11	11	11	11	10	10	9	9	--	12	
	MINIMUM	11	11	11	9	11	11	12	13	13	13	14	12	10	9	8	10	10	12	10	9	9	11	10	10	9	9	8	7	7	7	--	10	
DECEMBER																																		
	MAXIMUM	13	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	MINIMUM	12	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JANUARY																																		
	MAXIMUM	--	--	--	--	--	--	7	6	6	6	6	7	8	8	8	7	6	7	6	5	7	9	9	9	7	9	9	6	6	6	7	7	
	MINIMUM	--	--	--	--	--	--	6	6	5	5	6	7	8	7	7	6	8	8	8	6	5	5	7	-9	9	7	5	6	5	6	6	6	
FEBRUARY																																		
	MAXIMUM	7	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	9	9	9	9	9	9	8	8	7	8	7	--	--	--	8	
	MINIMUM	6	7	5	5	7	6	7	7	7	7	7	7	7	7	8	8	8	8	9	8	9	8	7	6	6	6	6	6	7	--	--	--	
MARCH																																		
	MAXIMUM	7	8	7	8	8	8	8	8	8	8	7	8	8	8	8	8	9	9	9	9	9	10	10	10	10	10	10	10	11	10	10	11	9
	MINIMUM	7	7	6	7	7	7	7	7	7	7	7	7	7	8	8	8	8	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	8
APRIL																																		
	MAXIMUM	11	11	11	11	11	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	11
	MINIMUM	10	11	11	11	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	11
MAY																																		
	MAXIMUM	12	13	13	14	13	14	13	12	12	12	13	13	13	14	14	15	15	16	15	15	15	15	15	15	16	16	16	17	17	17	15	15	14
	MINIMUM	12	12	13	13	13	13	12	12	12	12	12	12	13	13	13	14	15	15	15	15	15	15	15	15	16	16	16	16	15	15	15	15	14
JUNE																																		
	MAXIMUM	15	16	16	17	17	17	17	18	17	17	17	17	16	16	16	16	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	--	17
	MINIMUM	15	15	16	16	17	17	17	17	17	17	17	17	16	16	16	16	16	17	17	18	18	18	18	18	18	18	18	18	18	18	18	--	17
JULY																																		
	MAXIMUM	18	18	18	18	19	19	19	19	19	19	19	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22	22	20	20
	MINIMUM	17	17	17	18	18	18	19	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	20	21	21	21	22	22	22	22	22	20	20
AUGUST																																		
	MAXIMUM	22	22	22	22	22	22	22	22	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	22	22	21	21	21	21	21	20	22
	MINIMUM	22	22	22	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	20	21	
SEPTEMBER																																		
	MAXIMUM	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	--	19
	MINIMUM	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	17	19

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

EEL RIVER BASIN

11-4739. MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°42'23", long 123°19'27", in NE¼SE¼ sec.5, T.21 N., R.13 W., Mendocino County, at gaging station 0.6 mile upstream from Eastman Creek, 1.7 miles southeast of Dos Rios, and 1.9 miles upstream from mouth.

DRAINAGE AREA.--745 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1966.

Specific conductance: October 1966 to September 1967.

Water temperatures: October 1957 to September 1959, October 1960 to September 1969.

Sediment records: October 1957 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, freezing point Dec. 22.

Sediment concentrations: Maximum daily, 5,990 mg/l Jan. 21; minimum daily, 1 mg/l on many days during October and July to September.

Sediment loads: Maximum daily, 741,000 tons Jan. 20; minimum daily, 0.04 ton on several days during October and September.

EXTREMES, 1965-69.--Water temperatures (1968-69): Minimum, freezing point Dec. 22, 1968.

Sediment concentrations: Maximum daily, 11,800 mg/l Jan. 4, 1966; minimum daily, 1 mg/l on many days in 1965-69.

Sediment loads: Maximum daily, 1,430,000 tons Jan. 4, 1966; minimum daily, 0.04 ton on several days in 1966 and 1968-69.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	--	18	--	16	--	--	16	--	14	15	16	16	--	13	--	14	--	15	--	--	14	--	13	--	15	--	--	13	15	14	--	--
NOVEMBER.	12	13	--	12	13	11	14	13	--	--	13	11	9	7	7	9	--	11	11	9	--	10	--	9	8	7	8	--	8	7	--	--
DECEMBER.	7	4	--	4	7	6	5	7	8	10	6	4	5	7	7	6	6	5	6	3	3	0	5	7	6	4	4	5	6	6	7	6
JANUARY..	5	6	7	6	7	6	5	5	4	4	6	7	8	7	6	6	4	5	8	9	8	5	4	5	8	6	4	4	4	4	4	6
FEBRUARY.	5	6	5	4	4	7	6	6	7	7	8	7	6	6	7	7	7	6	7	6	5	6	6	4	4	4	7	7	--	--	--	6
MARCH....	6	5	6	7	6	7	6	7	6	6	6	7	7	7	6	7	8	8	6	8	7	8	7	7	8	9	8	9	9	11	7	7
APRIL....	10	8	7	10	8	8	8	9	9	10	11	10	7	9	8	9	10	8	9	9	11	11	8	8	7	9	10	11	9	9	--	9
MAY.....	9	9	9	9	10	13	12	12	--	12	12	13	11	11	12	16	13	11	12	13	13	14	13	14	13	13	13	14	17	16	12	--
JUNE.....	--	16	22	17	17	16	--	17	15	16	16	18	20	--	18	--	19	--	19	--	--	21	--	19	--	18	--	--	21	--	--	--
JULY.....	--	20	--	21	--	--	22	--	23	--	21	--	--	26	--	23	--	26	--	--	26	--	24	--	22	--	--	23	--	23	--	--
AUGUST...	22	--	--	26	--	27	--	23	--	--	22	--	23	--	22	--	--	24	--	22	--	24	--	--	26	--	21	--	24	--	--	--
SEPTEMBER	21	--	22	--	26	--	--	21	--	22	--	25	--	--	21	--	19	--	21	--	--	20	--	21	--	19	--	--	19	--	--	--

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	16	1	.04	131	3	1.1	664	62	111
2	16	1	.04	296	10	17	526	25	36
3	16	1	.04	532	24	34	370	9	9.0
4	16	1	.04	244	16	11	348	6	5.6
5	16	1	.04	188	8	4.1	344	11	10
6	16	1	.04	180	2	.97	460	29	36
7	17	1	.05	153	2	.83	420	12	14
8	17	1	.05	131	3	1.1	1090	92	271
9	17	1	.05	129	4	1.4	1000	104	281
10	18	1	.05	188	7	3.6	19400	4950	312000
11	24	1	.06	173	5	2.3	7760	1580	40600
12	43	1	.12	628	337	716	2340	470	2970
13	252	2	1.4	440	125	149	1920	797	5640
14	195	3	1.6	316	83	71	4330	1460	19800
15	135	2	.73	450	84	102	11300	3020	114000
16	118	1	.32	460	37	46	4920	964	14800
17	101	1	.27	400	27	29	2370	450	2880
18	90	1	.24	1400	583	2720	1680	510	2310
19	77	1	.21	1380	320	1290	1580	290	1240
20	57	1	.15	770	60	125	1270	110	377
21	60	1	.16	514	21	29	1090	75	221
22	55	1	.15	410	20	22	1040	100	281
23	52	1	.14	375	20	20	24800	4570	360000
24	49	1	.13	380	48	49	21700	3580	230000
25	37	1	.10	749	206	455	12200	1690	55700
26	43	1	.12	502	33	45	5870	880	13900
27	42	1	.11	405	10	11	3240	580	5070
28	40	1	.11	360	6	5.8	3870	770	8050
29	42	1	.11	360	6	5.8	3650	490	4830
30	86	2	.46	574	54	84	2750	260	1930
31	160	2	.86	--	--	--	2250	340	2070
TOTAL	1923	--	7.99	13218	--	6052.00	146552	--	1199442.6

11-4739. MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	2060	380	2110	3980	680	7310	3480	510	4790
2	2000	250	1350	3310	490	4380	3050	540	4450
3	2090	350	1980	3560	490	4710	3130	490	4140
4	2600	490	3440	3360	580	5260	2620	290	2050
5	3080	430	3580	4460	790	9510	2510	315	2130
6	3160	320	2730	4800	730	9460	2480	310	2080
7	2960	300	2400	3960	405	4330	2340	280	1770
8	2720	295	2170	4470	810	9780	2210	230	1370
9	2440	215	1420	13400	2630	95200	2130	295	1700
10	2250	200	1220	8610	990	23000	2040	255	1400
11	11200	2120	100000	15900	3540	163000	1950	135	711
12	35600	4170	401000	11700	1730	57900	1870	80	404
13	34800	4100	400000	6110	910	15000	1800	110	535
14	13600	2380	92900	5280	910	13000	1770	100	478
15	6630	1260	22600	8800	1710	40600	1810	145	709
16	4240	810	9270	6750	760	13900	2010	230	1250
17	3200	580	5010	4270	500	5760	3240	815	7510
18	3360	650	5900	3340	440	3970	3670	650	6440
19	21600	4430	321000	2940	420	3330	3000	430	3480
20	46200	5840	741000	2570	400	2780	2940	395	3140
21	29000	5990	469000	2320	290	1820	2830	345	2640
22	18000	3180	155000	2180	200	1180	2600	350	2460
23	11000	1900	56400	2300	380	2360	2830	460	3510
24	7620	1660	34200	2720	660	4850	2990	420	3390
25	11200	3420	103000	3160	700	5970	3120	425	3580
26	22900	3850	238000	2830	410	3130	3440	605	5620
27	11100	1700	50900	2600	300	2110	3910	845	8920
28	8190	1170	25900	4560	1270	17500	4420	1080	12900
29	5660	860	13100	--	--	--	4850	900	11800
30	4660	740	9310	--	--	--	5400	735	10700
31	4070	740	8130	--	--	--	5220	730	10300
TOTAL	339190	--	3284020	144240	--	531100	91660	--	126357

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	4470	605	7300	2920	380	3000	1250	44	149
2	3980	490	5270	2670	255	1840	1160	42	132
3	3360	460	4170	2600	280	1970	1100	27	80
4	2840	450	3450	2290	190	1170	1030	36	100
5	3670	840	8320	2390	225	1450	984	36	96
6	3080	350	2910	3120	430	3620	897	36	87
7	2680	285	2060	3690	740	7370	808	32	70
8	2560	290	2000	3850	755	7850	724	26	51
9	2720	305	2240	4200	815	9240	640	24	41
10	2840	285	2190	4400	780	9270	610	16	26
11	3070	425	3520	4110	655	7270	570	15	23
12	3520	650	6180	4000	620	6700	580	14	22
13	3080	410	3410	3610	490	4780	555	13	19
14	2750	280	2080	3080	370	3080	515	11	15
15	2500	240	1620	2480	270	1810	486	10	13
16	2620	270	1910	2410	265	1720	481	8	10
17	2970	410	3290	2500	300	2030	454	6	7.4
18	3360	605	5490	2750	300	2230	424	5	5.7
19	3070	445	3690	2500	180	1220	436	4	4.7
20	3230	460	4010	2180	120	706	387	4	4.2
21	3670	890	8820	2080	121	680	372	6	6.0
22	4050	1000	10900	2020	120	654	327	7	6.2
23	4270	1000	11500	2090	143	807	340	9	8.3
24	3460	500	4670	2130	135	776	313	6	5.1
25	2830	305	2330	1880	94	477	303	3	2.5
26	2510	255	1730	1590	79	339	287	3	2.3
27	2590	345	2410	1570	86	365	237	3	1.9
28	3050	510	4200	1370	60	222	230	3	1.9
29	3440	600	5570	1300	60	211	225	2	1.2
30	3080	420	3490	1420	65	249	219	2	1.2
31	--	--	--	1390	61	229	--	--	--
TOTAL	95320	--	130730	80590	--	83335	16944	--	992.6

EEL RIVER BASIN

11-4739. MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	218	2	1.2	38	1	.10	29	1	.08
2	217	2	1.2	37	1	.10	32	2	.17
3	208	3	1.7	37	1	.10	32	3	.26
4	197	5	2.7	37	1	.10	32	2	.17
5	186	5	2.5	34	1	.09	32	1	.09
6	168	8	3.6	34	1	.09	32	1	.09
7	156	12	5.1	34	1	.09	32	1	.09
8	143	8	3.1	34	1	.09	32	1	.09
9	132	2	.71	33	1	.09	32	1	.09
10	120	3	.97	31	1	.08	32	1	.09
11	118	3	.96	30	1	.08	25	1	.07
12	105	4	1.1	30	1	.08	19	1	.05
13	91	5	1.2	30	1	.08	18	1	.05
14	88	7	1.7	30	2	.16	18	1	.05
15	83	5	1.1	30	3	.24	18	1	.05
16	85	3	.69	29	4	.31	18	1	.05
17	78	3	.63	28	5	.38	17	1	.05
18	69	4	.75	27	7	.51	17	1	.05
19	63	5	.85	27	2	.15	14	2	.08
20	59	6	.96	27	1	.07	15	2	.08
21	58	7	1.1	27	1	.07	15	1	.04
22	58	5	.78	27	1	.07	15	1	.04
23	56	3	.45	26	1	.07	15	1	.04
24	48	5	.65	25	1	.07	15	1	.04
25	48	6	.78	25	1	.07	15	1	.04
26	48	5	.65	27	1	.07	15	1	.04
27	45	2	.24	25	1	.07	15	1	.04
28	43	1	.12	24	1	.06	15	1	.04
29	43	1	.12	24	1	.06	15	1	.04
30	43	1	.12	24	1	.06	15	1	.04
31	40	1	.11	24	1	.06	--	--	--
TOTAL	3114	--	37.84	915	--	3.72	646	--	2.20

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)934312
5362080.95

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED										METHOD OF ANALY- SIS	
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00		2.00
NOV 12, 1968	0900	11	670	608	1100	--	--	--	--	--	27	32	45	76	100	--	V
DEC 10.....	0855	10	12600	8190	279000	23	24	36	42	54	62	77	90	97	99	100	VPWC
DEC 11.....	1120	6	6520	1390	24500	19	27	36	44	51	63	74	87	97	100	--	VBWC
DEC 15.....	0930	7	13300	5070	182000	16	20	29	39	51	60	76	91	99	100	--	VPWC
DEC 19.....	1130	6	1590	246	1060	19	25	30	35	37	40	44	49	62	88	100	SBWC
DEC 23.....	1115	5	23200	4980	312000	19	23	31	40	49	60	72	87	98	100	--	VPWC
DEC 24.....	1445	7	18300	2920	144000	22	26	35	44	53	63	74	86	94	100	--	VPWC
DEC 25.....	1130	6	13400	1880	68000	22	25	35	45	54	64	75	89	98	100	--	VPWC
JAN 8, 1969	0950	7	2810	227	1720	29	38	49	57	61	70	74	80	91	98	100	SBWC
JAN 11.....	1230	6	6520	2630	46300	21	25	34	44	55	67	80	94	100	--	--	VPWC
JAN 12.....	1105	7	35300	3350	319000	22	27	37	49	60	72	83	93	99	100	--	VPWC
JAN 13.....	1015	8	44400	4890	586000	23	24	36	49	60	72	86	96	99	100	--	VPWC
JAN 15.....	1115	6	6520	1260	22200	21	30	40	50	58	65	73	83	92	95	100	SBWC
JAN 19.....	1330	8	19400	3950	207000	20	26	34	44	56	66	77	90	99	100	--	VPWC
JAN 20.....	1050	9	43200	5390	629000	22	25	34	45	57	68	81	93	99	100	--	VPWC
JAN 21.....	0900	8	D29000	5790	453000	22	28	38	49	61	72	85	95	100	--	--	VPWC
JAN 26.....	0945	6	33800	3850	351000	18	24	33	43	54	64	76	88	97	100	--	VPWC
FEB 13.....	1420	5	5730	965	14900	24	28	37	47	54	63	71	84	96	100	--	VPWC
FEB 23.....	1510	6	2270	301	1840	6	26	33	38	41	49	54	60	75	95	100	SBWC
APR 28.....	1350	13	3150	458	3900	16	23	32	40	47	54	59	67	80	95	100	SBWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE										METHOD OF ANALY- SIS	
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
APR 28, 1969	1315	13	5	3150	--	--	1	2	6	17	34	55	88	100	--	S

D Daily mean discharge.

319

LOCATION.--Lat 40°13'05", long 123°37'54", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.3 S., R.5 E., Humboldt County, at gaging station at bridge, 1.0 mile southeast of Fort Seward, 1.9 miles upstream from Dobbyn Creek, and 11.8 miles northeast of Garberville.

PERIOD OF RECORD.--Water temperatures: November 1960 to September 1969.

Sediment records: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 33°C July 22; minimum, 2°C Dec. 20-22, Jan. 29, 30.

Sediment concentrations: Maximum daily, 4,790 mg/l Dec. 25; minimum daily, 1 mg/l on many days during October, August, and September.

EXTREMES 1960-64, 1965-69.--Water temperatures: Maximum, 34°C June 25, July 7, 1968; minimum, freezing point Dec. 14-17, 1968.

Sediment concentrations (1965-69): Maximum daily, 13,900 mg/l Jan. 4, 1966; minimum daily, 1 mg/l on many days in 1965-69.

Sediment loads (1965-69): Maximum daily, 4,270,000 tons Jan. 4, 1966; minimum daily, 0.09 ton on many days in 1968 and 1969.

REMARKS.--No temperature record May 20 to June 3, probe out of water; Aug. 13 to Sept. 30, recorder malfunction. Where no maximum or minimum is shown, temperature is once-daily reading.

	DAY																																AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	21	23	23	19	20	19	20	21	21	20	16	16	19	17	16	18	20	18	19	18	19	21	21	22	20	22	22	19	17	17	18	--	
MINIMUM	16	14	16	16	16	13	14	12	12	14	14	14	13	12	12	12	13	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	
NOVEMBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	15	15	17	14	16	14	17	15	19	21	17	15	13	10	9	10	12	13	15	14	14	12	13	13	11	11	10	10	9	7	--	13	
MINIMUM	13	13	11	12	13	13	14	15	16	15	12	10	8	8	8	10	12	12	11	10	11	11	10	8	8	7	7	7	6	--	11	--	
DECEMBER...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	7	8	7	7	8	9	8	9	10	11	9	7	6	8	7	8	6	6	5	4	3	6	7	7	6	5	5	7	7	7	7	7	
MINIMUM	6	5	5	6	6	7	7	7	8	9	6	5	5	6	6	5	4	2	2	2	2	3	6	7	5	4	4	5	5	5	5	5	
JANUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	7	8	8	9	9	9	7	7	5	5	6	8	8	7	7	6	6	8	9	9	9	7	6	6	9	8	5	5	4	5	5	7	
MINIMUM	5	6	6	6	7	7	5	3	3	4	5	6	7	6	5	5	4	4	6	8	7	6	4	6	5	4	4	2	2	3	5	--	
FEBRUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	5	9	9	6	6	6	7	6	7	8	9	8	7	6	7	8	7	8	9	8	9	6	6	6	6	9	6	7	--	--	--	7	
MINIMUM	4	5	5	4	4	4	5	6	6	7	9	6	5	5	6	6	6	6	7	6	5	4	4	5	4	4	5	5	--	--	--	5	
MARCH....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	9	6	8	9	9	10	9	11	9	11	9	11	12	12	13	9	10	13	13	9	12	13	15	16	17	15	17	17	15	17	15	12	
MINIMUM	4	5	4	4	5	6	5	5	5	5	5	5	6	6	6	7	8	7	8	7	8	7	8	8	8	9	9	10	11	10	7	--	
APRIL....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	14	10	10	11	11	13	15	16	16	16																							

EEL RIVER BASIN

11-4750. EEL RIVER AT FORT SEWARD, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	38	1	.10	218	8	4.7	1760	65	309
2	37	1	.10	260	7	4.9	2080	80	449
3	37	1	.10	690	19	51	1380	22	82
4	37	1	.10	865	30	70	1060	10	29
5	37	1	.10	487	15	20	905	8	20
6	37	1	.10	354	4	3.8	905	10	24
7	37	1	.10	313	4	3.4	972	13	34
8	36	1	.10	288	4	3.1	2350	118	850
9	36	1	.10	254	3	2.1	2820	112	853
10	36	1	.10	240	3	1.9	23500	3590	321000
11	38	1	.10	300	11	11	26300	2470	197000
12	50	4	.54	760	35	76	11500	900	27900
13	66	2	.36	1310	62	226	6760	500	9130
14	175	1	.47	815	39	86	12900	1590	57900
15	313	1	.85	1280	67	257	27900	2910	251000
16	248	1	.67	1760	97	464	22300	1770	117000
17	214	1	.58	1210	26	85	11000	640	19000
18	196	1	.53	1590	122	783	6510	225	3950
19	180	1	.49	3530	555	5560	5580	150	2260
20	170	1	.46	1820	125	614	4500	85	1030
21	162	1	.44	1150	25	78	3420	60	554
22	158	1	.43	805	12	26	3170	119	1240
23	153	1	.41	646	7	12	48500	4130	765000
24	149	1	.40	800	32	84	79500	3840	824000
25	146	1	.39	2480	193	1350	67000	4790	867000
26	146	1	.39	1930	68	354	32200	1810	164000
27	146	1	.39	1220	25	82	20900	900	50800
28	144	1	.39	925	8	20	19400	840	44000
29	144	1	.39	755	6	12	18700	780	39400
30	144	1	.39	1000	20	54	14900	500	20100
31	152	1	.41	--	--	--	11800	255	8120
TOTAL	3662	--	10.48	30055	--	10398.9	492472	--	3794034

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	9300	190	4770	15400	560	23300	17100	840	38800
2	7900	158	3370	15900	520	22300	13300	448	16100
3	7600	150	3080	14100	355	13500	13900	450	16900
4	7800	145	3050	13000	310	10900	11100	285	8540
5	8500	180	4130	16200	650	28400	9560	235	6070
6	8300	178	3990	18800	880	44700	8790	200	4750
7	7100	142	2720	16400	510	22600	8010	168	3630
8	6400	137	2370	14700	479	20900	7160	135	2610
9	5800	122	1910	31800	2200	190000	6490	120	2100
10	5020	97	1310	27600	1150	85700	6050	100	1630
11	15300	1460	99300	38700	2200	244000	5650	88	1340
12	96400	3980	1030000	37800	1430	146000	5130	77	1070
13	107000	3290	950000	23500	980	62200	4870	70	920
14	53800	2400	349000	19000	730	37400	4680	62	783
15	29700	1750	140000	23700	1290	87100	4520	57	696
16	21700	1050	61500	25300	1190	81300	4660	70	881
17	16200	700	30600	18300	580	28700	6030	177	3180
18	13600	650	23900	14800	450	18000	9010	497	12100
19	36700	3110	353000	36600	370	36600	8220	260	5770
20	101000	4620	1230000	10500	300	8510	7120	170	3270
21	109000	3850	1140000	8790	250	5930	6870	150	2780
22	61000	2710	446000	7560	210	4290	6300	125	2130
23	35700	1780	172000	7490	210	4250	6050	118	1930
24	26200	1310	92700	8780	380	9010	6130	118	1950
25	26000	2140	157000	11900	530	17000	6180	130	2170
26	42700	3850	430000	11000	360	10700	6180	148	2470
27	34000	1880	173000	9380	265	6710	6600	210	3740
28	26000	1200	84200	15600	1240	58300	7860	345	7320
29	20800	900	50500	--	--	--	8450	405	9240
30	17600	630	29900	--	--	--	8450	495	11300
31	15100	490	20000	--	--	--	8630	535	12500
TOTAL	979220	--	7093300	512600	--	1328300	239050	--	188670

11-4750. EEL RIVER AT FORT SEWARD, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	7950	365	7830	4430	135	1610	1530	32	132
2	7090	295	5650	4230	105	1200	1470	28	111
3	6600	265	4720	3980	100	1070	1360	24	88
4	5700	195	3000	3770	105	1070	1230	24	80
5	6380	272	5250	3420	97	896	1230	20	66
6	7260	290	5680	3660	110	1090	1180	20	64
7	6000	176	2850	4600	195	2420	1100	19	56
8	5380	115	1670	5000	225	3040	1030	19	53
9	5350	108	1560	5180	305	4270	945	15	38
10	5060	118	1610	5530	370	5520	885	12	29
11	4870	110	1450	5580	345	5200	825	10	22
12	5040	130	1770	5180	320	4480	780	8	17
13	5400	195	2840	5200	250	3510	755	8	16
14	4870	150	1970	4560	180	2220	702	7	13
15	4000	115	1240	3720	140	1410	666	7	13
16	3740	96	969	3210	130	1130	622	6	10
17	3940	105	1120	3020	120	978	598	6	9.7
18	4540	145	1780	3360	110	998	578	5	7.8
19	4790	165	2130	3120	92	775	570	5	7.7
20	4810	180	2340	2660	86	618	626	4	6.8
21	5020	190	2580	2440	79	520	578	4	6.2
22	5450	195	2870	2320	74	464	570	4	6.2
23	6000	310	5020	2280	71	437	484	3	3.9
24	6380	240	4130	2280	69	425	444	3	3.6
25	5350	135	1950	2110	67	382	423	3	3.4
26	4560	105	1290	2120	58	332	405	3	3.3
27	4460	95	1140	2090	46	260	384	3	3.1
28	4460	100	1200	1960	40	212	369	3	3.0
29	4810	145	1880	1850	37	185	354	4	3.8
30	4580	165	2040	1760	36	171	328	4	3.5
31	--	--	--	1620	35	153	--	--	--
TOTAL	159840	--	81529	106240	--	47046	23021	--	880.0

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	318	3	2.6	76	5	1.0	38	1	.10
2	305	3	2.5	74	6	1.2	38	2	.21
3	290	3	2.3	71	7	1.3	38	2	.21
4	280	3	2.3	69	6	1.1	38	2	.21
5	262	3	2.1	66	5	.89	36	1	.10
6	256	3	2.1	63	5	.85	35	1	.09
7	242	4	2.6	61	4	.66	35	1	.09
8	230	6	3.7	59	3	.48	35	1	.09
9	222	3	1.8	57	2	.31	35	1	.09
10	212	4	2.3	55	2	.30	35	1	.09
11	198	4	2.1	53	2	.29	35	1	.09
12	184	4	2.0	51	3	.41	34	1	.09
13	176	4	1.9	50	3	.41	34	1	.09
14	164	4	1.8	49	3	.40	34	1	.09
15	155	4	1.7	49	4	.53	34	1	.09
16	147	22	8.7	48	6	.78	34	1	.09
17	138	15	5.6	48	7	.91	34	1	.09
18	131	13	4.6	47	7	.89	34	1	.09
19	123	11	3.7	47	6	.76	34	1	.09
20	119	9	2.9	45	6	.73	34	1	.09
21	115	9	2.8	45	6	.73	35	1	.09
22	109	9	2.6	44	5	.59	35	1	.09
23	108	10	2.9	44	5	.59	36	1	.10
24	102	10	2.8	43	5	.58	36	1	.10
25	98	9	2.4	42	7	.79	37	1	.10
26	95	8	2.1	41	11	1.2	37	1	.10
27	92	7	1.7	41	10	1.1	37	1	.10
28	89	7	1.7	41	9	1.0	37	1	.10
29	85	6	1.4	39	9	.95	37	1	.10
30	82	5	1.1	39	5	.53	37	1	.10
31	78	5	1.1	39	1	.11	--	--	--
TOTAL	5205	--	81.9	1596	--	22.37	1068	--	3.16

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)2554029
12544275.81

EEL RIVER BASIN

11-4750. EEL RIVER AT FORT SEWARD, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIÈVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	1610	10	36800	7270	722000	19	28	38	50	65	79	93	99	100	--	--	VPWC	
DEC 15.....	1620	8	41300	5100	569000	22	23	35	47	61	74	89	99	100	--	--	VPWC	
DEC 16.....	1610	7	17900	1390	67200	21	29	38	47	56	68	80	98	100	--	--	VBWC	
DEC 23.....	1425	6	60200	5350	870000	24	27	39	52	65	78	92	100	--	--	--	VPWC	
DEC 24.....	0815	7	D79500	4040	867000	25	28	41	53	67	79	92	99	100	--	--	VPWC	
JAN 21, 1969	1000	9	114000	4100	1260000	28	30	44	57	72	84	95	99	100	--	--	VPWC	
JAN 22.....	1000	7	61700	2770	461000	24	26	38	50	63	75	89	97	100	--	--	VPWC	
JAN 25.....	1000	7	24600	1380	91700	26	36	48	60	71	82	91	99	100	--	--	VBWC	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
APR 10, 1969	1030	12	5	5110	--	--	1	18	23	31	40	48	57	100	--	S	

D Daily mean discharge.

11-4752.5. EEL RIVER AT SOUTH FORK, CALIF.

LOCATION.--Lat 40°21'04", long 123°54'48", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.1 S., R.2 E., Humboldt County, 0.2 mile upstream from Northwestern Pacific Railroad Bridge, 0.4 mile north of town of South Fork, and 0.5 mile upstream from South Fork.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

REMARKS.--Records furnished by California Department of Water Resources and reviewed by Geological Survey. Exact sampling location subject to change due to seasonal accessibility to river. Records of discharge given for 11-4750. Eel River at Fort Seward.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 02...	37	17	8.9	--	--	9.2	--	158	0	--	7.9
NOV. 13...	1310	11	10.5	--	--	8.2	--	121	0	--	6.5
DEC. 04...	1060	6	12.5	--	--	6.0	--	93	0	--	3.7
JAN. 22...	61000	8	12.7	--	--	3.0	--	60	0	--	1.6
FEB. 04...	13000	6	12.7	--	--	4.0	--	72	0	--	2.0
MAR. 04...	11100	8	12.6	--	--	3.4	--	72	0	--	1.9
APR. 08...	5380	12	11.5	--	--	3.7	--	73	0	--	1.7
MAY 13...	5200	16	10.6	16	2.9	2.7	1.0	60	0	4.3	1.6
JUNE 11...	825	17	9.9	--	--	3.4	--	85	0	--	2.7
JULY 15...	155	22	9.1	--	--	6.1	--	136	0	--	3.7
AUG. 05...	66	21	9.6	--	--	6.8	--	156	0	--	4.3
SEPT. 10...	35	19	9.2	44	10	8.6	1.2	154	0	29	5.3

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 02...	--	160	--	--	168	38	11	.3	130	8.0	370
NOV. 13...	--	260	--	--	124	25	13	.3	99	7.9	266
DEC. 04...	--	110	99	.13	99	23	--	--	76	8.1	198
JAN. 22...	--	0	--	--	65	16	9	.2	49	7.9	110
FEB. 04...	--	10	--	--	70	11	11	.2	59	8.1	146
MAR. 04...	--	40	--	--	74	15	9	.2	59	7.5	140
APR. 08...	--	50	--	--	64	4	11	.2	60	8.0	142
MAY 13...	.1	10	63	.09	52	3	10	.2	49	7.8	114
JUNE 11...	--	20	--	--	80	10	8	.2	70	8.1	167
JULY 15...	--	40	--	--	128	16	9	.2	112	8.3	260
AUG. 05...	--	100	--	--	145	17	9	.2	128	8.3	302
SEPT. 10...	.1	100	162	.22	151	25	11	.3	126	8.0	312

EEL RIVER BASIN

11-4755. SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF.

LOCATION.--Lat 39°43'09", long 123°39'06", in NW¼ sec.32, T.22 N., R.16 W., Mendocino County, at gaging station 0.4 mile upstream from Jack of Hearts Creek, and 4.7 miles north of Branscomb.

DRAINAGE AREA.--43.9 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1960 to September 1969.

Sediment records: October 1962 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 1,360 mg/l Jan. 12; minimum daily, 1 mg/l on several days during October, May to August.

Sediment loads: Maximum daily, 17,400 tons Jan. 12; minimum daily, 0.01 ton on many days during October, August, and September.

EXTREMES, 1960-69.--Water temperatures: Maximum (1960-61, 1962-68), 28°C Aug. 7, 1961; minimum (1961-65, 1966-68), 3°C Nov. 17, 18, 1961.

Sediment concentrations (1962-69): Maximum daily, 4,900 mg/l (estimated) Dec. 22, 1964; minimum daily, 1 mg/l on many days in 1963-69.

Sediment loads (1962-69): Maximum daily, 230,000 tons (estimated) Dec. 22, 1964; minimum daily, 0 tons on many days in 1964-65, 1967.

REMARKS.--Where no maximum or minimum is shown, temperature is once-daily reading.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	17	17	--	--	18	--	--	--	--	--	14	--	--	--	--	--	--	--	--	--	14	--	--	--	--	--	--	--	11	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER.	--	11	--	11	--	--	10	--	--	12	--	10	--	--	8	--	10	--	--	--	11	--	--	--	--	8	--	--	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER.	7	--	--	7	--	--	--	9	--	11	8	--	9	--	9	--	--	9	--	--	--	--	--	10	--	--	9	10	--	--	8	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY..	8	9	--	9	--	--	--	7	--	--	8	11	11	--	9	7	--	--	11	11	11	10	--	7	--	7	7	--	6	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEBRUARY.	--	--	7	7	7	--	--	7	8	--	--	8	--	9	9	8	9	10	9	8	8	7	6	6	6	6	7	7	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH....	8	8	9	8	9	9	8	8	8	8	7	8	--	8	--	8	--	8	--	10	--	11	--	--	--	--	12	--	--	13	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL....	--	9	--	7	8	--	--	10	14	--	11	--	--	--	12	--	--	--	--	14	--	9	12	--	--	--	--	15	--	15	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....	--	13	--	--	--	--	--	13	--	--	15	--	--	--	15	--	--	18	--	--	20	--	--	--	--	--	--	20	--	--	22	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	--	21	--	--	15	--	--	--	17	--	--	19	--	--	--	--	17	--	--	18	--	--	19	--	--	--	23	--	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....	--	--	22	--	--	--	22	--	--	24	--	--	25	--	15	--	25	--	--	26	--	--	--	--	--	26	--	--	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	17	--	--	--	--	17	--	--	--	--	--	--	23	--	--	24	--	--	24	--	--	--	--	16	21	--	--	22	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	21	--	--	18	--	--	--	17	--	--	--	17	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	22	21	20	20	20	19	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	17	16	16	15	14	16	15	--

11-4755. SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	3.9	1	.01	13	4	.14	120	129	47
2	3.6	2	.02	31	15	1.4	90	55	13
3	3.4	2	.02	31	9	.75	68	18	3.3
4	3.1	2	.02	22	6	.36	58	7	1.1
5	3.1	3	.03	21	5	.28	53	5	.72
6	3.4	2	.02	18	5	.24	46	5	.62
7	3.4	2	.02	16	5	.22	49	17	3.1
8	3.4	2	.02	15	5	.20	129	100	38
9	3.1	2	.02	14	5	.19	99	80	21
10	3.1	2	.02	13	5	.18	1770	1020	5710
11	21	14	1.6	21	53	5.7	975	125	329
12	37	12	1.2	55	158	24	519	45	63
13	22	6	.36	33	65	5.8	390	91	96
14	18	6	.29	31	52	4.4	400	120	130
15	16	5	.22	97	229	63	1300	542	2230
16	13	4	.14	61	65	11	875	265	626
17	11	3	.09	44	13	1.5	498	110	148
18	10	3	.08	90	141	38	364	52	51
19	9.1	3	.07	75	55	11	280	32	24
20	8.7	3	.07	53	6	.86	219	21	12
21	7.7	3	.06	42	6	.68	180	20	9.7
22	7.3	3	.06	35	5	.47	170	46	21
23	7.0	3	.06	31	5	.42	1950	851	5660
24	6.6	3	.05	65	103	21	2030	510	2800
25	6.6	3	.05	118	87	32	1920	836	4450
26	6.3	3	.05	74	18	3.6	1360	230	845
27	5.9	3	.05	56	9	1.4	870	82	193
28	5.9	3	.05	45	8	.97	795	55	118
29	14	12	.57	42	35	4.7	674	26	47
30	20	7	.38	65	75	14	512	12	17
31	16	4	.17	--	--	--	406	11	12
TOTAL	302.6	--	5.87	1327	--	248.46	19169	--	23719.54

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	323	14	12	519	166	233	674	30	55
2	268	12	8.7	512	140	194	568	15	23
3	228	11	6.8	460	34	42	498	18	24
4	198	12	6.4	477	53	68	422	12	14
5	175	9	4.3	622	36	60	361	8	7.8
6	153	9	3.7	726	196	384	310	10	8.4
7	136	7	2.6	638	82	141	268	7	5.1
8	122	5	1.6	785	87	299	233	9	5.7
9	109	5	1.5	1440	207	864	206	4	2.2
10	105	13	3.7	975	159	419	183	7	3.5
11	1030	439	1850	1420	273	1070	160	10	4.3
12	4730	1360	17400	1020	86	237	145	11	4.3
13	3270	920	9050	674	34	62	134	10	3.6
14	1290	224	780	519	22	31	124	7	2.3
15	744	70	141	750	58	117	118	7	2.2
16	498	30	40	509	33	45	118	9	2.9
17	387	20	21	435	15	18	163	14	6.2
18	384	38	39	374	10	10	170	15	6.9
19	1320	340	1210	313	9	7.6	153	12	5.0
20	3160	826	7170	262	9	6.4	145	8	3.1
21	2660	399	2940	222	8	4.8	140	6	2.3
22	1390	184	691	200	9	4.9	131	5	1.8
23	855	80	185	211	21	12	122	5	1.6
24	561	30	45	268	47	34	116	5	1.6
25	642	185	338	364	50	49	107	6	1.7
26	1040	170	491	374	18	18	99	6	1.6
27	810	49	107	380	35	36	93	6	1.5
28	593	29	46	825	156	367	88	6	1.4
29	464	28	35	--	--	--	82	7	1.5
30	390	24	25	--	--	--	77	7	1.5
31	336	33	30	--	--	--	75	8	1.6
TOTAL	28371	--	42685.3	16274	--	4833.7	6283	--	207.6

EEL RIVER BASIN

11-4755. SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	70	7	1.3	68	2	.37	21	2	.11
2	77	16	3.3	61	2	.33	20	2	.11
3	79	20	4.3	57	2	.31	20	2	.11
4	68	15	2.8	54	2	.29	20	1	.05
5	140	51	19	48	2	.26	20	2	.11
6	122	6	2.0	45	2	.24	20	2	.11
7	105	5	1.4	42	2	.23	20	2	.11
8	97	7	1.8	40	4	.43	19	2	.10
9	97	10	2.6	37	2	.20	19	3	.15
10	93	5	1.3	36	2	.19	19	5	.26
11	83	5	1.1	34	2	.18	20	4	.22
12	84	7	1.6	33	2	.18	19	3	.15
13	79	8	1.7	32	2	.17	18	3	.15
14	74	8	1.6	31	2	.17	18	3	.15
15	70	7	1.3	31	3	.25	17	3	.14
16	65	5	.88	30	2	.16	16	4	.17
17	63	4	.68	28	2	.15	15	5	.20
18	64	4	.69	28	1	.08	14	6	.23
19	57	4	.62	27	2	.15	15	4	.16
20	54	4	.58	26	2	.14	17	3	.14
21	50	4	.54	25	2	.14	18	3	.15
22	49	5	.66	24	2	.13	17	3	.14
23	133	69	30	24	2	.13	16	2	.09
24	154	13	5.4	24	2	.13	15	2	.08
25	124	3	1.0	24	2	.13	14	2	.08
26	112	2	.60	25	3	.20	14	2	.08
27	98	2	.53	26	5	.35	13	2	.07
28	89	2	.48	23	7	.43	13	2	.07
29	79	2	.43	23	2	.12	13	2	.07
30	73	2	.39	22	2	.12	13	2	.07
31	--	--	--	21	3	.17	--	--	--
TOTAL	2602	--	90.58	1049	--	6.53	513	--	3.83

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	12	2	.06	5.2	2	.03	2.0	3	.02
2	12	2	.06	5.2	2	.03	2.0	4	.02
3	12	2	.06	4.2	3	.03	2.0	5	.03
4	11	2	.06	4.0	3	.03	1.9	4	.02
5	11	2	.06	4.0	3	.03	1.9	2	.01
6	11	2	.06	4.0	4	.04	1.9	3	.02
7	10	2	.05	4.0	4	.04	1.9	3	.02
8	10	2	.05	3.9	5	.05	1.9	3	.02
9	9.6	3	.08	3.9	4	.04	1.9	4	.02
10	9.2	4	.10	3.9	3	.03	1.9	4	.02
11	9.0	4	.10	3.9	2	.02	1.9	4	.02
12	8.5	4	.09	3.5	2	.02	1.6	4	.02
13	8.4	5	.11	3.5	2	.02	1.6	3	.01
14	8.0	3	.06	3.5	3	.03	1.6	3	.01
15	7.8	2	.04	3.5	6	.06	1.6	3	.01
16	8.5	1	.02	3.0	9	.07	1.6	3	.01
17	8.2	1	.02	3.0	7	.06	1.6	3	.01
18	8.2	1	.02	3.0	2	.02	2.2	3	.02
19	7.2	2	.04	3.0	1	.01	3.0	3	.02
20	7.2	2	.04	3.0	1	.01	5.8	3	.05
21	6.8	2	.04	3.0	1	.01	11	3	.09
22	6.4	2	.03	3.0	1	.01	9.6	2	.05
23	6.0	2	.03	2.9	1	.01	6.1	2	.03
24	6.0	1	.02	2.4	1	.01	3.0	2	.02
25	6.0	2	.03	2.4	2	.01	2.5	2	.01
26	6.0	2	.03	2.4	3	.02	2.0	2	.01
27	6.0	2	.03	2.1	4	.02	1.8	2	.01
28	6.0	2	.03	2.0	4	.02	1.8	2	.01
29	6.0	2	.03	2.0	3	.02	1.8	2	.01
30	6.0	2	.03	2.0	4	.02	1.6	2	.01
31	5.2	2	.03	2.0	4	.02	--	--	--
TOTAL	255.2	--	1.51	101.4	--	.84	83.0	--	.63

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)76330.2
71804.39

11-4755. SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
NOV 12, 1968	0720	10	62	183	31	78	92	98	98	99	100	--	--	--	--	--	SBWC
DEC 10.....	0930	11	3200	2470	21300	28	36	50	63	74	83	88	94	100	--	--	VPWC
DEC 10.....	1245	11	2780	805	6040	27	38	51	64	74	84	90	99	100	--	--	PBWC
JAN 12, 1969	1515	11	4860	1250	16400	25	29	42	56	68	76	84	93	100	--	--	VPWC
JAN 15.....	1535	9	678	67	123	26	39	49	61	66	86	92	97	100	--	--	SBWC
APR 5.....	0820	8	190	91	47	38	72	88	94	96	100	--	--	--	--	--	SBWC

11-4755.6. ELDER CREEK NEAR BRANSCOMB, CALIF.
(Hydrologic bench-mark station)

LOCATION.--Lat 39°43'47", long 123°38'34", in NW¼ sec.29, T.22 N., R.16 W., Mendocino County, at gaging station on right bank, 0.2 mile upstream from mouth, and 5.3 miles north of Branscomb.

DRAINAGE AREA.--6.50 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1968 to September 1969.

Water temperatures: October 1967 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C July 19-23; minimum, 5°C on several days during January to March.

EXTREMES, 1967-69.--Water temperatures: Maximum, 21°C on several days during July in 1968 and 1969; minimum, 5°C on several days during January to March in 1969.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SI02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT. 02...	1245	.92	12	--	14	--	15	4.6	8.1	.7	80	0
NOV. 07...	--	2.4	10	--	--	--	--	--	--	--	--	--
DEC. 11...	1255	138	9	10.2	13	--	8.1	2.7	4.7	.6	43	0
JAN. 15...	1430	137	8	--	15	10	7.3	2.4	4.5	.6	44	0
MAR. 11...	1500	31	5	10.4	15	--	8.9	3.0	5.2	.5	54	0
APR. 04...	1030	19	7	--	14	0	8.8	2.9	5.4	.5	48	0
MAY 08...	1110	11	10	8.8	14	10	10	3.4	6.0	.5	58	0
JUNE 04...	1000	5.3	14	8.2	14	10	11	3.7	6.7	.6	63	0
JULY 15...	1200	2.6	15	8.8	14	0	13	4.1	7.4	.6	70	0
AUG. 26...	1345	1.1	16	--	14	0	14	4.5	7.8	.8	73	0

DATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 02...	5.0	1.8	.1	.0	0	88	.12	56	0	7.5	143
NOV. 07...	--	--	--	.0	--	--	--	--	--	--	--
DEC. 11...	2.0	2.3	.2	.2	0	55	.07	31	0	7.2	83
JAN. 15...	2.0	1.4	.1	.8	0	56	.08	28	0	7.5	78
MAR. 11...	2.0	1.1	.2	.1	30	63	.09	34	0	7.6	90
APR. 04...	2.0	1.7	.0	.0	0	59	.08	34	0	7.7	90
MAY 08...	3.0	2.0	.1	.9	0	69	.09	39	0	7.9	106
JUNE 04...	3.0	1.7	.0	.0	40	72	.10	42	0	7.6	116
JULY 15...	3.0	2.0	.1	.1	20	80	.11	50	0	7.3	128
AUG. 26...	5.0	2.7	.1	.1	50	85	.11	54	0	7.0	135

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

EEL RIVER BASIN

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11-4758. SOUTH FORK EEL RIVER AT LEGGETT, CALIF.

LOCATION.--Lat 39°52'30", long 123°43'10", in NE¼SE¼ sec.3, T.23 N., R.17 W., Mendocino County, temperature recorder at gaging station on right bank near Standish-Hickey State Park, 0.2 mile upstream from Rock Creek, and 0.5 mile northwest of Leggett.

DRAINAGE AREA.--248 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 26°C on several days in July; minimum, 6°C on several days during December to February.

EXTREMES, 1965-69.--Water temperatures: Maximum, 26°C on several days in 1966-67, 1969; minimum, 3°C on several days in 1966-68.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	21	21	21	20	21	20	19	19	19	19	17	16	18	16	17	17	17	17	17	17	17	17	17	17	17	17	17	15	15	16	15	18		
MINIMUM	16	15	16	16	17	15	13	13	13	14	16	16	14	14	14	14	14	14	13	14	13	13	13	14	14	13	13	13	13	14	14	13	14	
NOVEMBER																																		
MAXIMUM	13	13	14	13	14	13	14	14	15	15	14	13	12	11	10	10	11	12	12	12	12	12	12	12	11	10	9	9	9	9	--	12		
MINIMUM	13	13	13	13	13	13	13	14	14	14	14	13	12	11	10	9	9	10	11	12	12	11	12	12	11	10	9	9	9	9	8	--	11	
DECEMBER																																		
MAXIMUM	8	8	8	8	9	9	9	9	10	11	11	10	8	9	9	9	9	9	9	8	7	6	8	9	9	9	8	8	8	8	8	9		
MINIMUM	8	8	7	8	8	9	9	9	9	10	10	8	8	8	9	9	9	9	8	7	6	6	6	8	9	8	8	8	8	8	8	8		
JANUARY																																		
MAXIMUM	8	8	8	8	9	9	9	9	7	7	7	9	9	9	9	9	9	8	8	10	10	10	10	9	9	9	9	8	8	7	6	6	8	
MINIMUM	8	8	8	8	8	9	9	9	7	7	7	7	9	9	9	9	8	8	8	8	10	10	9	8	9	9	8	8	7	6	6	6	8	
FEBRUARY																																		
MAXIMUM	7	7	7	7	7	7	8	8	9	9	9	9	9	8	8	8	8	8	8	9	9	9	8	8	7	7	7	7	7	--	--	--	8	
MINIMUM	6	7	7	7	7	7	7	8	8	8	9	9	9	8	8	8	8	8	8	8	9	8	8	7	7	7	7	7	7	--	--	--	8	
MARCH																																		
MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	10	11	11	11	11	11	12	12	12	13	13	9
MINIMUM	7	8	7	8	8	8	8	8	7	7	7	7	7	7	7	8	8	8	9	9	9	9	8	9	9	9	9	9	9	10	10	11	11	8
APRIL																																		
MAXIMUM	13	11	10	10	10	10	10	12	12	13	13	13	11	11	13	13	12	14	14	15	14	13	12	12	13	14	14	15	15	15	--	--	13	
MINIMUM	11	10	9	9	9	9	9	9	10	10	10	10	10	10	9	10	11	11	11	11	11	12	11	10	9	10	10	11	12	11	11	--	10	
MAY																																		
MAXIMUM	14	14	13	14	15	17	17	15	18	18	19	16	15	17	18	19	19	18	19	19	19	20	20	19	17	19	16	18	19	20	21	21	18	
MINIMUM	10	10	10	10	11	12	13	14	14	14	14	14	14	13	13	14	14	14	13	13	14	14	14	15	15	15	15	14	14	13	14	16	15	13
JUNE																																		
MAXIMUM	21	21	21	20	17	17	17	18	16	17	16	19	20	21	22	22	23	22	21	22	22	22	22	22	22	22	22	21	22	22	23	--	20	
MINIMUM	16	16	17	16	15	15	14	15	15	15	14	14	15	16	16	16	16	16	16	16	17	18	18	19	18	18	17	17	16	16	17	--	16	
JULY																																		
MAXIMUM	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24	25	25	26	26	26	26	26	26	26	25	26	25	25	25	26	25	25	
MINIMUM	17	18	18	19	19	19	19	19	20	20	20	20	20	19	19	19	20	20	20	20	20	20	20	20	21	21	21	21	21	20	20	20	20	
AUGUST																																		
MAXIMUM	25	25	25	24	24	24	24	24	25	25	25	24	24	25	25	24	24	25	24	24	25	25	25	25	25	25	24	24	24	23	24	24	24	
MINIMUM	20	20	20	20	20	19	19	19	19	20	20	20	19	20	20	20	19	19	20	20	20	21	21	20	20	19	20	19	19	19	19	19	20	
SEPTEMBER																																		
MAXIMUM	24	24	23	24	24	24	23	24	24	24	24	23	24	23	23	23	22	22	22	21	21	22	22	22	22	22	22	22	22	21	21	--	23	
MINIMUM	19	19	19	19	19	19	20	20	20	20	20	20	20	20	18	18	18	19	20	19	19	19	18	19	20	19	19	18	18	19	18	--	19	

EEL RIVER BASIN

11-4765. SOUTH FORK EEL RIVER NEAR MIRANDA, CALIF.

LOCATION.--Lat 40°10'55", long 123°46'30", in NW¼ sec.30, T.3 S., R.4 E., Humboldt County, at gaging station on right bank at Sylvandale Campgrounds on U.S. Highway 101, 0.5 mile upstream from Rocky Glen Creek, 4.3 miles southeast of Miranda, and 20 miles upstream from mouth.

DRAINAGE AREA.--537 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: November 1960 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 6°C on several days during December to February.

EXTREMES, 1960-64, 1965-69.--Water temperatures: Maximum (1960-61, 1963-64, 1965-68), 34°C July 25, 1964; minimum, 1°C Jan. 20, 21, 1963.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Temperature recorder malfunction Apr. 17-24, May 3, 4, June 2 to Sept. 30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 02...	1415	41	20	12.1	--	--	10	--	145	0	--	7.5
NOV. 13...	1445	673	11	11.7	--	--	8.2	--	102	0	--	5.5
DEC. 04...	0920	814	7	12.6	--	--	7.1	--	84	0	--	4.5
JAN. 22...	0840	24100	8	11.9	--	--	4.4	--	46	0	--	2.6
FEB. 04...	1350	4500	8	12.2	--	--	4.9	--	56	0	--	3.1
MAR. 04...	1410	5300	10	12.2	--	--	4.4	--	58	0	--	2.8
APR. 08...	1455	1130	14	11.5	--	--	5.4	--	72	0	--	4.3
MAY 13...	1700	460	16	11.1	21	5.7	6.6	1.0	90	0	4.9	4.5
JUNE 11...	0925	224	17	10.2	--	--	7.0	--	108	0	--	5.1
JULY 16...	0815	92	18	8.4	--	--	8.4	--	130	0	--	5.2
AUG. 05...	1430	63	23	13.0	--	--	9.1	--	125	0	--	5.9
SEPT. 10...	0850	39	18	7.4	31	8.1	11	.1	136	0	12	6.9

DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 02...	.3	.05	90	--	--	131	12	14	.4	119	8.0	282
NOV. 13...	.1	.16	100	--	--	88	4	17	.4	84	8.0	206
DEC. 04...	.1	.07	50	--	--	76	7	17	.4	69	8.0	169
JAN. 22...	.6	.26	0	--	--	45	7	18	.3	38	7.5	91
FEB. 04...	.2	.16	0	--	--	52	6	17	.3	46	8.0	112
MAR. 04...	.2	.06	0	--	--	46	0	17	.3	48	7.5	109
APR. 08...	.0	.12	0	--	--	60	1	16	.3	59	7.7	142
MAY 13...	.1	.10	140	103	.14	76	2	16	.3	74	8.2	175
JUNE 11...	.0	.06	110	--	--	92	3	14	.3	89	8.2	204
JULY 16...	.1	--	30	--	--	116	9	14	.3	107	8.3	239
AUG. 05...	.3	--	50	--	--	109	6	15	.4	103	8.3	237
SEPT. 10...	.0	--	80	103	.14	111	0	18	.5	112	8.1	256

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

[illegible]

EEL RIVER BASIN

11-4770. EEL RIVER AT SCOTIA, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 40°29'30", long 124°05'55", in SW $\frac{1}{4}$ sec.5, T.1 N., R.1 E., Humboldt County, at gaging station at bridge on U.S. Highway 101, 0.5 mile north of Scotia, and 6 miles upstream from Van Duzen River.

DRAINAGE AREA.--3,113 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: October 1957 to September 1969.

Sediment records: October 1957 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C June 17; minimum, 7°C Jan. 29 to Feb. 1.

Sediment concentrations: Maximum daily, 7,570 mg/l Jan. 12; minimum daily, 3 mg/l on several days during October and September.

Sediment loads: Maximum daily, 2,720,000 tons Jan. 12; minimum daily, 0.88 ton Oct. 9.

EXTREMES, 1957-69.--Water temperatures: Maximum (1960-64, 1965-69), 24°C on several days in 1962, 1967-69; minimum, 3°C Jan. 13, 14, 1963.

Sediment concentrations: Maximum daily, 33,000 mg/l (estimated) Dec. 23, 1964; minimum daily, 1 mg/l on many days in 1958-64, 1966-67.

Sediment loads: Maximum daily, 57,000,000 tons (estimated) Dec. 23, 1964; minimum daily, 0.3 ton on many days in 1958-63, 1966.

REMARKS.--Chemical-quality samples collected by California Department of Water Resources. No temperature record June 2-29, Sept. 13-23. Where no maximum or minimum is shown, temperature is once-daily reading.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	LITHIUM (LI) (UG/L)	STRON- TIUM (SR) (UG/L)
OCT. 02...	1230	130	19	11.0	9.3	0	43	13	10	1.6	10	490
NOV. 13...	1230	2120	12	10.8	9.2	100	29	8.5	8.6	1.3	10	330
DEC. 03...	1230	3420	8	12.9	9.2	60	22	6.9	6.9	1.0	10	200
JAN. 21...	1415	190000	--	11.9	8.8	10	12	2.9	3.8	1.2	10	120
FEB. 04...	----	18900	7	12.3	12	20	17	5.3	4.6	.9	20	200
MAR. 04...	1220	27000	10	12.0	12	70	15	7.1	5.2	1.7	20	200
APR. 08...	1315	7940	14	11.4	10	0	19	5.8	4.8	1.1	10	140
MAY 13...	----	6450	18	10.4	8.7	20	17	4.1	3.3	.6	10	210
JUNE 10...	1515	1370	18	10.5	8.4	20	24	6.4	4.7	1.0	10	220
JULY 15...	----	358	21	9.4	7.2	10	37	10	7.5	1.4	10	340
AUG. 05...	----	185	--	10.2	9.3	10	40	11	8.5	1.5	0	510
SEPT. 09...	----	110	--	12.1	8.1	0	36	13	9.6	1.4	10	500

DATE	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	PH (UNITS)
OCT. 02...	179	0	27	5.7	.2	.2	--	130	161	14	198	8.2
NOV. 13...	111	0	26	5.4	.3	.7	--	120	108	17	144	8.0
DEC. 03...	89	0	18	4.3	.2	.8	.52	80	84	11	114	8.2
JAN. 21...	55	0	6.0	1.2	.1	.8	.28	20	42	0	64	8.1
FEB. 04...	73	0	10	1.5	.0	.8	.10	0	64	4	88	7.5
MAR. 04...	77	0	12	2.6	.2	1.3	.23	50	66	3	95	7.3
APR. 08...	80	0	9.0	2.4	.1	2.1	.06	0	72	6	93	7.8
MAY 13...	69	0	7.0	1.2	.1	1.6	.06	0	60	3	78	7.9
JUNE 10...	98	0	12	2.2	.1	.0	.03	110	86	6	107	8.1
JULY 15...	149	0	18	3.8	.2	.0	.07	50	134	12	158	8.2
AUG. 05...	164	2	15	4.4	.2	.0	.06	160	145	7	174	8.4
SEPT. 09...	154	1	23	6.5	.1	.1	.06	130	144	16	175	8.4

11-4770. EEL RIVER AT SCOTIA, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	SPECI- FIC COND- UCTANCE (MICRO- MHUS)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	TUR- BID- ITY (MG/L)
OCT. 02...	343	.27	12	.3	147	--
NOV. 13...	242	.20	14	.4	91	270
DEC. 03...	191	.15	15	.3	73	10
JAN. 21...	99	.09	16	.3	45	550
FEB. 04...	142	.12	13	.2	60	550
MAR. 04...	152	.13	14	.3	63	540
APR.. 08...	155	.13	13	.2	66	60
MAY 13...	123	.11	11	.2	57	95
JUNE 10...	191	.15	10	.2	80	4.0
JULY 15...	281	.21	11	.3	122	2.0
AUG. 05...	314	.24	11	.3	138	1.0
SEPT. 09...	301	.22	13	.3	128	1.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	18	19	18	17	17	17	16	16	16	17	16	18	16	16	16	16	17	16	16	16	17	16	16	17	17	17	17	16	17	16	14	17		
MINIMUM	16	16	16	16	16	15	14	13	13	15	16	15	15	14	15	16	16	15	14	14	14	14	16	16	16	15	15	15	15	14	14	15		
NOVEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	14	13	13	13	14	14	15	15	16	17	16	15	14	12	11	11	12	14	13	14	14	13	13	13	13	12	11	11	11	10	--	13		
MINIMUM	13	13	13	13	13	13	14	15	16	15	14	12	11	11	11	11	11	12	13	13	13	13	13	13	12	11	11	11	10	10	9	--	12	
DECEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	9	9	10	10	11	11	11	11	11	13	13	11	11	10	10	10	10	10	10	10	9	8	10	10	10	10	10	10	10	10	10	10		
MINIMUM	9	9	8	10	10	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	9	8	8	8	10	10	10	10	10	10	10	10		
JANUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	10	10	10	10	10	10	10	10	9	8	9	10	10	10	10	10	9	9	9	9	10	10	10	10	9	9	9	8	8	7	7	9		
MINIMUM	10	10	10	10	10	10	10	9	8	8	8	9	10	10	9	9	9	9	9	9	9	10	10	9	8	8	9	8	8	7	7	9		
FEBRUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	8	8	9	9	8	8	9	9	9	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	--	--	9		
MINIMUM	7	8	8	7	8	8	8	9	9	9	10	10	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	--	--	--	9		
MARCH.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	8	8	8	10	9	9	9	9	9	9	9	9	10	10	10	11	10	10	11	11	11	11	11	12	12	12	12	12	13	13	13	10		
MINIMUM	8	8	8	8	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	11	12	12	12	12	13	13	12	10		
APRIL.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	12	12	11	11	11	11	12	14	12	13	14	14	14	13	12	13	13	13	13	13	14	14	14	14	12	12	13	14	14	14	--	13		
MINIMUM	12	11	11	11	11	11	11	12	12	12	13	14	13	12	12	12	13	13	13	13	13	14	14	12	12	12	12	13	14	14	14	--	12	
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	14	13	13	13	15	16	17	17	17	16	16	16	18	15	15	16	17	17	17	16	17	17	17	18	17	16	15	16	17	17	17	16		
MINIMUM	13	12	13	12	13	14	16	16	16	15	15	16	15	15	15	15	16	17	16	16	16	16	17	17	17	16	15	15	15	17	16	15		
JUNE.....	--	--	20	--	20	--	18	--	16	--	18	--	18	--	20	--	24	--	23	--	20	--	18	--	17	--	--	--	--	--	--	--		
MAXIMUM	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MINIMUM	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	18	17	18	19	18	18	19	19	20	19	18	19	19	19	21	19	19	20	20	20	20	20	21	21	19	21	20	18	19	19	19	19		
MINIMUM	17	16	16	16	16	15	16	17	17	17	16	16	16	16	16	16	16	16	16	17	18	17	18	18	18	18	18	17	17	17	17	17		
AUGUST....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	18	19	19	20	19	19	19	20	19	19	20	20	21	21	21	21	21	21	21	21	22	22	21	21	21	21	22	21	21	21	21	20		
MINIMUM	16	16	17	17	16	16	17	17	17	17	17	17	17	18	18	18	17	17	19	18	19	19	18	18	18	18	19	18	18	17	17	17		
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	22	21	19	18	19	19	19	20	20	19	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	19	19	18	18	--	--	
MINIMUM	18	19	17	15	15	15	16	17	17	17	17	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	17	16	16	16	16	--	--	

EEL RIVER BASIN

11-4770. EEL RIVER AT SCOTIA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	132	5	1.8	498	6	8.1	2750	88	653
2	130	4	1.4	914	99	312	3800	110	1130
3	146	4	1.6	1550	223	933	3420	106	979
4	194	3	1.6	1650	102	454	2950	28	223
5	128	3	1.0	1350	31	113	2570	14	97
6	123	3	1.0	1020	17	47	2350	17	108
7	153	3	1.2	896	12	29	2290	42	260
8	168	3	1.4	788	7	15	3500	253	2440
9	109	3	.88	738	6	12	5550	233	3670
10	84	4	.91	746	10	20	36800	3730	582000
11	121	8	2.6	738	12	24	54800	4150	706000
12	315	22	19	1780	114	548	22600	1710	104000
13	706	37	71	2120	150	859	14300	1000	38600
14	589	26	41	2120	117	670	22100	1500	89500
15	589	19	30	2350	202	1280	49100	4460	665000
16	610	15	25	3250	306	2660	36000	2840	276000
17	470	12	15	2590	121	846	21000	1220	69200
18	356	10	9.6	2930	61	483	14000	720	27200
19	296	9	7.2	5690	224	3700	12000	520	16800
20	255	8	5.5	3970	235	2950	10000	370	9990
21	227	7	4.3	2640	82	584	8200	300	6640
22	201	7	3.8	2070	36	201	7250	300	5870
23	184	6	3.0	1750	25	118	58200	2490	428000
24	171	5	2.3	1960	53	280	151000	5220	2200000
25	156	5	2.1	2910	553	4520	103000	3600	1000000
26	148	4	1.6	4820	284	3700	80400	2320	504000
27	140	4	1.5	3170	68	582	63200	1720	294000
28	135	4	1.5	2350	18	114	37600	1410	143000
29	184	4	2.0	1930	20	104	33100	1120	100000
30	350	5	4.7	2120	56	321	25700	850	59000
31	484	6	7.8	--	--	--	19600	640	33900
TOTAL	8054	--	273.29	63408	--	26487.1	909130	--	7368260

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	15900	460	19700	21800	1390	81800	37800	1270	130000
2	13800	360	13400	24100	1620	105000	26900	592	43000
3	12600	290	9870	20700	980	54800	29000	714	55900
4	12000	300	9720	18900	820	41800	27000	414	30200
5	12200	420	13800	24200	1360	88900	23200	336	21000
6	12000	450	14600	30600	2190	181000	19800	289	15400
7	11300	290	8850	28300	1220	93200	15900	268	11500
8	10300	410	11400	24000	955	70800	12200	292	9620
9	8900	210	5050	55000	3440	503000	11100	342	10200
10	7710	130	2710	47800	1630	210000	9650	357	9300
11	14900	2250	124000	66900	3090	599000	8600	262	6080
12	136000	7570	2720000	72100	2440	475000	7800	263	5540
13	187000	5060	2550000	44500	1180	142000	7180	319	6180
14	109000	3420	1010000	32700	860	75900	6730	201	3650
15	53700	2260	328000	40200	1300	141000	6500	137	2400
16	36500	1480	146000	46700	1440	182000	6580	136	2420
17	21000	1000	56700	32500	740	64900	7700	163	3390
18	16500	760	33900	24700	600	40000	12500	408	13800
19	52500	3340	473000	20200	560	30500	12200	318	10500
20	154000	5290	2170000	17000	520	23900	10200	246	6770
21	190000	4350	2220000	14800	530	21200	9820	211	5590
22	122000	3640	1200000	14600	570	22500	9290	200	5020
23	66000	2290	408000	14600	600	23700	8550	192	4430
24	42400	1580	181000	16800	640	29000	8540	150	3460
25	38300	1640	172000	22900	1020	63100	8440	150	3420
26	67200	3500	628000	20000	810	43700	8440	182	4150
27	60800	2120	348000	17000	550	25200	8760	232	5490
28	43100	1320	154000	33500	660	59700	9460	348	8890
29	31800	1030	88400	--	--	--	10100	461	12600
30	25300	930	63500	--	--	--	10600	508	14500
31	20900	700	39500	--	--	--	11100	537	16100
TOTAL	1605610	--	15223100	847100	--	3492600	401640	--	480500

11-4770. EEL RIVER AT SCOTIA, CALIF.--Continued

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	10600	461	13200	6030	131	2130	2240	22	133
2	9610	352	9130	5830	121	1900	2100	22	125
3	9310	306	7690	5480	102	1510	1990	23	124
4	7820	282	5950	5220	88	1240	1900	20	103
5	9080	219	5370	4850	96	1260	1810	17	83
6	11600	168	5260	4740	78	998	1740	16	75
7	9190	139	3450	5310	103	1480	1670	15	68
8	7830	138	2920	6010	196	3180	1610	17	74
9	7250	108	2110	6330	242	4140	1500	20	81
10	7180	111	2150	6740	296	5390	1420	19	73
11	6800	132	2420	6990	314	5930	1350	18	66
12	6730	133	2420	6630	268	4800	1300	17	60
13	7410	144	2880	6450	220	3830	1270	15	51
14	7120	181	3480	5850	184	2910	1180	18	57
15	7860	168	2660	5020	148	2010	1100	21	62
16	5220	161	2270	4290	114	1320	1060	18	52
17	5180	159	2220	4080	96	1060	1020	17	47
18	5790	157	2450	4130	91	1010	963	16	42
19	6240	162	2730	4200	89	1010	973	16	42
20	6210	194	3250	3920	82	868	968	17	44
21	6290	188	3190	3520	75	713	999	18	49
22	6710	221	4000	3310	71	635	927	12	30
23	7900	352	7510	3140	66	560	898	6	15
24	10400	572	16100	3050	61	502	818	7	15
25	8790	281	6670	3000	59	478	765	8	17
26	7150	179	3460	2770	48	359	760	8	16
27	6620	122	2180	2610	47	331	756	7	14
28	6480	100	1750	2670	43	310	691	7	13
29	11000	106	3150	2420	36	235	616	7	12
30	6630	124	2220	2280	30	185	598	6	9.7
31	--	--	--	2330	30	189	--	--	--
TOTAL	230000	--	134240	139200	--	52473	36992	--	1652.7

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	570	6	9.2	217	10	5.9	120	8	2.6
2	540	6	8.7	208	9	5.1	119	8	2.6
3	518	6	8.4	197	8	4.3	115	8	2.5
4	505	6	8.2	191	7	3.6	120	8	2.6
5	496	6	8.0	185	7	3.5	117	7	2.2
6	462	7	8.7	180	8	3.9	116	6	1.9
7	450	19	23	179	11	5.3	112	5	1.5
8	438	15	18	173	11	5.1	110	3	.89
9	425	12	14	169	11	5.0	110	4	1.2
10	410	13	14	166	10	4.5	111	4	1.2
11	398	14	15	162	9	3.9	121	5	1.6
12	384	12	12	159	8	3.4	115	5	1.6
13	376	10	10	158	8	3.4	110	5	1.5
14	371	7	7.0	155	8	3.3	115	5	1.6
15	358	6	5.8	152	9	3.7	110	5	1.5
16	346	6	5.6	149	10	4.0	119	5	1.6
17	332	6	5.4	148	10	4.0	117	4	1.3
18	320	6	5.2	148	10	4.0	121	3	.98
19	308	12	10	144	10	3.9	123	4	1.3
20	292	13	10	139	10	3.8	141	4	1.5
21	284	17	13	137	9	3.3	178	9	4.3
22	284	9	6.9	132	8	2.9	175	8	3.8
23	276	8	6.0	130	6	2.1	204	7	3.9
24	269	9	6.5	130	5	1.8	211	5	2.8
25	260	10	7.0	130	5	1.8	146	4	1.6
26	250	12	8.1	128	10	3.5	147	3	1.2
27	240	18	12	125	9	3.0	149	4	1.6
28	231	15	9.4	122	8	2.6	149	6	2.4
29	224	12	7.3	121	7	2.3	150	5	2.0
30	224	9	5.4	120	6	1.9	151	5	2.0
31	223	10	6.0	120	5	1.6	--	--	--
TOTAL	11064	--	293.8	4774	--	110.4	4002	--	59.27

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)4260974
26780049.56

EEL RIVER BASIN

11-4770. EEL RIVER AT SCOTIA, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: 8, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	1600	11	51300	4900	679000	27	29	42	55	72	85	96	100	--	--	--	VPWC	
DEC 16.....	1030	10	D36000	2770	269000	27	30	44	58	71	84	97	100	--	--	--	VPWC	
DEC 23.....	0900	8	33500	3310	299000	27	29	42	55	68	82	93	100	--	--	--	VPWC	
DEC 24.....	0930	10	190000	5610	2880000	29	35	47	61	77	88	98	100	--	--	--	VPWC	
JAN 12, 1969	1530	10	183000	7470	3690000	18	26	34	47	64	80	96	100	--	--	--	VPWC	
JAN 20.....	0900	10	149000	5430	2180000	21	27	35	49	65	79	94	100	--	--	--	VPWC	
JAN 25.....	1630	9	38700	1620	169000	27	28	39	51	62	74	88	100	--	--	--	VPWC	
FEB 9.....	1100	9	61000	3800	626000	24	26	40	52	66	80	92	99	100	--	--	VPWC	
MAR 3.....	1410	8	28800	728	56600	25	34	44	55	65	72	80	91	96	98	100	SBWC	

D Daily mean discharge.

11-4775. VAN DUZEN RIVER NEAR DINSMORES, CALIF.

LOCATION.--Lat 40°29'05", long 123°39'25", in NW¼ sec.7, T.1 N., R.5 E., Humboldt County, temperature recorder at gaging station on right bank, 10 ft upstream from private road bridge, 0.3 mile upstream from South Fork, and 2.8 miles west of Dinsmores.

DRAINAGE AREA.--85.1 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C July 22-24.

EXTREMES, 1965-69.--Water temperatures: Maximum, 25°C July 22-24, 1969; minimum (1965-68), freezing point on several days during winter months.

REMARKS.--Recorder malfunction Oct. 1, 2, Nov. 7 to Feb. 25, Feb. 28 to Mar. 5, Mar. 7 to Apr. 7, Apr. 19-27, June 9 to July 8, Aug. 18, Sept. 10-16.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER																																
MAXIMUM	--	--	18	17	18	17	17	16	16	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	15	14	14	16
MINIMUM	--	--	17	16	17	16	15	15	14	15	16	15	15	15	15	15	15	15	15	16	15	15	16	16	15	15	15	14	14	14	14	15
NOVEMBER																																
MAXIMUM	14	14	14	14	14	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	14	14	14	14	14	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEBRUARY																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	4	--	--	--	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	2	--	--	--	--	--
MARCH																																
MAXIMUM	--	--	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL																																
MAXIMUM	--	--	--	--	--	--	--	10	9	12	13	9	9	10	12	13	9	8	--	--	--	--	--	--	--	--	--	--	14	14	12	--
MINIMUM	--	--	--	--	--	--	--	8	7	6	6	6	5	5	5	6	7	6	--	--	--	--	--	--	--	--	--	--	7	7	7	--
MAY																																
MAXIMUM	11	9	11	9	10	13	16	16	18	18	18	17	16	16	17	17	17	15	15	18	20	21	20	18	17	17	13	16	19	20	21	16
MINIMUM	5	4	4	3	1	3	9	8	9	12	12	12	12	12	12	11	12	10	9	11	11	12	12	12	12	12	10	11	12	13	14	10
JUNE																																
MAXIMUM	22	22	23	24	22	18	16	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	14	15	15	15	16	15	14	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																
MAXIMUM	--	--	--	--	--	--	--	--	22	22	22	22	21	21	21	21	21	22	23	24	24	25	25	25	24	24	24	24	24	23	23	--
MINIMUM	--	--	--	--	--	--	--	--	18	18	18	18	17	17	16	17	17	17	19	20	20	20	21	20	20	20	20	19	18	19	18	17
AUGUST																																
MAXIMUM	22	23	23	22	22	22	22	23	22	23	22	22	24	24	24	24	24	--	24	24	24	24	24	24	23	23	23	22	22	22	22	23
MINIMUM	17	18	17	17	16	16	16	17	17	18	17	16	17	18	18	18	18	--	19	17	18	18	18	17	16	16	16	16	15	16	15	17
SEPTEMBER																																
MAXIMUM	23	23	23	22	22	23	23	22	22	--	--	--	--	--	--	--	--	19	19	18	19	20	21	20	20	21	21	20	20	20	19	--
MINIMUM	16	16	16	16	15	15	17	17	16	--	--	--	--	--	--	--	--	14	16	16	15	15	15	15	16	15	15	16	15	15	14	--

11-4785, VAN DUZEN RIVER NEAR BRIDGEVILLE, CALIF.

LOCATION.--Lat 40°28'50", long 123°53'23", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.1 N. R.2 E., Humboldt County, at gaging station at bridge on State Highway 36, 0.9 mile upstream from Grizzly Creek, and 5 miles west of Bridgeville.

DRAINAGE AREA.--222 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1969.

Water temperatures: December 1960 to September 1969.

Sediment records: October 1955 to September 1963.

EXTREMES, 1968-69.--Water temperatures: Maximum, 27°C July 22; minimum, 1°C Jan. 30.

EXTREMES, 1960-64, 1965-69.--Water temperatures: Maximum, 29°C July 1, 2, 1967, June 24, 1968; minimum, 1°C Dec. 18-20, 23, 1965, Jan. 30, 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
UCT. 01...	1530	9.8	20	10.4	--	--	8.6	--	140	0	--	4.5
NOV. 12...	1415	1300	11	11.7	--	--	4.0	--	65	0	--	2.9
DEC. 03...	1330	554	7	12.8	--	--	4.3	--	77	0	--	2.6
JAN. 21...	1520	10200	7	12.4	--	--	3.0	--	56	0	--	1.6
FEB. 04...	1030	1300	5	13.1	--	--	3.6	--	61	0	--	1.9
MAR. 04...	1100	1310	6	13.0	--	--	3.1	--	59	0	--	1.7
APR. 03...	1230	930	10	11.9	--	--	2.7	--	58	0	--	1.2
MAY 13...	1500	586	13	10.8	11	6.0	2.5	.6	58	0	4.4	1.2
JUNE 10...	1400	142	16	10.3	--	--	3.6	--	91	0	--	2.1
JULY 15...	1430	35	24	9.8	--	--	5.6	--	113	0	--	2.5
AUG. 05...	1155	18	20	10.0	--	--	6.8	--	140	0	--	3.1
SEPT. 09...	1515	7.0	24	10.0	32	6.6	8.6	.1	113	0	27	4.0

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACU3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
UCT. 01...	--	90	--	--	146	31	11	.3	115	8.0	306
NOV. 12...	--	80	--	--	68	15	11	.2	53	7.6	148
DEC. 03...	--	0	--	--	85	22	10	.2	63	8.2	160
JAN. 21...	--	40	--	--	52	6	11	.2	46	7.8	98
FEB. 04...	--	0	--	--	61	11	12	.2	50	7.9	121
MAR. 04...	--	0	--	--	57	9	11	.2	48	7.3	118
APR. 03...	--	0	--	--	54	6	10	.2	48	7.8	111
MAY 13...	.1	0	80	.11	52	4	9	.2	48	8.0	116
JUNE 10...	--	20	--	--	82	7	9	.2	75	8.2	173
JULY 15...	--	0	--	--	114	21	10	.2	93	8.3	224
AUG. 05...	--	40	--	--	127	12	10	.3	115	8.3	267
SEPT. 09...	.0	50	105	.14	107	14	15	.4	93	7.9	251

EEL RIVER BASIN

11-4785. VAN DUZEN RIVER NEAR BRIDGEVILLE, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	21	20	20	18	18	18	18	18	18	19	16	16	15	14	16	17	18	17	17	18	17	17	18	19	17	18	18	17	16	13	14	17		
MINIMUM	16	14	14	15	15	13	13	12	11	14	15	13	12	11	12	12	13	12	13	13	12	11	13	13	13	13	12	12	11	13	12	11	13	
NOVEMBER																																		
MAXIMUM	12	13	12	12	13	11	14	14	16	16	14	12	9	8	8	9	10	10	11	10	10	11	10	9	8	8	8	8	8	7	--	11		
MINIMUM	10	11	11	11	11	10	11	12	13	13	12	9	8	7	7	7	9	9	10	9	9	10	9	8	8	7	7	7	6	5	--	9		
DECEMBER																																		
MAXIMUM	6	6	7	7	8	7	7	9	10	11	8	6	7	7	7	6	6	6	6	5	3	4	5	7	6	5	5	5	5	5	5	6		
MINIMUM	5	5	5	5	7	6	6	7	9	8	6	5	6	6	6	6	6	6	5	3	3	3	4	5	5	4	5	5	5	4	4	5		
JANUARY																																		
MAXIMUM	6	7	6	7	7	7	7	5	4	5	5	7	7	6	5	5	4	5	7	8	8	6	5	5	8	8	4	3	3	3	3	6		
MINIMUM	5	6	6	6	6	6	5	4	2	4	5	5	6	5	5	4	3	4	5	6	6	5	3	4	5	4	3	3	2	1	2	4		
FEBRUARY																																		
MAXIMUM	4	5	5	5	5	5	6	6	6	7	7	6	5	5	6	6	6	6	7	6	6	5	4	5	4	6	5	5	--	--	--	6		
MINIMUM	2	3	3	3	4	3	4	5	4	6	5	5	4	5	5	4	5	5	6	5	5	4	4	4	3	3	5	4	--	--	--	4		
MARCH																																		
MAXIMUM	6	5	5	6	6	6	7	7	6	7	6	8	8	7	9	7	7	7	7	7	9	10	9	10	10	10	10	10	10	11	11	8		
MINIMUM	4	4	3	3	4	4	5	4	5	4	5	4	4	4	5	6	6	5	4	6	6	7	7	7	6	6	7	7	7	8	8	5		
APRIL																																		
MAXIMUM	9	8	7	8	8	8	10	12	10	12	12	11	9	9	11	12	10	12	12	13	13	13	11	9	11	12	13	13	12	12	--	11		
MINIMUM	6	5	4	6	6	6	6	9	9	8	10	9	7	8	8	9	9	9	9	10	12	11	7	6	6	8	10	11	9	9	--	8		
MAY																																		
MAXIMUM	12	13	10	13	16	18	17	18	16	17	17	18	20	18	18	18	20	21	18	18	19	21	21	21	18	20	17	18	20	21	21	22	18	
MINIMUM	8	8	8	7	10	12	14	15	14	14	15	15	13	13	14	14	14	14	12	13	14	15	16	15	15	14	13	13	14	16	16	13		
JUNE																																		
MAXIMUM	23	23	24	23	20	19	17	17	17	17	18	20	20	18	18	24	24	22	21	20	21	23	23	23	20	21	19	23	24	24	--	21		
MINIMUM	16	16	17	17	17	16	15	15	15	15	15	15	15	16	16	16	17	17	18	17	17	17	17	17	17	17	15	15	14	16	17	--	16	
JULY																																		
MAXIMUM	19	22	23	23	23	25	25	25	23	22	25	25	25	24	25	25	26	26	26	26	26	27	26	24	26	26	20	25	25	24	21	24		
MINIMUM	17	17	17	17	18	17	17	18	18	18	18	17	17	17	18	17	16	17	16	18	18	18	19	19	19	17	17	17	17	17	17	17		
AUGUST																																		
MAXIMUM	24	24	24	24	24	24	23	24	20	23	23	23	25	24	24	24	24	24	23	25	26	25	24	24	24	24	24	24	23	23	23	25	24	
MINIMUM	17	17	17	17	17	17	17	17	17	17	17	17	16	17	17	17	15	17	18	18	18	18	17	17	17	17	17	17	16	17	16	15	17	
SEPTEMBER																																		
MAXIMUM	24	23	22	22	23	24	24	25	24	23	22	22	20	22	21	21	22	22	20	20	21	22	22	22	22	22	22	21	21	20	21	--	22	
MINIMUM	16	17	17	14	14	15	17	17	17	16	16	17	17	16	14	14	15	18	17	16	17	16	17	18	15	17	16	15	16	16	--	16		

MISCELLANEOUS ANALYSES OF STREAMS IN EEL RIVER BASIN

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
11-4731. WILLIAMS CREEK NEAR COVELO, CALIF. (LAT 39°49'30", LONG 123°08'25")																	
OCT 8, 1968	1700	18	.67	3	.01	--	--	--	--	--	--	--	--	--	--	--	SBWC
NOV 7.....	1535	14	10	4	.11	--	--	--	--	--	--	--	--	--	--	--	
JAN 9, 1969	1545	3	116	26	8.1	--	--	--	--	--	--	--	--	--	--	--	
FEB 11.....	1725	7	921	681	1690	18	26	34	42	50	57	64	73	84	93	100	
MAR 5.....	1650	8	120	15	4.9	--	--	--	--	--	--	--	--	--	--	--	
APR 1.....	1045	11	155	17	7.1	--	--	--	--	--	--	--	--	--	--	--	
APR 29.....	1720	14	106	11	3.1	--	--	--	--	--	--	--	--	--	--	--	

11-4737. MILL CREEK NEAR COVELO, CALIF. (LAT 39°44'45", LONG 123°10'15")

DEC 5, 1968	1530	8	6.1	6	.10	--	--	--	--	--	--	--	--	--	--	--	SBWC
JAN 10, 1969	1400	6	195	56	29	--	--	--	--	--	--	--	--	--	--	--	
FEB 13.....	1200	5	722	137	267	29	40	52	61	68	74	79	85	94	99	100	
MAR 7.....	1045	4	337	33	30	--	--	--	--	--	--	--	--	--	--	--	
APR 2.....	1550	11	113	14	4.3	--	--	--	--	--	--	--	--	--	--	--	
APR 30.....	1710	20	41	11	1.2	--	--	--	--	--	--	--	--	--	--	--	

PERIODIC DETERMINATIONS OF TURBIDITY

DATE OF COLLECTION	TIME (24-HR)	TEMP- ERA- TURE (°C)	TURBIDITY (MG/L SILICA)			
			SURFACE	10-FOOT DEPTH		
				TOTAL	RESIDUAL 1/	TOTAL
11-4700. LAKE PILLSBURY NEAR POTTER VALLEY, CALIF. (LAT 39°24'30", LONG 122°57'30")2/						
DEC. 18, 1968.....	1510	--	700	85	--	--
DEC. 27.....	1115	4	315	77	490	78
JAN. 3, 1969.....	1030	6	200	40	350	74
JAN. 10.....	1000	4	240	49	350	62
JAN. 17.....	1000	4	135	35	276	51
JAN. 24.....	1030	3	150	40	274	62
JAN. 31.....	1015	4	116	44	139	58
FEB. 7.....	1000	4	92	28	142	51
FEB. 14.....	1000	5	121	40	128	42
FEB. 21.....	0930	4	116	27	114	27
FEB. 28.....	0930	4	95	23	76	20
MAR. 7.....	0900	6	76	23	82	22
MAR. 14.....	0900	6	74	21	74	23
MAR. 28.....	0900	11	43	9	54	19
APR. 11.....	1200	12	34	6	31	7
MAY 9.....	0930	17	18	1	20	2
JUNE 13.....	1000	22	3	1	5	1

1/ Turbidity measured after a 7-day settling period.

2/ Samples collected by Pacific Gas and Electric Company, and U.S. Forest Service.

MAD RIVER BASIN

11-4805. MAD RIVER NEAR FOREST GLEN, CALIF.

LOCATION.--Lat 40°27'30", long 123°30'35", in SW $\frac{1}{4}$ sec.16, T.1 N., R.6 E., Trinity County, Six Rivers National Forest, temperature recorder at gaging station on right bank, 0.7 mile downstream from Lamb Creek, and 11 miles northwest of Forest Glen.

DRAINAGE AREA.--143 sq mi.

PERIOD OF RECORD.--Water temperatures: November 1960 to September 1969.

Sediment records: January 1957 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C June 15; minimum, 2°C Feb. 28, Mar. 13, 14.

EXTREMES, 1960-69.--Water temperatures: Maximum (1960-66, 1967-69), 26°C June 25, 1961; minimum, freezing point Jan. 5, 6, 1968.

REMARKS.--Recorder stopped Apr. 24 to June 2, Aug. 14-19, Aug. 23 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	17	17	18	16	17	17	16	16	16	17	16	15	16	14	16	16	16	15	15	15	14	15	15	15	15	15	14	14	13	13	14	15		
MINIMUM	14	14	15	14	14	14	14	13	13	14	15	14	14	13	13	14	14	13	13	13	13	13	13	13	13	13	13	12	13	13	13	13		
NOVEMBER																																		
MAXIMUM	13	13	13	13	13	13	13	14	14	14	13	12	11	10	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	9	--	12		
MINIMUM	12	12	12	12	12	12	12	13	13	12	13	12	11	8	8	10	10	10	10	10	10	10	10	9	9	9	9	9	9	8	--	10		
DECEMBER																																		
MAXIMUM	9	9	9	9	9	9	8	9	9	9	8	8	7	7	7	7	6	6	6	6	6	6	5	6	6	6	5	5	5	5	5	7		
MINIMUM	8	8	8	8	8	8	8	8	9	8	7	7	6	6	6	7	6	6	5	5	5	5	4	4	5	6	5	5	5	4	4	4	6	
JANUARY																																		
MAXIMUM	5	5	5	5	5	5	5	5	5	5	4	6	5	4	4	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	4	5		
MINIMUM	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	4	3	4	3	4	
FEBRUARY																																		
MAXIMUM	4	5	5	5	5	5	6	4	5	4	5	5	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5		
MINIMUM	3	4	4	4	3	3	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4	3	2	--	--	--	4	
MARCH																																		
MAXIMUM	5	4	6	6	5	6	6	6	6	6	6	6	7	6	7	5	6	6	7	6	8	8	7	8	8	8	8	9	10	10	9	7		
MINIMUM	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3	4	5	4	4	4	5	5	5	5	5	5	5	6	6	7	7	6	4	
APRIL																																		
MAXIMUM	10	8	9	9	9	9	10	11	10	11	11	10	10	9	11	11	11	12	12	13	12	13	9	--	--	--	--	--	--	--	--	--	--	
MINIMUM	6	7	6	7	7	7	6	7	7	7	7	7	6	6	6	7	7	7	7	7	8	9	8	8	--	--	--	--	--	--	--	--	--	
MAY																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE																																		
MAXIMUM	--	--	19	18	18	16	15	14	13	13	15	18	18	20	21	20	18	17	16	19	19	19	16	18	17	15	14	17	18	19	--	17		
MINIMUM	--	--	15	13	13	13	12	12	12	11	11	12	13	14	15	14	15	14	13	13	14	14	14	13	13	12	12	11	13	13	--	13		
JULY																																		
MAXIMUM	19	19	18	19	19	19	20	20	20	20	20	20	20	19	19	19	18	19	19	19	19	19	19	20	20	19	19	19	19	19	18	19		
MINIMUM	13	14	13	13	13	13	14	14	15	14	14	14	14	13	13	13	12	12	12	12	13	13	14	14	14	13	13	12	13	13	12	13		
AUGUST																																		
MAXIMUM	18	18	18	18	17	18	18	18	18	19	18	18	19	--	--	--	--	--	--	--	19	19	19	--	--	--	--	--	--	--	--	--	--	
MINIMUM	12	12	12	12	11	11	11	12	12	13	12	12	14	--	--	--	--	--	--	--	13	13	14	--	--	--	--	--	--	--	--	--	--	
SEPTEMBER																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

			WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED										METHOD OF ANALY- SIS
DATE	TIME	.002					.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
OCT 2, 1968	1355	17	81	5	1.1	--	--	--	--	--	--	--	--	--	--	--	
NOV 7.....	0945	12	116	15	4.7	--	--	--	--	--	--	--	--	--	--	--	
DEC 5.....	1005	8	296	10	8.0	--	--	--	--	--	--	--	--	--	--	--	
JAN 8, 1969	1620	4	892	32	77	--	--	--	--	--	--	--	--	--	--	--	
FEB 7.....	1000	4	585	52	82	--	--	--	--	--	--	--	--	--	--	--	
MAR 6.....	1335	5	538	28	41	--	--	--	--	--	--	--	--	--	--	--	
APR 9.....	0910	8	497	15	20	--	--	--	--	--	--	--	--	--	--	--	
MAY 7.....	1000	9	352	14	13	--	--	--	--	--	--	--	--	--	--	--	
JUL 8.....	1630	20	72	8	1.6	--	--	--	--	--	--	--	--	--	--	--	
AUG 19.....	1840	19	91	9	2.2	--	--	--	--	--	--	--	--	--	--	--	

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE											METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
APR 9, 1969	0930	8	3	497	--	--	2	3	8	23	44	83	100	--	--	S

MAD RIVER BASIN

341

11-4807.5. MAD RIVER NEAR KNEELAND, CALIF.

LOCATION.--Lat 40°45'50", long 123°53'20", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.4 N., R.3 E., Humboldt County, temperature recorder at gaging station on left bank at mouth of Maple Creek, 30 ft upstream from bridge, and 5.4 miles east of Kneeland.

DRAINAGE AREA.--352 sq mi.

PERIOD OF RECORD.--Water temperatures: November 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C on many days during July and August; minimum, 3°C Feb. 12-15.

EXTREMES, 1965-69.--Water temperatures: Maximum, 28°C July 19-22, 1968; minimum, 2°C Mar. 2, 1966.

REMARKS.--Recorder malfunction Nov. 15 to Dec. 10, Jan. 21 to Feb. 5, Apr. 6, 9-11, May 5 to June 2.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	21	21	21	20	21	21	19	19	17	17	17	17	17	17	18	19	18	18	18	18	19	18	18	17	17	18	18	17	17	17	17	17	18	
MINIMUM	20	19	19	19	19	19	17	16	16	17	16	17	14	12	16	16	16	16	16	16	16	16	16	16	17	16	16	15	16	16	16	16	17	
NOVEMBER																																		
MAXIMUM	16	16	16	16	16	16	16	16	18	18	19	18	17	18	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	14	15	16	16	16	15	16	16	16	16	18	17	16	17	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DECEMBER																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	8	8	8	8	9	8	8	8	8	8	8	7	7	8	8	7	7	7	7	7	7	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	--	
JANUARY																																		
MAXIMUM	7	7	8	8	8	8	8	8	8	8	7	6	7	8	8	7	7	7	6	7	6	8	9	--	--	--	--	--	--	--	--	--	--	
MINIMUM	7	7	7	8	8	8	8	8	8	7	6	7	7	7	7	6	6	6	6	6	8	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																		
MAXIMUM	--	--	--	--	--	9	10	10	10	10	10	10	8	3	3	4	5	5	5	5	6	6	6	6	6	6	6	6	6	--	--	--	7	
MINIMUM	--	--	--	--	--	9	9	10	9	10	8	3	3	3	3	4	4	4	5	5	6	6	6	5	6	6	5	5	6	--	--	--	6	
MARCH																																		
MAXIMUM	6	6	6	6	6	6	7	7	7	7	6	6	6	6	7	7	7	7	7	7	7	7	8	8	10	10	10	10	11	11	11	12	8	
MINIMUM	6	6	6	6	6	6	7	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	8	8	9	9	10	10	11	10	10	7	
APRIL																																		
MAXIMUM	11	11	10	11	10	--	12	12	--	--	--	13	13	13	13	14	14	14	14	14	15	15	16	16	15	15	15	15	15	15	15	--	14	
MINIMUM	10	10	9	10	10	--	11	11	--	--	--	13	12	13	13	13	14	13	13	13	13	14	15	15	14	14	14	14	15	15	15	--	13	
MAY																																		
MAXIMUM	15	15	15	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	14	15	15	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE																																		
MAXIMUM	--	--	18	18	18	17	18	18	18	18	18	18	18	18	19	19	19	19	19	19	20	20	21	22	22	22	22	22	22	23	23	24	--	20
MINIMUM	--	--	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	19	19	19	19	20	20	21	21	21	21	21	21	22	22	22	--	19
JULY																																		
MAXIMUM	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	23	
MINIMUM	22	22	22	22	22	22	22	23	23	23	23	24	23	23	23	22	22	22	22	22	22	22	23	23	23	24	24	24	24	24	24	24	23	
AUGUST																																		
MAXIMUM	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	23	
MINIMUM	24	24	24	24	24	24	24	24	24	24	24	23	23	23	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	22	22	21	23	
SEPTEMBER																																		
MAXIMUM	22	21	21	21	21	21	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	19	19	19	19	19	19	19	18	18	18	--	20	
MINIMUM	21	21	20	20	20	20	20	20	20	20	21	20	21	20	19	20	19	19	19	19	19	19	19	19	19	19	18	18	18	17	17	17	--	19

11-4810. MAD RIVER NEAR ARCATA, CALIF.

LOCATION.--Lat 40°54'35", long 124°03'35", in NW¼ sec.15, T.6 N., R.1 E., Humboldt County, at gaging station 100 ft upstream from bridge on U.S. Highway 299, 1.0 mile downstream from Warren Creek, and 2.8 miles northeast of Arcata.

DRAINAGE AREA.--485 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1958 to September 1969.

Water temperatures: December 1957 to September 1969.

Sediment records: December 1957 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 26°C July 7; minimum, 3°C Dec. 21.

Sediment concentrations: Maximum daily, 6,630 mg/l Jan. 13; minimum daily, 2 mg/l on several days during October, June, and August.

Sediment loads: Maximum daily, 472,000 tons Jan. 13; minimum daily, 0.11 ton Oct. 7.

EXTREMES, 1957-69.--Water temperatures: Maximum (1963-64, 1965-69), 27°C on several days in July 1968; minimum, 1°C Dec. 17-20, 1965.

Sediment concentrations: Maximum daily, 21,900 mg/l Dec. 23, 1964; minimum daily, 1 mg/l on many days in

1958-60, 1962, 1965, 1967-68.

Sediment loads: Maximum daily, 3,140,000 tons Dec. 22, 1964; minimum daily, 0.02 ton June 13, Aug. 8, 9, 1968.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Temperature recorder stopped Dec. 13 to Jan. 30, Aug. 13-18, Aug. 22 to Sept. 30. Where no maximum or minimum is shown, temperature is once-daily reading.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
02...	0710	24	15	9.5	--	--	4.9	--	110	0	--	2.8
NOV.												
12...	1230	2540	11	11.3	--	--	4.5	--	46	0	--	4.7
DEC.												
03...	1110	1590	7	12.8	--	--	4.2	--	60	0	--	3.6
JAN.												
20...	1315	21000	7	12.8	--	--	3.3	--	51	0	--	2.2
FEB.												
03...	1240	3250	7	12.9	--	--	3.6	--	45	0	--	3.0
MAR.												
03...	1345	3260	7	12.9	--	--	2.9	--	44	0	--	2.8
APR.												
07...	1445	1760	11	12.2	--	--	2.9	--	51	0	--	2.1
MAY												
13...	1050	726	13	11.1	15	2.8	2.7	1.3	54	0	5.6	2.5
JUNE												
10...	1120	177	15	10.7	--	--	3.6	--	82	0	--	3.5
JULY												
15...	1250	41	22	8.6	--	--	4.5	--	110	0	--	2.7
AUG.												
05...	1025	56	18	10.1	--	--	4.4	--	102	0	--	2.5
SEPT.												
09...	1050	29	18	10.1	32	4.4	4.6	.8	109	0	11	3.0

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
02...	--	50	--	--	106	16	9	.2	90	8.0	213
NOV.											
12...	--	70	--	--	48	10	17	.3	38	7.2	117
DEC.											
03...	--	40	--	--	68	19	12	.2	49	8.1	130
JAN.											
20...	--	30	--	--	58	16	11	.2	42	7.8	100
FEB.											
03...	--	0	--	--	49	12	14	.2	37	7.6	96
MAR.											
03...	--	20	--	--	43	7	13	.2	36	7.7	93
APR.											
07...	--	40	--	--	42	0	13	.2	42	7.8	103
MAY											
13...	.2	80	54	.07	49	5	10	.2	44	7.7	108
JUNE											
10...	--	40	--	--	73	6	10	.2	67	7.9	158
JULY											
15...	--	0	--	--	102	12	9	.2	90	8.3	207
AUG.											
05...	--	0	--	--	96	12	9	.2	84	8.2	194
SEPT.											
09...	.0	10	100	.14	98	9	9	.2	89	7.8	206

11-4810. MAD RIVER NEAR ARCATA, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	14	17	17	14	16	18	17	14	14	13	13	14	14	13	13	14	15	16	15	16	14	14	14	15	14	16	15	15	15	16	14	15	
MINIMUM	13	12	12	13	11	10	12	9	10	12	13	12	11	11	11	12	12	13	13	13	12	11	12	13	13	12	11	12	14	14	12	12	
NOVEMBER..	12	13	14	13	14	12	14	14	14	15	14	14	12	10	10	10	12	12	12	12	12	13	12	11	11	10	10	9	9	9	--	12	
MAXIMUM	11	12	12	12	12	12	12	13	14	14	14	11	9	9	9	9	10	12	11	11	11	11	10	10	9	9	9	8	9	8	--	11	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	9	9	9	9	7	8	5	4	3	5	10	9	11	12	6	8	7	5	--	--	
DECEMBER..	9	9	9	9	10	9	9	10	11	11	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	8	7	7	8	9	8	9	9	10	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	8	7	7	8	9	8	9	9	10	9	9	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JANUARY..	8	9	9	8	7	7	8	6	5	6	8	8	9	8	8	8	8	5	8	9	8	7	5	7	9	7	7	5	4	5	--	7	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	
FEBRUARY..	6	8	8	6	7	8	9	9	9	10	9	9	8	9	9	9	9	10	11	9	9	8	8	10	9	10	9	9	--	--	--	9	
MAXIMUM	5	6	5	5	5	7	7	8	8	8	8	8	7	8	8	7	8	8	9	8	8	7	7	7	7	7	8	8	--	--	--	7	
MINIMUM	10	8	10	10	9	10	10	11	11	11	10	12	12	12	13	12	12	12	11	10	12	12	13	13	12	12	12	12	12	13	12	11	--
MARCH....	7	7	7	7	7	8	7	7	7	6	7	8	8	8	8	10	10	9	8	9	8	10	9	9	8	10	9	7	8	9	10	10	8
MAXIMUM	12	10	10	11	11	12	13	13	12	15	14	14	13	12	14	15	13	14	13	16	15	15	13	12	14	15	16	13	15	15	--	13	
MINIMUM	9	8	7	8	9	9	9	9	10	10	11	11	10	10	10	11	12	11	10	11	12	12	11	9	9	10	11	12	10	10	--	10	
APRIL....	15	15	13	15	18	19	16	15	15	15	18	17	16	18	16	20	20	18	20	18	20	18	17	16	19	17	18	20	21	22	23	19	--
MAXIMUM	10	10	11	9	11	13	15	13	13	13	14	14	13	13	13	14	15	15	14	15	16	16	15	15	14	15	13	14	15	17	17	14	--
MINIMUM	23	21	18	18	17	19	16	16	16	16	16	17	17	17	18	23	21	20	19	21	22	22	22	23	21	22	22	22	23	22	--	20	
MAY.....	17	17	17	16	16	15	14	14	15	14	14	15	16	16	16	17	18	18	17	17	18	18	19	18	18	16	17	16	16	18	--	16	
JUNE.....	23	22	24	25	24	25	26	24	23	23	23	24	24	23	23	23	22	23	23	23	23	24	24	23	21	20	22	20	20	20	19	23	
MAXIMUM	20	19	18	20	20	20	20	20	20	20	20	19	19	19	19	18	17	18	18	19	18	19	19	19	18	18	18	17	18	18	18	19	
MINIMUM	18	22	22	22	22	22	22	22	21	22	22	22	22	--	--	--	--	18	--	--	23	23	23	--	--	--	--	--	--	--	--	--	
AUGUST....	17	18	18	17	17	18	18	18	18	18	18	17	--	--	--	--	--	18	--	--	23	23	23	--	--	18	--	17	--	21	--	20	
MAXIMUM	18	22	22	22	22	22	22	22	21	22	22	22	22	--	--	--	--	18	--	--	23	23	23	--	--	18	--	16	--	17	--	--	
MINIMUM	17	18	18	17	17	18	18	18	18	18	18	17	--	--	--	--	--	18	--	--	23	23	23	--	--	18	--	16	--	17	--	--	
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	22	5	.30	110	25	7.4	2230	122	735
2	19	7	.36	149	57	33	2030	99	543
3	18	9	.44	380	184	197	1560	52	219
4	20	10	.54	215	36	21	1460	39	154
5	20	9	.49	187	16	8.1	2380	168	1080
6	16	4	.17	199	18	9.7	2140	110	636
7	20	2	.11	215	22	13	1620	61	267
8	33	2	.18	252	11	7.5	1700	86	395
9	29	3	.23	610	330	544	1670	72	325
10	28	4	.30	677	110	201	5000	3480	47000
11	26	6	.42	737	119	319	6560	2260	40000
12	122	69	23	2410	768	5380	3960	400	4280
13	165	79	35	1120	135	408	3110	290	2440
14	113	23	7.0	866	82	192	5220	1480	21900
15	130	19	6.7	1350	336	1240	9550	2740	74800
16	112	16	4.8	1210	100	327	7140	1540	29700
17	75	9	1.8	1130	80	266	4550	420	5160
18	60	4	.65	2530	640	4240	3540	330	3150
19	47	6	.76	2040	265	1460	3430	720	6670
20	66	20	3.6	1240	102	341	2410	260	1690
21	86	44	10	953	68	175	1800	170	826
22	63	38	6.5	1050	72	204	1650	140	624
23	48	18	2.3	939	35	89	5330	1660	37900
24	34	6	.55	2100	580	4310	11900	3970	127000
25	35	3	.28	4330	1050	11900	10400	1080	30300
26	34	2	.18	2660	235	1690	7340	810	16100
27	32	3	.26	1820	98	482	4580	522	6460
28	30	4	.32	1500	77	312	4080	358	3940
29	34	8	.73	1430	88	340	3520	282	2680
30	71	49	9.4	1850	122	609	2610	236	1660
31	151	50	20	--	--	--	1980	220	1180
TOTAL	1759	--	137.37	36259	--	35325.7	126450	--	469814

MAD RIVER BASIN

11-4810. MAD RIVER NEAR ARCATA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1640	162	717	7160	1420	27500	2110	210	1200
2	1560	147	619	4450	525	6310	2070	234	1310
3	1510	150	612	3260	402	3540	3380	363	3310
4	1670	216	974	2960	356	2850	2360	140	892
5	2040	320	1760	3280	206	1820	1940	124	650
6	2490	330	2220	3400	443	4070	2010	142	771
7	2710	245	1790	2960	346	2770	1930	128	667
8	2560	238	1650	2840	311	2660	1830	88	435
9	2100	183	1040	7580	2710	56500	1680	84	381
10	1840	151	750	6040	1390	22700	1500	82	332
11	3070	1030	13000	11900	5970	202000	1330	74	266
12	16900	6460	313000	10100	3180	86700	1220	59	194
13	25100	6630	472000	6820	1710	31500	1060	52	149
14	12900	3600	125000	4820	1010	13100	988	59	157
15	7900	1780	38000	6260	1580	26700	1030	103	286
16	5660	880	13400	6580	1080	19200	1210	126	412
17	4580	490	6060	4670	1040	13100	1480	284	1130
18	4020	1140	12400	3580	920	8890	2640	623	4440
19	8850	2990	71400	2910	646	5080	2540	370	2540
20	20000	5700	335000	2530	436	2980	2260	278	1700
21	22200	5160	323000	2110	340	1940	2020	224	1220
22	12500	3280	111000	1800	299	1450	1940	211	1110
23	8040	2060	44700	1880	328	1660	1950	211	1110
24	5620	1350	20500	1970	176	936	1900	216	1110
25	6480	2250	40700	2180	209	1230	2020	278	1520
26	11000	4410	132000	1970	170	904	2030	266	1460
27	8230	1840	40900	1720	144	669	2190	330	1950
28	6180	1010	16900	2210	236	1410	2560	362	2500
29	4520	660	8050	--	--	--	2830	372	2840
30	4100	530	5870	--	--	--	2830	298	2280
31	3460	400	3740	--	--	--	2840	311	2380
TOTAL	221430	--	2158752	119940	--	550169	61678	--	40702

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	2430	229	1500	1190	37	119	252	7	4.8
2	2010	193	1050	1040	41	115	199	7	3.8
3	1840	169	840	925	42	105	185	7	3.5
4	1530	124	512	860	45	104	173	7	3.3
5	2010	221	1200	794	61	131	175	8	3.8
6	2120	154	881	806	68	148	173	15	7.0
7	1790	122	590	890	67	161	171	9	4.2
8	1540	101	420	939	66	167	175	7	3.3
9	1460	89	351	812	66	145	173	6	2.8
10	1430	92	355	715	65	125	169	6	2.7
11	1320	86	307	743	61	122	175	6	2.8
12	1360	78	286	721	53	103	167	5	2.3
13	1320	71	253	704	46	87	157	5	2.1
14	1150	69	214	650	39	68	144	4	1.6
15	1030	80	222	565	33	50	109	4	1.2
16	939	92	233	565	28	43	79	5	1.1
17	925	114	285	560	24	36	60	5	.81
18	1250	131	442	488	21	28	53	5	.72
19	1090	66	194	470	18	23	65	6	1.1
20	925	52	130	406	16	18	133	7	2.5
21	836	53	120	394	14	15	106	6	1.7
22	842	60	136	363	13	13	84	6	1.4
23	1130	166	506	346	13	12	73	4	.79
24	2410	434	2820	325	12	11	72	2	.39
25	2140	168	971	316	13	11	72	2	.39
26	1840	90	447	325	15	13	75	3	.61
27	1660	85	381	422	19	22	68	2	.37
28	1530	73	302	336	12	11	64	2	.35
29	1470	88	349	310	6	5.0	60	3	.49
30	1320	52	185	301	6	4.9	64	3	.52
31	--	--	--	295	7	5.6	--	--	--
TOTAL	44647	--	16482	18576	--	2021.5	3725	--	62.44

11-4810. MAD RIVER NEAR ARCATA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	74	3	.60	52	5	.70	39	3	.32
2	72	4	.78	55	4	.59	37	3	.30
3	73	3	.59	54	4	.58	34	3	.28
4	110	3	.89	50	4	.54	24	3	.19
5	98	3	.79	52	4	.56	21	3	.17
6	74	3	.60	48	3	.39	20	4	.22
7	49	3	.40	49	2	.26	23	4	.25
8	38	3	.31	48	3	.39	26	3	.21
9	39	3	.32	49	5	.66	27	3	.22
10	40	3	.32	52	3	.42	32	3	.26
11	39	4	.42	49	2	.26	32	3	.26
12	45	4	.49	49	2	.26	33	3	.27
13	47	4	.51	48	2	.26	37	3	.30
14	38	4	.41	44	2	.24	35	3	.28
15	30	5	.41	40	2	.22	33	3	.27
16	20	6	.32	41	2	.22	24	4	.26
17	17	5	.23	42	2	.23	18	7	.34
18	23	5	.31	39	3	.32	24	6	.39
19	41	5	.55	40	15	1.6	53	5	.72
20	44	5	.59	37	8	.80	53	4	.57
21	41	5	.55	39	3	.32	51	4	.55
22	39	5	.53	38	3	.31	46	4	.50
23	56	5	.76	37	3	.30	44	3	.36
24	53	9	1.3	39	3	.32	37	4	.40
25	49	6	.79	35	2	.19	32	10	.86
26	51	4	.55	37	3	.30	29	8	.63
27	50	5	.68	36	4	.39	30	6	.49
28	49	5	.66	35	5	.47	32	5	.43
29	48	4	.52	38	6	.62	28	3	.23
30	45	4	.49	38	4	.41	27	3	.22
31	46	4	.50	35	2	.19	--	--	--
TOTAL	1538	--	17.17	1345	--	13.32	981	--	10.75
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									638328
TOTAL LOAD FOR YEAR (TONS)									3273507.25

11-4810. MAD RIVER NEAR ARCATA, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

		WATER TEMPERATURE (C)		DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALYSIS
DATE	TIME						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
							.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
NOV 9, 1968	1030	14	732	732	561	1110	--	--	--	--	--	94	99	100	--	--	--	S
NOV 12.....	0900	12	2840	2840	1010	7740	29	39	52	63	70	83	89	98	99	100	--	VBWC
NOV 25.....	1000	11	4640	4640	1080	13500	--	--	--	--	--	66	74	85	96	100	--	V
DEC 10.....	1200	11	5300	5300	2330	33300	14	16	26	38	55	72	90	98	100	--	--	VPWC
DEC 10.....	1645	10	9420	9420	7820	199000	23	26	35	47	59	72	86	96	100	--	--	VPWC
DEC 15.....	1515	9	12600	12600	3310	113000	29	30	45	58	74	86	97	100	--	--	--	VPWC
JAN 12, 1969	1200	8	17800	17800	6040	290000	19	21	26	38	53	68	87	99	100	--	--	VPWC
JAN 13.....	0800	7	31300	31300	7320	619000	22	29	38	50	65	78	92	99	100	--	--	VPWC
JAN 15.....	0830	6	7820	7820	1480	31200	31	34	48	63	78	92	99	100	--	--	--	VPWC
JAN 20.....	0915	8	12700	12700	4340	149000	15	16	24	33	45	60	82	98	100	--	--	VPWC
JAN 21.....	0730	8	23600	23600	5460	348000	21	22	31	44	56	70	86	98	100	--	--	VPWC
FEB 5.....	1415	7	3180	3180	228	1960	29	40	50	60	68	75	80	93	100	--	--	VBWC

REDWOOD CREEK BASIN

11-4825. REDWOOD CREEK AT ORICK, CALIF.

LOCATION.--Lat 41°17'20", long 124°03'30", in NE $\frac{1}{4}$ sec.4, T.10 N., R.1 E., Humboldt County, temperature recorder at gaging station on pier of bridge on U.S. Highway 101 at Orick, and 0.9 mile downstream from Prairie Creek.
DRAINAGE AREA.--278 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1958 to September 1966.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1966-68.--Water temperatures: Minimum, 1°C Dec. 14, 1967.

REMARKS.--Recorder stopped Dec. 21 to Feb. 10; probe buried Mar. 7-26, July 3 to Aug. 6.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	18	18	16	16	16	17	16	16	16	15	14	15	15	14	14	16	16	16	15	16	15	16	16	16	16	16	16	14	15	15	14	16	
MINIMUM	15	14	14	14	14	13	12	12	12	14	13	13	12	12	12	13	13	13	12	13	12	12	13	13	13	13	13	13	13	12	12	13	
NOVEMBER																																	
MAXIMUM	13	13	13	13	13	12	13	14	15	15	14	13	11	10	10	10	11	12	12	12	12	13	12	11	11	11	10	10	10	9	--	12	
MINIMUM	12	12	12	12	12	12	12	13	14	14	13	11	10	10	10	10	11	12	12	12	12	11	12	11	11	10	9	9	9	--	11		
DECEMBER																																	
MAXIMUM	10	9	9	10	11	10	9	10	11	11	9	8	9	9	9	8	8	8	8	7	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	9	9	8	9	10	9	9	9	10	9	8	8	8	8	8	8	8	8	7	7	--	--	--	--	--	--	--	--	--	--	--	--	
JANUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	8	8	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	8	8	8	--	--	--	
MARCH																																	
MAXIMUM	8	8	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	11	11	12	12	--
MINIMUM	8	8	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	11	11	11	11	--
APRIL																																	
MAXIMUM	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	12	11	11	11	11	11	11	11	11	11	11	11	--	11
MINIMUM	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	--	11
MAY																																	
MAXIMUM	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	12	
MINIMUM	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	12	
JUNE																																	
MAXIMUM	13	13	13	13	13	14	14	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	16	17	17	17	--	15
MINIMUM	13	13	13	13	13	13	14	14	14	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	16	16	16	--	15
JULY																																	
MAXIMUM	17	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	17	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST																																	
MAXIMUM	--	--	--	--	--	--	13	11	13	15	17	18	20	19	20	20	19	19	20	20	20	19	19	20	19	20	20	19	19	19	19	18	
MINIMUM	--	--	--	--	--	--	9	10	11	12	13	13	15	16	16	16	16	16	17	16	17	16	16	16	16	15	16	15	15	15	15	15	
SEPTEMBER																																	
MAXIMUM	19	19	18	18	18	18	18	19	18	18	17	16	18	16	17	17	16	18	18	18	19	18	17	19	18	18	17	17	16	17	--	18	
MINIMUM	15	15	15	14	14	15	15	16	15	16	16	16	15	14	14	14	15	16	16	16	15	15	16	15	15	15	15	14	14	14	--	15	

11-5165.3. KLAMATH RIVER BELOW IRON GATE DAM, CALIF.

LOCATION.--Lat 41°55'41", long 122°26'35", in SE¼NE¼ sec.17, T.47 N., R.5 W., Siskiyou County, at gaging station on left bank, 0.1 mile downstream from Bogus Creek, 0.6 mile downstream from Iron Gate Dam, and 5.9 miles northeast of Hornbrook.

PERIOD OF RECORD.--Chemical analyses: October 1961 to September 1969.

Water temperatures: October 1962 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 22°C Aug. 4; minimum, 1°C on several days during December to February.

EXTREMES, 1962-69.--Water temperatures: Maximum, 23°C Aug. 6, 1967; minimum, 1°C on several days during January 1965, and December 1968 to February 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph clock stopped Dec. 29 to Jan. 1; temperature range, 4°C to 5°C.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	MEAN DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (NO3) (MG/L)
OCT. 09...	1380	14	8.1	--	--	25	--	112	0	--	5.4	3.1
NOV. 13...	1350	10	9.2	--	--	20	--	95	0	--	4.8	6.1
DEC. 10...	1380	6	9.9	--	--	26	--	111	0	--	6.1	7.0
JAN. 20...	2620	1	12.1	--	--	14	--	82	0	--	3.8	3.2
FEB. 17...	3310	3	11.6	--	--	20	--	95	0	--	4.9	6.5
MAR. 10...	1750	5	12.3	--	--	19	--	99	0	--	4.7	6.0
APR. 08...	7150	10	11.8	--	--	16	--	76	0	--	3.4	5.0
MAY 12...	1900	16	10.2	12	5.8	15	2.3	72	0	21	5.0	1.9
JUNE 09...	925	19	10.8	--	--	15	--	75	0	--	5.0	.1
JULY 07...	750	21	11.8	--	--	14	--	73	1	--	3.6	1.7
AUG. 12...	1020	22	9.3	--	--	28	--	110	0	--	6.2	2.0
SEPT. 15...	1310	20	9.3	14	9.2	22	3.3	99	0	27	7.5	.1

DATE	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	.74	120	--	--	85	0	39	1.2	92	8.1	259
NOV. 13...	.68	70	--	--	78	0	36	1.0	78	8.1	209
DEC. 10...	.81	100	--	--	77	0	42	1.3	91	7.9	262
JAN. 20...	.69	0	--	--	64	0	32	.8	67	7.5	170
FEB. 17...	.57	10	--	--	74	0	37	1.0	78	7.5	218
MAR. 10...	.53	50	--	--	79	0	34	.9	81	7.5	240
APR. 08...	.74	0	--	--	62	0	36	.9	62	7.2	198
MAY 12...	.28	50	133	.18	54	0	37	.9	59	7.4	178
JUNE 09...	.37	100	--	--	51	0	39	.9	62	7.9	168
JULY 07...	--	20	--	--	62	0	33	.8	62	8.4	174
AUG. 12...	--	170	--	--	82	0	43	1.3	90	8.2	279
SEPT. 15...	--	80	158	.21	73	0	38	1.1	81	8.3	247

KLAMATH RIVER BASIN

11-5165.3. KLAMATH RIVER BELOW IRON GATE DAM, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	MONTH	DAY																															AVER- AGE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	MAXIMUM	16	16	16	16	16	16	16	16	16	15	15	14	14	14	14	14	14	14	14	13	13	13	13	12	13	13	12	12	12	11	11	14
	MINIMUM	16	16	16	16	16	16	16	16	15	15	14	14	14	14	14	13	13	14	13	13	13	13	12	12	12	12	12	12	11	11	11	14
NOVEMBER	MAXIMUM	11	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	9	9	8	8	8	8	8	--	10	
	MINIMUM	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	9	8	8	8	8	8	8	8	--	10	
DECEMBER	MAXIMUM	8	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	5	5	--	--	--	6	
	MINIMUM	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5	5	5	4	--	--	6	
JANUARY	MAXIMUM	--	4	4	4	4	4	4	4	4	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	3	
	MINIMUM	--	4	4	4	4	4	4	4	4	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	3	
FEBRUARY	MAXIMUM	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	--	--	2	
	MINIMUM	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	--	--	2	
MARCH	MAXIMUM	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	6	6	6	6	6	6	6	6	8	5	
	MINIMUM	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	6	6	6	6	6	6	6	6	5	
APRIL	MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	10	10	10	10	10	10	10	10	11	10	11	11	--	9
	MINIMUM	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	10	10	10	10	10	10	10	10	--	9	
MAY	MAXIMUM	11	11	11	11	12	12	12	13	14	13	14	14	14	14	14	14	14	15	16	16	16	16	16	16	16	14	16	16	18	18	14	
	MINIMUM	10	10	10	10	10	11	12	12	12	12	12	12	11	12	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	16	16	13
JUNE	MAXIMUM	18	19	20	20	20	20	20	19	18	16	18	20	20	20	20	19	19	18	17	18	18	18	18	19	18	17	17	17	17	18	--	19
	MINIMUM	16	16	18	18	18	18	18	17	16	16	16	17	17	17	18	18	18	16	16	16	16	16	17	18	18	17	17	16	16	17	--	17
JULY	MAXIMUM	18	19	18	18	19	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
	MINIMUM	17	17	17	17	18	18	18	18	18	18	18	18	19	19	19	18	18	19	19	19	19	19	20	20	20	20	20	20	20	20	20	
AUGUST	MAXIMUM	20	21	21	22	20	20	20	20	20	21	21	20	20	20	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
	MINIMUM	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
SEPTEMBER	MAXIMUM	20	20	20	20	20	20	19	19	20	20	20	20	20	20	19	19	19	18	18	18	18	18	17	17	17	16	16	16	16	16	--	18
	MINIMUM	20	20	20	20	20	19	19	19	19	19	19	20	20	19	19	19	18	18	18	18	18	17	17	17	16	16	16	16	16	16	--	18

KLAMATH RIVER BASIN

349

11-5166, COTTONWOOD CREEK AT HORN BROOK, CALIF.

LOCATION.--Lat 41°55'06", long 122°33'45", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.47 N., R.6 W., Siskiyou County, temperature recorder at gaging station on right bank, 0.5 mile upstream from Rancheria Gulch, and 0.6 mile northwest of Hornbrook.

DRAINAGE AREA.--89.8 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1964 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 25°C Aug. 15, 21; minimum, freezing point on several days during January to March.

EXTREMES, 1964-69.--Water temperatures: Maximum (1964-65, 1966-69), 30°C July 7, 8, 1968; minimum, freezing point on several days in most years.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
MAXIMUM		19	19	19	18	19	19	17	17	16	17	16	16	16	15	15	16	16	16	14	17	15	16	16	16	15	16	16	14	14	14	14	16	
MINIMUM		16	16	16	16	16	16	14	12	12	13	15	14	13	12	12	12	12	12	11	13	12	12	12	12	12	13	12	11	13	12	11	13	
NOVEMBER																																		
MAXIMUM		13	14	14	13	13	11	13	14	16	15	14	13	11	9	9	9	10	11	12	11	10	12	12	11	11	10	10	8	9	8	--	11	
MINIMUM		9	12	12	10	11	10	11	13	14	14	13	11	9	6	6	8	9	10	10	10	10	11	11	10	10	8	7	7	7	6	--	10	
DECEMBER																																		
MAXIMUM		8	8	7	7	8	7	8	9	9	10	7	6	6	6	6	5	5	5	3	3	3	3	3	4	5	5	3	4	3	4	3	6	
MINIMUM		6	6	6	7	7	6	6	8	8	9	5	3	4	4	6	4	3	4	3	2	2	3	3	3	3	3	3	2	2	1	1	4	
JANUARY																																		
MAXIMUM		4	4	5	5	5	6	5	4	2	4	4	4	4	5	4	3	2	2	2	2	4	3	2	1	2	2	2	1	1	1	1	3	
MINIMUM		1	3	3	4	4	4	3	2	1	2	3	2	3	3	2	1	0	0	1	2	1	1	0	1	0	1	1	0	0	0	0	2	
FEBRUARY																																		
MAXIMUM		4	3	4	2	4	4	4	5	5	6	4	5	4	5	7	6	6	6	6	4	5	5	5	5	5	6	6	5	5	--	--	5	
MINIMUM		1	0	0	0	1	2	1	2	2	3	3	2	1	3	3	2	2	2	3	4	2	2	2	2	2	2	1	2	3	--	--	2	
MARCH																																		
MAXIMUM		6	4	5	7	7	5	7	6	5	6	6	6	7	7	8	7	7	8	8	6	10	10	9	9	10	11	11	11	9	11	9	8	
MINIMUM		2	2	2	1	3	3	2	1	2	0	0	2	1	0	1	2	2	3	1	3	3	3	3	2	2	2	3	3	3	4	4	5	2
APRIL																																		
MAXIMUM		10	7	8	9	7	9	11	11	8	12	12	11	10	9	10	11	10	12	12	13	13	14	12	10	11	12	14	14	12	12	--	11	
MINIMUM		4	4	3	5	5	4	3	4	5	3	4	5	3	5	5	5	6	6	7	6	8	9	7	6	5	5	6	9	5	5	--	5	
MAY																																		
MAXIMUM		12	12	12	14	16	17	17	18	18	19	18	18	17	14	16	18	18	17	15	17	19	20	19	20	20	17	18	20	21	22	21	17	
MINIMUM		6	5	6	5	7	8	9	9	10	11	11	11	12	11	9	11	12	12	10	10	12	12	13	14	14	14	12	12	14	15	14	11	
JUNE																																		
MAXIMUM		22	23	24	23	22	22	22	18	17	20	21	23	23	23	23	21	23	24	22	22	23	20	19	21	18	18	17	20	21	21	--	21	
MINIMUM		15	16	16	18	17	17	16	16	15	16	16	16	16	17	17	17	16	17	18	18	18	16	17	17	15	15	14	13	14	13	15	--	16
JULY																																		
MAXIMUM		20	20	19	20	20	20	21	21	21	21	21	21	20	20	21	20	21	21	21	21	21	21	21	20	22	22	21	22	22	22	22	21	
MINIMUM		16	16	15	15	16	15	15	16	17	17	17	17	16	16	16	15	16	16	17	17	17	17	18	18	18	18	18	18	18	18	18	18	
AUGUST																																		
MAXIMUM		22	23	24	23	22	22	23	22	24	24	23	22	23	24	25	24	24	24	24	24	25	24	23	22	21	21	21	21	20	21	22	23	
MINIMUM		17	18	17	18	16	16	17	16	18	18	17	16	17	18	19	18	17	18	18	18	19	18	19	17	15	15	15	15	14	15	15	17	
SEPTEMBER																																		
MAXIMUM		22	23	21	20	20	20	20	22	22	21	22	22	21	19	19	19	20	20	18	18	19	20	19	19	20	20	20	19	20	19	--	20	
MINIMUM		16	17	16	13	14	14	15	16	17	16	18	18	18	18	14	14	15	15	17	16	15	14	14	17	15	15	16	16	15	16	16	--	16

KLAMATH RIVER BASIN

11-5175. SHASTA RIVER NEAR YREKA, CALIF.

LOCATION.--Lat 41°49'23", long 122°35'40", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.46 N., R.7 W., Siskiyou County, at gaging station on right bank, 0.5 mile upstream from mouth, and 7 miles north of Yreka.

DRAINAGE AREA.--793 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1958 to September 1969.

Water temperatures: June 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 29°C July 21, 22; minimum, 1°C sometime during period Jan. 8 to Feb. 3.

EXTREMES, 1965-69.--Water temperatures: Maximum, 30°C Aug. 2, 3, 1966, July 1, 2, 12, 1967, sometime during period July 2-17, and July 27, 28, 1968; minimum, 1°C Dec. 14-18, 1967, and sometime during period Jan. 8 to Feb. 3, 1969.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph clock stopped Nov. 22 to Dec. 2, Jan. 2, Jan. 8 to Feb. 3, Feb. 9 to Mar. 5; temperature ranges, 7°C to 11°C, 5°C to 7°C, 1°C to 5°C, and 3°C to 8°C, respectively.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
09...	0820	85	--	10.8	--	--	50	--	335	14	--	29
NOV.												
13...	1200	168	8	12.7	--	--	41	--	269	14	--	26
DEC.												
10...	1200	189	8	11.6	--	--	38	--	266	6	--	22
JAN.												
20...	1300	1290	3	12.4	--	--	26	--	205	0	--	15
FEB.												
17...	1100	309	6	12.1	--	--	28	--	281	5	--	19
MAR.												
10...	1240	224	7	12.5	--	--	30	--	291	0	--	19
APR.												
08...	1240	317	11	10.6	--	--	31	--	285	0	--	18
MAY												
13...	0715	203	17	9.0	29	32	34	3.5	294	0	8.1	20
JUNE												
09...	1350	101	18	9.2	--	--	38	--	336	0	--	22
JULY												
07...	1250	66	22	9.5	--	--	4.1	--	333	2	--	24
AUG.												
12...	1245	27	23	9.8	--	--	50	--	373	8	--	30
SEPT.												
15...	1330	56	19	9.9	42	37	50	4.2	338	20	5.8	28

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT.											
09...	--	500	--	--	251	0	30	1.4	298	8.5	627
NOV.											
13...	--	470	--	--	202	0	31	1.3	244	8.6	530
DEC.											
10...	--	470	--	--	189	0	30	1.2	228	8.5	497
JAN.											
20...	--	270	--	--	152	0	27	.9	168	8.1	392
FEB.											
17...	--	290	--	--	218	0	22	.8	239	8.4	516
MAR.											
10...	--	360	--	--	216	0	23	.9	239	8.3	513
APR.											
08...	--	250	--	--	207	0	25	.9	234	8.0	496
MAY											
13...	.8	520	307	.42	203	0	26	1.0	241	8.1	505
JUNE											
09...	--	410	--	--	240	0	26	1.1	276	8.0	554
JULY											
07...	--	400	--	--	236	0	4	.1	276	8.6	558
AUG.											
12...	--	600	--	--	270	0	29	1.3	319	8.5	639
SEPT.											
15...	3.8	580	326	.44	256	0	29	1.4	310	8.7	617

11-5175. SHASTA RIVER NEAR YREKA, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	19	18	19	18	18	18	16	16	14	15	14	14	14	13	13	14	14	14	14	14	14	14	14	14	14	15	14	14	13	13	13	15	
MINIMUM	14	14	14	14	15	14	13	11	11	12	13	13	12	11	11	11	11	11	11	12	12	12	12	12	12	12	12	12	11	11	10	12	
NOVEMBER																																	
MAXIMUM	11	12	12	12	12	11	12	13	15	14	13	12	10	8	9	8	10	11	11	10	10	10	--	--	--	--	--	--	--	--	--	--	
MINIMUM	9	10	11	10	10	10	10	11	13	13	12	10	8	6	8	7	8	10	10	10	10	--	--	--	--	--	--	--	--	--	--	--	
DECEMBER																																	
MAXIMUM	--	--	7	6	7	7	7	8	9	9	8	7	6	7	6	6	6	6	5	4	3	3	4	5	5	6	6	5	6	6	6		
MINIMUM	--	--	6	6	6	6	7	7	7	8	7	6	5	5	6	5	5	5	4	3	2	2	3	4	4	5	5	5	4	5	5	5	
JANUARY																																	
MAXIMUM	7	--	8	9	8	8	8	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	5	--	7	8	8	8	6	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																	
MAXIMUM	--	--	--	5	6	5	6	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	3	4	4	4	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MARCH																																	
MAXIMUM	--	--	--	--	--	9	9	9	8	8	8	9	10	9	11	9	9	9	10	9	12	12	12	12	12	13	13	13	12	13	12	10	
MINIMUM	--	--	--	--	--	6	6	5	6	5	5	6	5	6	6	8	8	7	6	8	7	8	8	8	8	8	9	9	10	9	10	7	
APRIL																																	
MAXIMUM	12	9	10	11	9	10	12	13	12	14	15	14	14	13	15	15	13	14	15	16	17	14	11	12	13	16	17	17	15	15	--	13	
MINIMUM	9	8	7	8	8	8	8	9	10	8	9	10	8	9	9	9	11	9	10	10	11	11	9	8	8	10	11	12	11	10	--	9	
MAY																																	
MAXIMUM	16	16	12	16	18	20	21	22	23	22	23	22	21	19	21	22	23	21	21	22	23	24	24	24	22	18	20	23	24	24	24	21	
MINIMUM	10	10	10	9	11	14	15	16	17	17	18	17	17	15	14	15	16	16	15	15	17	18	19	19	18	15	14	15	17	18	17	15	
JUNE																																	
MAXIMUM	24	26	27	26	25	26	25	21	20	21	23	24	25	25	24	24	25	25	23	23	24	22	22	22	20	20	19	21	22	24	--	23	
MINIMUM	18	18	19	21	18	20	20	19	18	17	18	19	19	20	19	19	19	19	19	19	19	19	19	18	17	16	15	15	16	16	17	--	
JULY																																	
MAXIMUM	24	24	26	24	24	25	25	26	26	27	27	27	27	26	26	26	26	27	28	28	29	29	26	27	25	27	26	27	26	27	26	26	
MINIMUM	18	18	19	19	17	17	17	18	20	20	19	19	19	18	18	18	18	19	21	21	21	21	22	22	22	21	24	22	21	21	20	20	
AUGUST																																	
MAXIMUM	26	26	23	24	24	25	25	26	27	27	25	25	27	27	27	26	26	26	26	26	26	27	27	25	24	24	23	23	23	23	24	25	
MINIMUM	19	19	17	17	18	17	18	18	20	20	19	18	19	20	20	19	19	19	19	19	20	20	20	20	18	16	17	16	16	16	16	17	
SEPTEMBER																																	
MAXIMUM	24	24	22	21	22	22	21	22	23	23	23	24	22	21	20	19	19	19	17	17	18	18	18	19	20	20	20	19	18	17	--	20	
MINIMUM	17	18	17	15	15	15	16	17	18	17	18	18	18	15	14	15	15	15	16	15	14	14	14	15	15	15	15	15	15	15	--	16	

KLAMATH RIVER BASIN

11-5195. SCOTT RIVER NEAR FORT JONES, CALIF.

LOCATION.--Lat 41°38'28", long 123°00'54", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.44 N., R.10 W., Siskiyou County, at gaging station 1.7 miles upstream from Snow Creek, and 10.8 miles downstream from Fort Jones.

DRAINAGE AREA.--653 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1958 to September 1969.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 09...	1100	56	11	11.8	--	--	5.8	--	179	0	--	5.0
NOV. 14...	0755	140	6	10.7	--	--	3.4	--	117	0	--	2.7
JAN. 20...	1635	2420	2	12.0	--	--	2.7	--	84	0	--	2.0
MAR. 10...	1120	670	4	12.7	--	--	3.1	--	140	0	--	2.0
MAY 12...	1235	3880	12	10.5	7.8	5.2	1.4	.4	48	0	1.2	1.6
JULY 08...	0730	258	15	9.8	--	--	3.7	--	134	0	--	2.7
SEPT. 16...	0925	42	13	10.5	31	13	6.6	.4	157	0	5.4	6.5

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 09...	--	0	--	--	157	10	7	.2	147	8.2	300
NOV. 14...	--	0	--	--	102	6	7	.1	96	8.3	196
JAN. 20...	--	0	--	--	86	17	6	.1	69	8.0	151
MAR. 10...	--	0	--	--	121	6	5	.1	115	8.0	234
MAY 12...	.9	20	60	.08	41	2	7	.1	39	7.4	85
JULY 08...	--	0	--	--	123	13	6	.1	110	8.3	228
SEPT. 16...	1.0	0	142	.19	130	1	10	.3	129	8.3	276

11-5205. KLAMATH RIVER NEAR SEIAD VALLEY, CALIF.

LOCATION.--Lat 41°51'14", long 123°13'52", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.46 N., R.12 W, Siskiyou County, Klamath National Forest, temperature recorder at gaging station on left bank 0.4 mile upstream from Bittenbender Creek, 1.4 miles downstream from Grider Creek, and 2.2 miles west of Seiad Valley.

DRAINAGE AREA.--6,980 sq mi, approximately, not including Lost River or Lower Klamath Lake basins.

PERIOD OF RECORD.--Chemical analyses: December 1958 to September 1966.

Water temperatures: October 1963 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 26°C July 22, 26; minimum, 1°C on several days during January and February.

EXTREMES, 1963-69.--Water temperatures: Maximum, 27°C July 28-30, 1968; minimum (1963-64, 1966-69), 1°C on several days during December to February in 1967-69.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	17	17	17	17	17	17	16	14	14	14	14	14	13	13	12	12	13	13	12	13	13	13	14	13	13	13	13	13	13	12	12	14		
MINIMUM	15	16	16	16	15	15	14	13	12	13	14	13	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	12	12	12	13		
NOVEMBER																																		
MAXIMUM	12	11	12	12	12	11	11	11	12	12	12	11	10	9	8	8	9	9	10	10	10	10	10	9	8	8	7	7	7	--	10			
MINIMUM	11	11	11	12	11	11	11	11	11	12	11	10	9	8	7	7	8	9	9	10	10	10	10	9	8	8	7	7	7	6	--	9		
DECEMBER																																		
MAXIMUM	6	6	6	7	7	7	7	7	7	7	7	6	5	5	5	5	5	5	5	5	5	4	4	3	4	4	4	4	4	5	4	5		
MINIMUM	6	6	6	6	6	6	6	6	7	7	6	5	5	5	5	5	5	5	5	5	4	4	2	2	3	4	4	4	4	4	4	5		
JANUARY																																		
MAXIMUM	4	4	5	5	5	5	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	1	1	1	1	3		
MINIMUM	4	4	4	5	5	5	5	4	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	2	1	2	1	1	1	1	1	3		
FEBRUARY																																		
MAXIMUM	1	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	4	4	4	4	5	5	4	4	--	--	--	4		
MINIMUM	1	1	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	--	--	--	3	
MARCH																																		
MAXIMUM	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	7	7	7	7	7	7	7	8	8	8	6		
MINIMUM	4	4	4	4	5	5	5	5	5	5	5	4	4	5	5	5	5	6	6	6	6	6	7	7	7	7	7	7	7	7	7	8	6	
APRIL																																		
MAXIMUM	8	8	7	8	8	9	9	9	9	9	9	9	9	8	9	9	9	9	10	10	11	12	11	10	11	12	12	12	12	11	--	10		
MINIMUM	8	7	7	7	8	8	8	8	9	8	8	9	8	8	8	9	9	9	9	9	9	10	11	10	10	10	11	12	12	11	--	9		
MAY																																		
MAXIMUM	11	12	12	12	13	14	14	14	14	14	14	13	13	13	14	15	15	15	14	15	15	15	15	15	15	14	14	12	14	15	16	14		
MINIMUM	10	11	11	10	12	13	13	13	13	13	13	13	12	12	12	13	14	14	13	13	13	14	14	14	14	13	12	11	11	13	14	13		
JUNE																																		
MAXIMUM	16	17	18	18	17	18	17	17	16	16	17	19	19	20	19	19	20	20	19	19	20	19	18	17	17	16	16	17	18	19	--	18		
MINIMUM	14	15	16	16	16	16	16	16	15	14	15	16	17	18	17	18	18	18	17	17	17	17	17	16	16	15	14	14	15	16	--	16		
JULY																																		
MAXIMUM	20	20	19	20	20	20	21	22	22	22	22	21	22	22	22	21	22	22	24	25	25	26	25	25	25	25	26	24	24	24	23	23		
MINIMUM	17	17	17	17	17	17	18	20	20	19	19	19	19	19	19	18	18	19	20	22	22	22	23	22	23	23	22	21	22	21	21	20		
AUGUST																																		
MAXIMUM	24	24	24	22	22	22	22	23	23	24	23	22	23	23	23	23	23	22	22	23	23	23	23	22	20	20	20	20	20	21	21	22		
MINIMUM	20	21	21	20	19	19	20	20	21	21	21	20	20	20	20	21	20	20	20	20	20	20	20	21	21	20	18	18	18	18	18	20		
SEPTEMBER																																		
MAXIMUM	21	21	21	20	20	20	21	21	22	21	21	22	21	20	19	19	20	20	19	19	19	19	19	20	21	21	21	20	20	--	--	20		
MINIMUM	19	19	19	18	18	18	18	19	19	19	20	19	19	18	17	18	18	19	19	18	18	18	18	18	18	19	19	19	19	19	--	19		

KLAMATH RIVER BASIN

11-5225. SALMON RIVER AT SOMES BAR, CALIF.
(Formerly published as Salmon River at Somesbar, Calif.)

LOCATION.--Lat 41°22'40", long 123°28'35", in NE¼ sec.3, T.11 N., R.6 E., Siskiyou County, Klamath National Forest, temperature recorder at gaging station on left bank at Somes Bar, and 1.0 mile upstream from mouth.

DRAINAGE AREA.--751 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1958 to September 1964.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C July 22, 24-26; minimum, 2°C Jan. 29, 30.

EXTREMES, 1965-69.--Water temperatures: Maximum (1965-66, 1967-69), 32°C Sept. 4, 5, 1966; minimum, freezing point Dec. 14, 15, 1967.

REMARKS.--Recorder malfunction Nov. 25 to Dec. 25.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	18	18	18	16	17	17	16	15	15	16	14	13	13	12	12	13	13	13	12	13	12	12	12	12	13	13	12	13	12	12		14	
MINIMUM	15	15	15	15	15	14	13	12	12	13	13	12	12	11	11	12	12	12	11	12	11	11	11	11	11	12	11	11	12	11	11		12
NOVEMBER																																	
MAXIMUM	11	11	11	11	11	10	11	12	13	13	12	11	9	8	8	8	9	9	9	9	9	9	10	10	9	--	--	--	--	--	--	10	
MINIMUM	10	10	11	10	10	9	10	11	12	12	11	9	8	6	6	7	8	8	9	8	9	8	9	9	9	7	--	--	--	--	--	9	
DECEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	6	5	5	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	5	5	5	5	5	--
JANUARY																																	
MAXIMUM	6	6	7	7	7	7	7	6	5	6	6	7	7	7	7	6	6	5	5	6	7	8	7	6	5	5	6	6	4	4	4	6	
MINIMUM	5	6	6	6	6	6	6	5	4	5	6	6	7	6	6	6	5	4	4	5	6	7	6	5	5	4	4	3	3	2	3	5	
FEBRUARY																																	
MAXIMUM	5	5	5	5	5	6	6	6	7	7	7	7	6	6	7	7	7	7	8	7	7	6	6	6	7	6	6	6	6	--	--	6	
MINIMUM	3	4	5	5	5	5	6	6	6	6	7	6	6	6	6	6	6	6	6	7	6	5	5	6	6	5	5	5	5	--	--	6	
MARCH																																	
MAXIMUM	7	6	7	7	7	7	7	7	7	6	6	7	6	7	6	7	7	8	8	8	8	9	9	9	9	9	9	10	10	9	10	8	
MINIMUM	5	5	5	5	6	6	6	5	6	5	4	6	5	5	5	6	7	7	8	7	7	7	7	7	7	7	7	7	7	8	8	6	
APRIL																																	
MAXIMUM	9	9	8	9	9	9	9	9	9	10	11	10	9	9	10	11	10	10	10	10	11	11	11	10	9	9	11	11	10	10	10	--	10
MINIMUM	7	7	6	7	8	7	7	7	8	8	8	9	7	7	8	8	8	8	8	8	8	9	9	9	7	7	7	8	8	9	8	7	8
MAY																																	
MAXIMUM	10	10	10	11	12	13	12	13	13	12	12	12	11	12	12	13	13	11	12	13	14	14	14	13	13	12	11	12	13	14	13	12	
MINIMUM	7	7	8	7	9	9	9	9	9	9	9	9	9	9	9	9	10	9	9	9	9	10	10	10	10	11	10	8	9	10	10	9	
JUNE																																	
MAXIMUM	14	14	15	15	15	15	14	13	13	14	15	16	17	17	17	17	17	16	15	17	18	17	16	17	16	16	15	16	17	18	--	16	
MINIMUM	10	11	11	12	12	12	12	12	12	12	12	12	13	13	13	14	14	15	15	14	14	15	15	15	14	14	13	13	13	14	15	--	13
JULY																																	
MAXIMUM	18	18	17	18	19	19	19	20	20	20	20	20	20	20	20	20	21	21	22	23	23	24	23	24	24	24	24	23	22	22	22	21	
MINIMUM	16	16	15	15	16	16	16	17	18	18	18	18	18	18	18	18	18	19	20	20	21	21	21	21	21	21	22	21	20	20	20	19	
AUGUST																																	
MAXIMUM	21	22	22	21	21	21	21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23	22	22	21	21	20	20	20	21	21	
MINIMUM	19	19	19	19	18	19	18	19	19	20	19	19	19	20	20	19	20	19	19	19	19	20	20	19	18	18	17	17	17	17	17	19	
SEPTEMBER																																	
MAXIMUM	21	21	21	20	20	20	20	21	22	22	21	22	21	20	20	19	18	19	17	18	18	18	18	19	19	19	19	18	17	17	--	20	
MINIMUM	18	18	18	17	17	17	18	18	19	18	19	19	18	17	17	16	16	17	16	16	15	16	16	16	16	16	16	16	15	16	--	17	

11-5230. KLAMATH RIVER AT ORLEANS, CALIF.

LOCATION.--Lat 41°18'13", long 123°32'00", in SW¼NE¼ sec.31, T.11 N., R.6 E., Humboldt County, at gaging station at Orleans, 25 ft upstream from highway bridge, and 0.2 mile downstream from Cheenitch Creek.
 DRAINAGE AREA.--8,500 sq mi, approximately, not including Lost River or Lower Klamath Lake basins.
 PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.
 Water temperatures: October 1965 to September 1969.
 Sediment records: January 1967 to September 1969.
 EXTREMES, 1968-69.--Water temperatures: Maximum, 27°C July 22; minimum, freezing point Dec. 22, 23.
 Sediment concentrations: Maximum daily, 1,390 mg/l Jan. 22; minimum daily, 2 mg/l on several days during October.
 Sediment loads: Maximum daily, 212,000 tons Jan. 21; minimum daily, 7.7 tons Oct. 9.
 EXTREMES, 1965-69.--Water temperatures: Maximum, 28°C on several days in 1967-68; minimum (1965-66, 1967-69), freezing point Dec. 22, 23, 1968.
 Sediment concentrations (1967-69): Maximum daily, 3,220 mg/l Feb. 23, 1968; minimum daily, 2 mg/l on several days in 1968.
 Sediment loads (1967-69): Maximum daily, 825,000 tons Feb. 28, 1968; minimum daily, 7.7 tons Oct. 9, 1968.
 REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. No temperature record Apr. 5-21; recorder malfunction. Where no maximum or minimum is shown, temperature is once-daily reading.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV. 11...	1430	4100	12	11.0	--	--	9.4	--	86	0	--	3.9
DEC. 02...	1515	4320	6	13.3	--	--	11	--	93	0	--	4.3
FEB. 03...	1000	12600	5	13.8	--	--	8.5	--	91	0	--	3.1
MAR. 03...	1115	9700	6	13.7	--	--	9.3	--	97	0	--	3.4
APR. 07...	1225	19200	8	13.2	--	--	10	--	85	0	--	2.7
MAY 12...	1240	29700	12	12.6	7.5	4.2	2.4	1.0	43	0	3.3	1.2
JUNE 09...	1225	9930	18	11.0	--	--	3.6	--	54	0	--	1.7
JULY 14...	1245	2750	21	9.3	--	--	6.6	--	90	0	--	3.1
AUG. 04...	1210	2400	22	10.3	--	--	11	--	101	0	--	4.5
SEPT. 08...	1245	1870	21	10.0	19	9.1	20	2.5	112	0	26	6.2

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LILITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 11...	--	100	--	--	66	0	24	.5	71	7.9	169
DEC. 02...	--	20	--	--	80	4	23	.5	76	8.2	186
FEB. 03...	--	0	--	--	82	7	18	.4	75	8.0	176
MAR. 03...	--	20	--	--	87	7	19	.4	80	7.4	193
APR. 07...	--	20	--	--	68	0	24	.5	70	7.6	182
MAY 12...	.4	10	44	.06	36	1	12	.2	35	7.4	80
JUNE 09...	--	20	--	--	43	0	15	.2	44	7.7	100
JULY 14...	--	0	--	--	70	0	17	.3	74	7.8	159
AUG. 04...	--	80	--	--	76	0	24	.5	83	8.2	194
SEPT. 08...	.0	90	141	.19	85	0	33	.9	92	7.7	255

KLAMATH RIVER BASIN

11-5230. KLAMATH RIVER AT ORLEANS, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	18	19	19	18	18	18	17	16	15	16	17	16	14	14	14	14	14	14	14	14	14	14	14	14	15	14	15	15	14	13	13	15		
MINIMUM	16	17	17	17	17	16	16	14	13	14	16	14	13	13	13	13	13	14	13	13	13	13	13	13	14	13	13	14	13	13	12	14		
NOVEMBER..	12	11	12	12	11	11	11	11	12	13	13	12	10	9	6	7	8	9	9	10	10	10	10	10	10	8	7	7	7	6	6	10		
MAXIMUM	11	11	11	11	11	11	10	11	12	13	12	10	9	6	6	7	8	9	9	10	10	10	10	10	8	7	7	7	6	6	5	9		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
DECEMBER..	6	6	6	7	7	7	7	8	9	7	6	6	6	6	6	6	6	5	4	3	3	2	2	4	5	5	5	5	5	5	5	5		
MAXIMUM	5	6	6	6	7	7	7	7	7	6	6	5	5	6	6	6	5	4	3	3	2	0	0	2	4	5	4	4	5	5	5	5		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
JANUARY...	5	5	5	6	6	6	6	6	4	5	5	5	6	6	6	6	5	4	5	6	6	6	5	3	3	3	4	3	3	2	2	5		
MAXIMUM	5	5	5	6	6	6	6	4	4	4	5	5	5	6	6	5	4	4	4	5	6	5	3	3	3	3	3	2	2	1	2	4		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FEBRUARY..	3	4	5	5	5	5	5	5	6	6	7	7	6	6	5	7	6	7	7	7	6	6	6	6	6	7	6	6	--	--	--	6		
MAXIMUM	2	3	4	4	4	5	5	5	5	6	6	6	5	5	5	5	6	6	7	6	5	5	6	5	5	6	6	6	--	--	--	5		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MARCH....	7	6	7	7	7	8	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	10	9	9	10	10	10	10	11	11	8		
MAXIMUM	6	6	5	6	6	6	6	6	6	5	7	7	6	6	7	8	8	7	8	8	7	8	8	8	8	8	8	9	9	9	9	7		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
APRIL....	10	9	9	10	--	--	--	--	--	--	--	11	--	--	11	--	--	--	--	--	--	--	--	--	--	12	12	10	11	13	13	13	--	
MAXIMUM	8	8	8	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	9	9	9	10	12	12	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAY.....	10	10	10	11	12	13	13	13	13	13	13	13	12	12	13	14	15	14	13	14	15	15	15	14	14	13	12	11	13	15	16	16	13	
MAXIMUM	9	9	9	8	10	11	11	11	11	11	11	11	11	11	11	12	13	13	12	12	13	13	13	13	13	13	12	11	11	13	14	15	12	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
JUNE.....	16	17	18	18	18	18	17	17	18	16	17	19	20	20	21	21	21	20	20	20	20	20	20	20	19	18	16	15	16	18	19	--	18	
MAXIMUM	15	15	16	16	16	16	16	16	15	14	15	16	18	18	18	19	19	19	18	17	18	19	18	17	17	14	14	13	14	15	--	16		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
JULY.....	19	19	21	21	21	22	22	23	23	23	23	23	23	23	23	23	24	25	26	26	27	26	26	26	25	26	26	25	23	23	23	23		
MAXIMUM	16	17	17	18	19	19	19	20	20	21	20	20	20	20	20	20	20	21	22	23	24	24	24	23	23	24	23	22	22	21	21	21		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
AUGUST...	23	23	23	22	22	22	21	22	22	23	23	22	23	23	23	23	23	23	22	23	23	23	23	23	22	21	21	20	20	20	21	22		
MAXIMUM	20	20	20	20	19	19	19	20	20	21	21	21	20	21	21	21	21	21	20	20	21	21	21	21	20	19	19	18	18	19	19	20		
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
SEPTEMBER	21	21	21	20	20	20	20	21	22	22	22	22	22	21	20	19	18	17	17	18	17	17	17	17	18	17	18	17	18	19	19	--	20	
MAXIMUM	19	20	18	18	18	18	19	19	20	20	19	18	18	17	17	17	17	16	16	16	16	16	16	16	16	16	18	18	17	18	17	--	18	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1510	2	8.2	2800	10	76	4660	9	113
2	1500	3	12	4310	523	8060	4380	7	83
3	1500	3	12	4880	590	7770	4110	7	78
4	1490	3	12	3530	210	2000	3990	8	86
5	1490	2	8.0	3510	70	663	5920	62	1080
6	1480	2	8.0	3460	52	486	5930	80	1280
7	1470	2	7.9	3420	36	332	5240	58	821
8	1440	2	7.8	3500	42	397	6180	53	884
9	1430	2	7.7	6160	334	5560	6020	47	764
10	1430	3	12	4970	142	1910	17400	90	4770
11	1430	3	12	4500	39	474	19600	90	4830
12	2800	5	38	8160	136	3000	12100	60	1960
13	3800	13	133	5700	21	323	9690	41	1070
14	3400	14	129	4700	12	152	10500	31	879
15	3200	10	86	4570	10	123	13600	40	1550
16	3050	8	66	4280	12	139	15300	39	1610
17	2850	6	46	4240	16	183	11000	19	564
18	2800	10	76	9330	114	3060	8870	15	359
19	2780	13	98	9280	84	2100	7580	12	246
20	2740	16	118	6810	54	993	6660	16	288
21	2700	20	146	5610	37	560	6100	14	231
22	2660	25	180	6520	27	475	5780	16	250
23	2580	26	181	6230	18	303	8400	88	2300
24	2510	26	176	5910	12	191	14100	223	8490
25	2420	25	163	5310	10	143	13300	112	4020
26	2400	23	149	5520	11	164	10600	63	1800
27	2380	22	141	4990	17	229	9180	53	1310
28	2360	19	121	4620	20	249	9250	47	1170
29	2360	16	102	4430	22	263	8850	43	1030
30	2700	13	95	4630	19	239	7980	39	840
31	3200	10	86	--	--	--	7240	38	743
TOTAL	71860	--	2437.6	155910	--	40617	279510	--	45499

11-5230. KLAMATH RIVER AT ORLEANS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	6840	40	739	14900	420	16900	9910	49	1310
2	7240	40	782	13300	280	10100	9920	50	1340
3	7780	45	945	12500	175	5910	9630	51	1330
4	9350	54	1360	12200	110	3620	9170	51	1260
5	10400	60	1680	12200	65	2140	8930	51	1230
6	10800	62	1810	11700	40	1260	8870	55	1320
7	10700	63	1820	11000	40	1190	8450	60	1370
8	10300	63	1750	11000	65	1930	8060	45	979
9	9450	62	1580	15900	510	22100	7190	41	796
10	8900	62	1490	15900	545	23400	6970	48	903
11	11200	394	13200	20600	699	39900	6750	50	911
12	21300	756	46300	25600	940	65000	6710	40	725
13	48400	1380	182000	21300	785	45100	7330	44	871
14	32100	721	66000	18100	665	32500	7390	46	918
15	20800	320	18000	17200	545	25300	7320	53	1050
16	16100	135	5870	17100	440	20300	7050	58	1100
17	13300	65	2330	15800	345	14700	7960	72	1550
18	11500	30	932	14900	265	10700	10700	132	3810
19	12500	97	3600	14300	210	8110	10700	112	3240
20	25300	370	27100	13700	165	6100	10100	76	2070
21	70000	1120	212000	13000	135	4740	9750	66	1740
22	52000	1390	195000	12200	115	3790	10300	73	2030
23	39000	985	104000	11900	100	3210	11200	88	2660
24	35000	770	72800	11600	85	2660	11600	86	2690
25	31800	630	54100	11000	75	2230	12100	86	2810
26	23200	555	34800	10400	65	1830	14600	146	5760
27	19400	505	26500	9910	55	1470	17200	188	8730
28	18700	560	28600	9920	50	1340	20700	210	11700
29	23700	951	61000	--	--	--	24500	227	15000
30	22000	795	47200	--	--	--	28200	341	26200
31	20900	600	33900	--	--	--	31300	399	33600
TOTAL	659960	--	1249188	399130	--	377530	360560	--	141003

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	29100	303	23800	18000	102	4960	14300	62	2390
2	25400	252	17300	17400	98	4600	14500	55	2150
3	22700	237	14500	18200	96	4720	14600	48	1890
4	21300	246	14100	17600	95	4510	14500	44	1720
5	21300	290	16700	17000	95	4360	14900	42	1690
6	20400	286	15800	18700	104	5250	13600	41	1510
7	19200	246	12800	22600	153	9340	12600	40	1360
8	18200	216	10600	26400	240	17100	11000	40	1190
9	17500	208	9830	29000	264	20700	9980	41	1100
10	16600	203	9100	30800	316	26300	9650	42	1090
11	16200	207	9050	30400	335	27500	8930	43	1040
12	17900	213	10300	29900	342	27600	9040	45	1100
13	18700	207	10500	28700	294	22800	9120	46	1130
14	17500	179	8460	26500	267	19100	8820	47	1120
15	16200	141	6170	24000	244	15800	8870	48	1150
16	15300	122	5040	24500	240	15900	8550	50	1150
17	16000	144	6220	25900	250	17500	8190	51	1130
18	19200	190	9850	27500	292	21700	7620	52	1070
19	18700	172	8680	25500	221	15200	7500	51	1030
20	17600	170	8080	20900	193	10900	7160	51	986
21	18500	177	8840	19700	192	10200	6550	50	884
22	21900	234	13800	20600	193	10700	5890	48	763
23	24900	288	19400	21300	175	10100	5500	46	683
24	22400	188	11400	20700	160	8940	5280	34	485
25	18500	132	6590	18200	147	7220	5010	20	271
26	16300	97	4270	17800	139	6680	4840	14	183
27	15500	84	3520	17500	123	5810	4580	13	161
28	16700	112	5050	14400	107	4160	4490	13	158
29	19100	161	8300	13700	91	3370	4300	12	139
30	19300	115	5990	14700	80	3180	4130	12	134
31	--	--	--	15300	70	2890	--	--	--
TOTAL	578100	--	314040	673400	--	369090	264000	--	30857

KLAMATH RIVER BASIN

11-5230. KLAMATH RIVER AT ORLEANS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	4000	12	130	2300	13	81	1650	8	36
2	3870	14	146	2460	13	86	1960	13	69
3	3690	16	159	2420	13	85	1980	18	96
4	3570	17	164	2400	13	84	1980	15	80
5	3450	17	158	2390	12	77	1950	13	68
6	3340	17	153	2350	12	76	1890	13	66
7	3220	18	156	2270	12	74	1870	13	66
8	3150	18	153	2220	12	72	1870	10	50
9	3100	18	151	2160	12	70	1860	7	35
10	3060	19	157	2110	12	68	1840	11	55
11	3000	19	154	2050	12	66	1800	16	78
12	2930	20	158	2010	11	60	1790	12	58
13	2820	20	152	1980	11	59	1790	8	39
14	2750	20	149	1940	11	58	1790	11	53
15	2690	19	138	1900	11	56	1800	14	68
16	2620	19	134	1830	11	54	1840	9	45
17	2570	18	125	1780	11	53	1900	4	21
18	2530	17	116	1710	10	46	1970	4	21
19	2500	17	115	1650	10	45	2040	4	22
20	2480	16	107	1600	10	43	2120	4	23
21	2420	15	98	1560	10	42	2200	4	24
22	2370	15	96	1540	10	42	2290	4	25
23	2330	14	88	1520	10	41	2340	4	25
24	2460	14	93	1490	9	36	2320	4	25
25	2430	14	92	1470	9	36	2300	4	25
26	2460	14	93	1450	9	35	2280	4	25
27	2440	14	92	1450	9	35	2260	4	24
28	2330	14	88	1450	9	35	2220	4	24
29	2270	14	86	1460	9	35	2200	4	24
30	2210	13	78	1460	8	32	1980	4	21
31	2160	13	76	1450	8	31	--	--	--
TOTAL	87220	--	3855	57830	--	1713	60080	--	1291
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									3647560
TOTAL LOAD FOR YEAR (TONS)									2577120.6

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
FEB 4, 1969	1430	5	12100	105	3430	1	14	26	36	40	53	61	76	89	99	100	SBWC
FEB 26.....	1300	6	10500	59	1670	--	4	19	30	42	50	60	71	87	100	--	SBWC

11-5255. TRINITY RIVER AT LEWISTON, CALIF.

LOCATION.--Lat 40°43'10", long 122°48'09", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.33 N., R.8 W., Trinity County, at gaging station on right bank, 400 ft upstream from Deadwood Creek, and 0.8 mile northeast of Lewiston.

DRAINAGE AREA.--728 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1953 to September 1969.

Water temperatures: September 1951 to September 1955, October 1957 to September 1958, July 1959 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 13°C on several days in May; minimum, 4°C on many days during

January and February.

EXTREMES, 1951-55, 1957-58, 1959-69.--Water temperatures: Maximum (1951-55, 1957-58, 1959-63, 1964-69), 26°C

July 20, 21, 28, 29, 1960; minimum, 1°C on several days in January 1952.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV.												
11...	1010	252	8	10.8	--	--	7.2	--	50	0	--	8.4
JAN.												
20...	0930	177	5	12.2	--	--	3.1	--	54	0	--	1.6
MAR.												
03...	0810	164	6	12.2	--	--	3.2	--	58	0	--	1.6
MAY												
12...	0840	170	13	11.4	5.5	7.4	2.4	.2	54	0	4.1	2.5
JULY												
14...	0815	170	9	11.1	--	--	2.5	--	52	0	--	1.7
SEPT.												
08...	0810	223	8	10.6	5.8	7.4	2.2	.1	53	0	.6	1.8
30...	1230	200	11	10.5	--	--	2.2	--	48	0	--	1.5

DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV.												
11...	.1	.07	60	--	--	41	0	28	.5	41	7.8	87
JAN.												
20...	.4	.00	10	--	--	48	4	12	.2	44	7.8	98
MAR.												
03...	.1	.00	0	--	--	57	9	11	.2	48	7.7	106
MAY												
12...	.1	.07	10	42	.06	44	0	11	.2	44	7.6	96
JULY												
14...	.1	--	0	--	--	45	45	11	.2	0	7.7	103
SEPT.												
08...	.0	--	0	62	.08	45	2	10	.1	43	7.6	93
30...	.0	.02	50	--	--	43	4	10	.1	39	7.5	86

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE	
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER	MAXIMUM	11	11	11	11	11	11	11	11	11	11	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	
	MINIMUM	10	10	10	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
NOVEMBER	MAXIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	9	
	MINIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	9	
DECEMBER	MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	7	
	MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6	7	
JANUARY	MAXIMUM	6	6	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	5	
	MINIMUM	6	6	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	5		
FEBRUARY	MAXIMUM	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	6	6	6	6	6	5	6	6	6	--	--	--	5	
	MINIMUM	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	6	6	6	6	4	5	5	6	5	--	--	4	
MARCH	MAXIMUM	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	8	8	8	8	9	9	9	9	9	7	
	MINIMUM	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	8	6	
APRIL	MAXIMUM	9	8	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	11	11	11	10	11	11	11	11	11	11	--	--	10	
	MINIMUM	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	--	9	
MAY	MAXIMUM	11	11	10	11	11	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	12	12	11	10	11	9	10	10	10	11	11	12
	MINIMUM	9	10	10	10	10	10	11	10	11	11	12	12	12	11	12	12	12	12	12	11	11	10	10	9	9	9	9	9	9	9	9	9	10
JUNE	MAXIMUM	9	10	10	11	11	11	11	11	11	10	10	10	9	9	9	10	11	11	10	9	9	9	9	9	9	9	9	9	9	9	--	--	10
	MINIMUM	9	9	10	10	11	11	11	11	11	10	10	10	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	--	9
JULY	MAXIMUM	9	9	9	9	9	10	10	10	10	10	10	9	9	10	10	9	10	9	9	9	9	10	10	11	9	9	8	8	8	9	9	9	9
	MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
AUGUST	MAXIMUM	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10
	MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
SEPTEMBER	MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	--	9	
	MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	8

11-5270. TRINITY RIVER NEAR BURNT RANCH, CALIF.

LOCATION.--Lat 40°47'20", long 123°26'20", in S $\frac{1}{2}$ sec.19, T.5 N., R.7 E., Trinity County, temperature recorder at gaging station on left bank, 500 ft upstream from Cedar Flat Creek, 700 ft upstream from highway bridge at Cedar Flat, and 2.3 miles southeast of town of Burnt Ranch.

DRAINAGE AREA.--1,439 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1966.

Water temperatures: October 1961 to September 1964, October 1966 to September 1967, October 1968 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 21°C Aug. 22; minimum, 4°C Jan. 29, 30.

EXTREMES, 1962-64, 1966-67, 1968-69.--Water temperatures: Maximum, 27°C Aug. 17-19, 24, 1967; minimum (1962-63, 1966-67, 1968-69), 1°C Dec. 28, 29, 1966.

REMARKS.--Recorder stopped Oct. 1-10, Dec. 15 to Jan. 8, Feb. 3-6.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	14	14	13	13	13	13	14	14	13	13	13	13	13	14	14	14	13	13	13	12	13	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	14	13	12	11	11	12	12	12	12	12	12	12	12	12	12	12	12	11	12	12	12	--	
NOVEMBER																																		
MAXIMUM	12	12	12	12	12	11	12	13	13	13	13	12	10	8	8	9	9	10	11	11	10	11	11	11	10	9	9	9	8	9	8	--	11	
MINIMUM	11	11	11	11	11	11	11	12	12	12	12	12	10	8	8	8	8	9	10	10	10	10	11	10	9	8	8	8	8	7	7	--	10	
DECEMBER																																		
MAXIMUM	7	7	8	7	8	8	8	9	10	9	7	7	7	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	7	7	7	7	7	7	7	8	9	7	6	6	6	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JANUARY																																		
MAXIMUM	--	--	--	--	--	--	--	--	7	7	7	6	6	6	7	7	6	6	6	6	7	8	7	7	7	7	7	6	6	5	5	6	--	
MINIMUM	--	--	--	--	--	--	--	--	7	6	5	5	6	6	6	6	5	5	6	6	7	7	7	6	6	7	6	6	5	4	4	5	--	
FEBRUARY																																		
MAXIMUM	6	6	--	--	--	--	7	7	8	9	8	7	7	7	7	7	8	8	8	7	7	7	7	7	7	7	7	7	7	--	--	7		
MINIMUM	5	5	--	--	--	--	7	7	7	7	7	7	6	6	6	6	7	7	7	7	7	6	6	6	6	6	6	7	6	--	--	6		
MARCH																																		
MAXIMUM	8	7	7	8	8	8	8	8	8	8	8	8	9	9	9	10	9	9	9	10	8	11	11	12	11	11	11	12	12	11	12	10	9	
MINIMUM	6	6	6	6	7	7	6	6	6	6	5	5	7	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
APRIL																																		
MAXIMUM	11	8	9	9	9	10	12	11	11	12	13	10	10	10	11	12	10	11	11	13	12	11	9	9	11	12	13	11	11	10	--	11		
MINIMUM	7	7	6	8	8	7	7	7	8	8	8	8	8	7	7	8	8	8	8	8	8	8	9	8	7	7	7	8	8	8	7	--	8	
MAY																																		
MAXIMUM	9	10	8	12	13	13	13	12	12	12	12	12	10	11	11	12	12	11	11	12	12	12	12	12	10	9	10	11	11	9	12	11		
MINIMUM	6	6	7	6	7	8	8	7	7	7	7	7	7	7	7	7	7	8	8	7	8	8	8	9	9	7	6	6	6	8	8	7		
JUNE																																		
MAXIMUM	12	15	15	15	14	14	13	13	12	13	14	15	15	15	15	15	15	15	15	13	15	15	15	15	15	14	14	13	14	15	16	--	14	
MINIMUM	8	10	11	12	12	12	12	11	11	10	11	11	12	12	13	12	13	13	13	12	13	12	13	13	13	12	12	12	11	11	12	--	12	
JULY																																		
MAXIMUM	16	15	15	15	15	16	16	17	17	16	17	18	18	18	18	18	18	18	19	19	19	20	19	18	19	18	18	18	18	18	19	18		
MINIMUM	12	13	13	12	13	13	13	14	14	14	14	14	15	15	15	15	15	15	14	15	15	16	16	16	16	16	16	15	15	15	15	16	15	
AUGUST																																		
MAXIMUM	19	19	19	18	18	18	18	19	18	19	18	18	18	18	18	18	19	19	19	20	20	21	20	19	19	19	19	18	18	19	19	20	19	
MINIMUM	15	15	15	15	15	15	15	16	16	17	16	15	15	15	14	15	16	16	16	17	17	17	18	18	17	16	16	16	16	15	16	16	16	
SEPTEMBER																																		
MAXIMUM	20	20	19	19	20	20	19	19	20	20	20	19	19	19	18	18	18	18	18	17	17	18	18	18	18	18	18	18	18	18	17	--	19	
MINIMUM	16	16	16	16	16	16	17	17	17	17	17	17	16	15	15	15	15	15	16	16	15	15	15	16	16	16	16	16	15	15	15	--	16	

11-5287. SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF.

LOCATION.--Lat 40°39'00", long 123°29'35", in NW¼SW¼ sec.10, T.3 N., R.6 E., Trinity County, Trinity National Forest, at gaging station 0.3 mile downstream from Big Creek, 3.0 miles northeast of Hyampom, and 3.5 miles downstream from Hayfork Creek.

DRAINAGE AREA.--764 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

Sediment records: October 1966 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 27°C July 21-23, 25, 26; minimum, freezing point Dec. 22-24. Sediment concentrations: Maximum daily, 3,570 mg/l Jan. 21; minimum daily, 1 mg/l on several days during September.

Sediment loads: Maximum daily, 326,000 tons Jan. 21; minimum daily, 0.41 ton Sept. 30.

EXTREMES, 1965-69.--Water temperatures: Maximum, 29°C June 30, July 1, 3, 1967, Aug. 1, 2, 1968; minimum, freezing point on several days in 1965, 1967-68.

Sediment concentrations (1966-69): Maximum daily, 3,890 mg/l Jan. 29, 1967; minimum daily, 1 mg/l on several days in 1967-69.

Sediment loads (1966-69): Maximum daily, 326,000 tons Jan. 21, 1969; minimum daily, 0.28 ton July 29, 1968. REMARKS.--Temperature recorder stopped Mar. 10-15. Where no maximum or minimum is shown, temperature is once-daily reading.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	21	22	22	20	20	19	19	19	18	19	16	15	16	14	16	17	17	17	17	17	16	17	17	17	17	17	17	16	14	14	14	17		
MINIMUM	14	14	14	14	15	14	13	12	11	13	14	13	12	12	12	13	13	12	12	12	11	12	12	12	12	12	11	11	17	12	12	13		
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	12	12	13	12	13	11	13	14	16	15	14	11	9	8	6	7	8	8	9	9	9	9	9	9	8	7	7	7	6	6	--	10		
MINIMUM	11	11	11	10	11	10	11	13	13	12	11	9	8	4	4	6	7	8	8	9	8	8	9	8	7	7	7	6	6	6	--	9		
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	6	5	6	6	7	7	6	7	8	8	6	5	4	4	5	5	6	5	4	3	2	1	0	2	2	3	3	4	4	4	3	5		
MINIMUM	5	5	5	5	6	5	5	6	6	6	4	4	3	3	4	4	5	4	3	2	1	0	0	0	2	2	2	2	3	2	2	3		
JANUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	4	5	5	5	5	5	4	4	2	4	4	5	5	5	5	4	4	4	4	6	6	5	4	4	6	6	3	3	2	3	3	4		
MINIMUM	3	3	3	3	3	3	3	2	1	2	3	3	4	5	4	4	3	3	3	4	5	4	3	3	4	3	3	2	1	2	2	3		
FEBRUARY.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	4	5	5	4	5	5	6	5	6	6	6	6	5	5	5	6	5	6	6	6	5	5	4	4	4	4	4	4	--	--	--	5		
MINIMUM	3	4	3	3	3	3	4	5	5	5	4	4	3	3	4	4	5	5	5	4	4	4	4	4	4	3	3	3	--	--	--	4		
MARCH....	--	--	--	--	--	--	--	--	--	--	7	8	8	8	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	4	4	4	6	7	7	7	7	6	--	--	--	--	--	--	--	9	7	8	7	6	8	9	9	8	8	9	10	10	10	9	8		
MINIMUM	3	3	4	4	5	5	5	4	4	--	--	--	--	--	--	--	4	6	6	6	5	5	6	5	4	4	5	6	6	7	7	7		
APRIL....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	9	8	8	9	8	8	8	9	9	9	9	8	8	8	10	10	9	10	10	10	11	11	11	9	8	9	11	10	9	9	--	9		
MINIMUM	6	6	5	6	7	6	6	6	7	6	6	6	5	6	6	6	7	7	7	7	8	8	8	5	5	6	6	7	6	5	--	6		
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	8	10	8	10	12	13	13	14	14	14	14	14	13	13	14	14	15	14	14	15	16	17	17	16	16	14	14	16	17	19	19	14		
MINIMUM	5	6	5	4	7	10	9	9	10	10	9	10	10	9	8	9	10	10	9	10	10	11	11	12	11	11	10	10	11	13	13	9		
JUNE.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	19	20	21	21	21	20	18	17	17	17	18	21	22	22	22	22	21	21	18	22	22	22	20	20	20	19	19	20	21	22	--	20		
MINIMUM	13	14	14	15	15	15	14	14	14	14	14	14	14	14	15	15	16	17	17	16	15	16	16	15	15	14	13	13	13	14	--	15		
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	22	22	22	22	22	23	23	25	25	25	24	24	26	26	25	26	26	25	26	26	27	27	27	26	27	27	25	26	26	26	25	25		
MINIMUM	14	15	15	15	15	15	15	16	17	17	16	16	17	17	17	16	17	17	17	18	18	19	20	20	19	19	18	17	18	17	17	17		
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	24	24	25	23	23	24	23	25	25	24	23	23	23	23	23	23	24	24	24	24	25	26	26	26	24	23	23	23	22	23	24	25		
MINIMUM	16	17	16	16	15	15	15	16	17	17	16	16	15	15	15	15	15	16	16	16	17	17	18	16	15	15	15	15	15	15	15	16		
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAXIMUM	25	23	23	24	24	25	23	24	24	24	24	24	24	23	23	23	23	23	19	18	20	21	22	20	22	22	22	21	22	20	20	--	22	
MINIMUM	15	16	15	15	15	15	17	16	17	16	16	16	15	14	14	15	15	16	16	15	15	14	15	16	15	15	15	15	14	15	14	--	15	

KLAMATH RIVER BASIN

11-5287. SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	62	3	.50	130	4	1.4	335	25	23
2	62	5	.84	295	172	159	320	25	22
3	62	8	1.3	450	110	134	310	25	21
4	62	8	1.3	260	27	19	305	30	25
5	62	6	1.0	218	10	5.9	295	50	40
6	62	5	.84	174	10	4.7	330	87	78
7	62	4	.67	161	9	3.9	370	160	160
8	62	4	.67	154	8	3.3	580	257	402
9	62	4	.67	154	8	3.3	700	215	406
10	62	5	.84	154	7	2.9	6000	1520	24600
11	73	6	1.2	161	7	3.0	4600	1320	16400
12	144	7	2.7	274	32	24	3000	810	6560
13	186	6	3.0	289	45	35	2100	650	3690
14	152	5	2.1	244	20	13	2400	720	4670
15	144	4	1.6	252	8	5.4	5500	1410	20900
16	126	3	1.0	246	9	6.0	3700	495	4950
17	113	3	.92	258	15	10	2580	225	1570
18	108	3	.87	420	30	34	2150	165	958
19	104	3	.84	690	40	75	1980	100	535
20	102	3	.83	500	42	57	1750	55	260
21	102	3	.83	390	35	37	1620	45	197
22	100	3	.81	330	25	22	1530	43	178
23	99	4	1.1	300	18	15	1920	76	541
24	99	5	1.3	300	13	11	3920	187	2020
25	99	5	1.3	440	10	12	3480	121	1140
26	99	5	1.3	360	12	12	2600	89	625
27	95	4	1.0	315	17	14	2200	70	416
28	95	4	1.0	280	23	17	2110	60	342
29	97	4	1.0	265	25	18	2060	60	334
30	142	5	1.9	300	25	20	1920	57	295
31	152	5	2.1	--	--	--	1800	50	243
TOTAL	3051	--	37.33	8764	--	777.8	64465	--	92601

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	1750	40	189	2700	600	4370	2630	90	639
2	1750	36	170	2480	550	3680	2580	90	627
3	1790	36	174	2330	520	3270	2570	92	638
4	2000	45	243	2270	485	2970	2400	90	583
5	2350	64	406	2310	470	2930	2340	92	581
6	2630	280	1990	2240	450	2720	2350	90	571
7	2710	600	4390	2070	440	2460	2290	88	544
8	2690	740	5370	2220	562	3630	2170	90	527
9	2460	770	5110	4510	1550	18900	2110	92	524
10	2270	670	4110	4460	1280	15500	2040	94	518
11	2990	929	8820	10700	1990	57900	1950	97	511
12	22900	3430	234000	10400	1130	31700	1890	102	521
13	33800	2930	275000	6300	660	11200	1840	107	532
14	13600	1600	61600	4950	460	6150	1820	112	550
15	7420	900	18000	4810	320	4160	1860	116	583
16	5120	550	7600	4610	220	2740	2010	124	673
17	3790	390	3990	4020	165	1790	2530	158	1080
18	3360	375	3400	3740	150	1510	3610	196	1910
19	8780	1500	46800	3540	130	1240	3470	175	1640
20	28600	3540	290000	3340	118	1060	3340	148	1330
21	32500	3570	326000	3080	115	956	3620	126	1230
22	15500	1830	79300	2830	113	863	3830	115	1190
23	10300	950	26400	2780	112	841	4130	113	1260
24	7540	540	11000	2720	110	808	4200	113	1280
25	7440	400	8040	2650	108	773	4290	115	1330
26	12800	1980	70500	2410	104	677	4590	120	3810
27	7480	1630	32900	2410	100	651	5390	135	1960
28	5170	1100	15400	2720	93	683	6380	160	2760
29	3960	860	9200	--	--	--	7230	200	3900
30	3290	725	6440	--	--	--	7870	265	5630
31	2830	660	5040	--	--	--	7540	265	5390
TOTAL	261576	--	1561582	105600	--	186132	106870	--	44822

11-5287. SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	6480	210	3670	3250	56	491	1160	22	69
2	5670	146	2240	3120	53	446	1120	20	60
3	4890	98	1290	2910	50	393	1080	29	85
4	4540	72	883	2570	48	333	1040	15	42
5	5390	218	3170	2360	47	299	997	15	40
6	4760	176	2260	2590	49	343	937	14	35
7	4200	115	1300	2840	58	445	880	14	33
8	4070	106	1160	2980	65	523	822	13	29
9	4190	112	1270	3040	67	550	790	13	28
10	4370	118	1390	3170	64	548	765	12	25
11	4560	127	1560	3140	61	517	730	10	20
12	5140	130	1800	3080	58	482	705	8	15
13	4780	113	1460	2940	56	445	652	7	12
14	4200	93	1050	2670	51	368	616	5	8.3
15	3860	81	844	2360	50	319	581	5	7.8
16	3890	79	830	2190	47	278	550	6	8.9
17	4140	87	972	2110	44	251	520	6	8.4
18	4370	97	1140	2060	41	228	508	6	8.2
19	4130	103	1150	1930	38	198	648	7	12
20	4070	106	1160	1800	35	170	643	8	14
21	4200	103	1170	1650	32	143	531	9	13
22	4640	99	1240	1610	29	126	474	8	10
23	4930	93	1240	1560	27	114	446	8	9.6
24	4160	86	966	1530	25	103	422	7	8.0
25	3510	80	758	1470	24	95	396	6	6.4
26	3270	74	653	1450	23	90	382	6	6.2
27	3320	70	627	1440	25	97	368	6	6.0
28	3540	66	631	1360	26	95	351	3	2.8
29	3710	63	631	1310	27	95	347	2	1.9
30	3430	59	546	1270	24	82	340	2	1.8
31	--	--	--	1230	26	86	--	--	--
TOTAL	130410	--	39061	68990	--	8753	19801	--	626.3

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	328	2	1.8	176	7	3.3	106	8	2.3
2	319	2	1.7	173	10	4.7	105	7	2.0
3	307	2	1.7	169	13	5.9	103	7	1.9
4	304	3	2.5	164	13	5.8	100	7	1.9
5	301	3	2.4	160	12	5.2	100	8	2.2
6	290	3	2.3	159	12	5.2	100	9	2.4
7	277	2	1.5	155	11	4.6	100	9	2.4
8	274	2	1.5	154	11	4.6	99	9	2.4
9	274	4	3.0	151	10	4.1	99	9	2.4
10	274	4	3.0	151	10	4.1	100	8	2.2
11	269	3	2.2	148	10	4.0	98	8	2.1
12	252	4	2.7	144	10	3.9	97	7	1.8
13	241	5	3.3	142	10	3.8	96	7	1.8
14	238	2	1.3	138	12	4.5	93	6	1.5
15	227	5	3.1	137	15	5.5	91	5	1.2
16	225	6	3.6	135	20	7.3	90	5	1.2
17	225	4	2.4	132	16	5.7	143	4	1.5
18	218	3	1.8	132	12	4.3	156	3	1.3
19	215	2	1.2	129	9	3.1	169	3	1.4
20	216	2	1.2	125	9	3.0	193	3	1.6
21	218	2	1.2	124	9	3.0	193	3	1.6
22	217	3	1.8	123	9	3.0	150	2	.81
23	214	4	2.3	123	9	3.0	158	2	.85
24	212	4	2.3	118	9	2.9	170	1	.46
25	206	5	2.8	112	8	2.4	184	1	.50
26	204	5	2.8	111	8	2.4	190	1	.51
27	195	4	2.1	109	8	2.4	190	1	.51
28	191	9	4.6	108	8	2.3	175	1	.47
29	189	9	4.6	108	8	2.3	160	1	.43
30	184	8	4.0	108	8	2.3	152	1	.41
31	180	8	3.9	108	8	2.3	--	--	--
TOTAL	7484	--	76.6	4226	--	120.9	3960	--	44.05

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)785191
1934633.98

KLAMATH RIVER BASIN

11-5287. SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF.--Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; V, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
DEC 10, 1968	0800	8	D6000	368	5960	--	--	--	--	--	72	80	86	95	100	--	V	
DEC 10.....	1700	7	D6000	2260	36600	15	23	34	47	61	73	85	94	98	100	--	VPWC	
DEC 15.....	1500	5	D5500	1480	22000	7	12	17	22	28	36	48	67	90	100	--	VBWC	
DEC 16.....	1545	5	3680	332	3300	8	15	21	28	33	40	47	63	99	100	--	VBWC	
JAN 12, 1969	1000	3	21100	3190	182000	7	8	14	19	23	30	39	56	98	100	--	VPWC	
JAN 12.....	1500	4	28400	4230	324000	4	6	10	14	17	21	26	40	99	100	--	VPWC	
JAN 13.....	1600	5	31300	2570	217000	10	16	26	37	49	59	74	91	99	100	--	VPWC	
JAN 20.....	0800	4	24100	2660	173000	9	14	23	31	38	49	63	85	96	100	--	VPWC	
MAR 4.....	1000	5	2400	90	583	--	--	10	17	22	32	37	45	74	99	100	--	VBWC

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEM- PERA- TURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
MAR 28, 1969	0900	7	5	6060	1	3	7	10	11	15	19	31	56	87	100	S	

D Daily mean discharge.

11-5300. TRINITY RIVER AT HOOPA, CALIF.

LOCATION.--Lat 41°03'00", long 123°40'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.25, T.8 N., R.4 E., Humboldt County, Hoopa Valley Indian Reservation, at gaging station at Hoopa 0.4 mile upstream from Supply Creek.

DRAINAGE AREA.--2,865 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: November 1956 to September 1969.

Sediment records: November 1956 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 24°C on several days during July and August; minimum, 2°C Dec. 22-24.

Sediment concentrations: Maximum daily, 6,000 mg/l Jan. 21; minimum daily, 1 mg/l on several days during October and September.

Sediment loads: Maximum daily, 880,000 tons Jan. 21; minimum daily, 1.1 ton Sept. 29, 30.

EXTREMES, 1956-69.--Water temperatures (1963-69): Maximum (1963-66, 1968-69), 27°C July 16, 1955; minimum (1964-69), 2°C Dec. 17, 1967, Dec. 22-24, 1968.

Sediment concentrations: Maximum daily, 20,400 mg/l Dec. 23, 1964; minimum daily, 1 mg/l on many days in 1957-64, 1968, and 1969.

Sediment loads: Maximum daily, 8,900,000 tons Dec. 23, 1964; minimum daily, 1.0 ton on several days in 1960.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Where no maximum or minimum is shown, temperature is once-daily reading. Measurement of suspended sediment made at bridge on State Highway 96, 1.0 mile downstream from gaging station. No appreciable inflow between sampling point and gaging station except during periods of heavy runoff.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV. 11...	1315	1530	13	10.8	--	--	3.5	--	80	0	--	3.8
DEC. 02...	1400	1830	7	12.6	--	--	4.0	--	93	0	--	3.7
FEB. 03...	0845	9970	6	12.4	--	--	2.7	--	93	0	--	2.0
MAR. 03...	1020	9250	7	13.0	--	--	2.6	--	96	0	--	1.9
APR. 07...	1120	10900	8	12.1	--	--	2.3	--	78	0	--	1.5
MAY 12...	1110	11800	13	11.2	12	3.4	1.6	.6	51	0	4.8	1.1
JUNE 09...	1030	4230	15	10.2	--	--	2.3	--	65	0	--	2.5
JULY 14...	1115	1240	20	9.5	--	--	3.2	--	92	0	--	3.0
AUG. 04...	1040	674	20	9.5	--	--	4.2	--	98	0	--	3.1
SEPT. 08...	1120	450	22	11.0	28	7.8	4.4	.6	112	0	9.9	4.3

DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
NOV. 11...	.0	.08	0	--	--	77	11	9	.2	66	8.0	164
DEC. 02...	.2	.07	0	--	--	90	14	9	.2	76	8.3	188
FEB. 03...	.2	.09	0	--	--	93	17	6	.1	76	8.2	175
MAR. 03...	.1	.04	0	--	--	92	13	6	.1	79	7.7	173
APR. 07...	.3	.83	0	--	--	67	3	7	.1	.64	7.9	139
MAY 12...	.0	.72	10	52	.07	44	2	7	.1	42	7.7	92
JUNE 09...	.1	.20	30	--	--	55	2	8	.1	53	7.6	120
JULY 14...	.1	--	0	--	--	80	5	8	.2	75	8.1	167
AUG. 04...	.1	--	20	--	--	93	13	9	.2	80	8.1	198
SEPT. 08...	.0	--	0	94	.13	102	10	9	.2	92	7.7	215

KLAMATH RIVER BASIN

11-5300. TRINITY RIVER AT HOOPA, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	16	17	17	16	15	15	14	13	13	14	14	13	13	12	12	12	13	13	12	13	12	12	12	12	12	13	12	12	12	11	11	13	
MINIMUM	14	14	14	14	14	13	12	11	11	12	13	12	11	10	10	11	11	11	11	11	10	10	10	10	11	11	11	11	11	10	10	11	
NOVEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	11	11	11	10	10	10	10	11	12	11	13	10	9	8	6	7	8	8	8	8	8	8	8	8	7	7	7	6	6	6	--	9	
MINIMUM	9	10	10	9	9	9	9	10	10	10	10	9	8	6	5	6	7	7	7	7	7	8	8	8	6	6	6	6	5	5	--	8	
DECEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	5	7	5	6	7	6	6	7	7	8	7	6	5	5	6	6	6	6	6	5	4	4	3	4	4	5	5	5	5	5	5	6	
MINIMUM	5	5	5	5	6	6	5	6	6	7	5	5	5	5	5	5	6	6	5	4	4	2	2	2	4	4	5	5	5	5	4	5	
JANUARY...	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7	--	--	6	6	8	--	--	--	--	6	6	5	5	6	5	5	4	5
MAXIMUM	5	6	6	6	5	6	6	5	4	5	5	5	5	--	--	6	6	8	--	--	--	--	--	6	6	5	5	6	5	5	4	5	
MINIMUM	5	5	5	5	5	5	5	4	4	4	5	5	5	--	--	6	6	6	--	--	--	--	--	6	5	5	5	5	5	5	4	5	
FEBRUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	5	5	6	6	5	5	5	5	5	6	6	6	5	5	5	6	6	6	7	6	6	5	5	5	5	6	6	6	--	--	6		
MINIMUM	4	5	5	5	5	5	5	5	5	5	5	6	5	5	5	5	5	5	6	5	5	4	5	5	4	4	5	6	--	--	5		
MARCH....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	7	6	7	7	7	7	7	7	7	7	7	8	8	7	8	7	8	8	7	7	8	8	8	8	8	8	9	9	9	9	9	8	
MINIMUM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	6	7	7	7	7	7	7	7	8	8	8	8	7		
APRIL.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	8	8	8	8	8	8	9	9	9	10	10	10	9	9	10	10	10	10	10	10	10	10	9	8	8	10	10	10	10	10	--	9	
MINIMUM	7	7	7	7	7	8	8	8	8	8	9	9	8	8	8	9	9	8	9	9	9	9	9	9	7	7	7	8	9	9	8	8	
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	10	10	10	10	11	12	12	12	12	12	12	13	12	12	12	13	14	13	13	14	14	15	15	14	14	13	14	15	16	17	13		
MINIMUM	8	8	9	8	9	10	11	11	11	11	11	11	11	11	11	11	12	11	11	11	11	12	13	13	13	12	11	11	11	12	14	11	
JUNE.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	17	17	17	17	17	16	15	14	15	14	15	16	17	17	18	19	18	18	17	18	18	18	17	18	17	17	15	17	18	18	--	17	
MINIMUM	14	14	14	14	14	14	14	14	13	13	13	13	14	15	15	16	16	16	16	15	15	16	16	15	15	14	14	13	14	15	--	14	
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAXIMUM	19	19	19	19	19	19	19	20	20	20	20	20	19	20	19	19	19	20	20	21	21	22	--	--	--	--	--	--	--	--	--	--	
MINIMUM	16	16	16	16	17	17	17	17	18	18	18	18	17	17	17	17	17	18	19	19	20	20	--	--	--	--	--	--	--	--	--	--	
AUGUST...	--	23	--	22	--	23	--	23	--	24	--	24	--	24	--	24	--	24	--	24	--	24	--	23	--	--	23	--	22	--	22	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SEPTEMBER	22	--	21	--	21	--	--	21	--	22	--	21	--	--	20	--	20	--	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	456	1	1.2	946	7	18	1980	85	454
2	457	1	1.2	1290	80	279	1870	75	379
3	460	2	2.5	1820	195	958	1640	58	257
4	457	2	2.5	1490	70	282	1510	67	273
5	462	1	1.2	1290	30	104	1970	105	558
6	468	1	1.3	1230	30	100	2200	115	683
7	469	1	1.3	1230	34	113	2030	80	438
8	468	1	1.3	1240	18	60	2300	75	466
9	464	1	1.3	2010	173	1090	2580	55	383
10	465	2	2.5	2150	157	968	10700	749	32400
11	516	4	5.6	1740	141	714	11100	624	20000
12	890	7	17	2940	307	2490	8660	224	5390
13	1170	15	47	2620	163	1170	6710	350	6510
14	1050	22	62	2020	98	534	7840	800	16900
15	994	15	40	2150	120	697	13600	1400	57800
16	858	10	23	1920	58	301	13000	1120	40400
17	826	7	16	1960	70	370	8990	680	16500
18	834	5	11	4020	610	7640	6730	490	8900
19	794	3	6.4	5100	425	5850	5710	400	6170
20	834	3	6.8	3020	220	1790	3840	390	4040
21	834	3	6.8	2140	133	768	3700	342	3420
22	794	4	8.6	2030	87	477	3760	345	3500
23	746	5	10	1900	75	385	5830	692	11500
24	730	4	7.9	2120	105	635	10900	1260	37400
25	714	3	5.8	3190	293	2540	11000	1030	30600
26	698	3	5.7	2520	160	1090	8520	500	11500
27	690	3	5.6	2040	86	474	7040	220	4180
28	674	4	7.3	1760	55	261	6570	140	2480
29	714	4	7.7	1620	67	293	6260	97	1640
30	922	5	12	1750	92	435	5560	100	1500
31	1070	5	14	--	--	--	4820	98	1280
TOTAL	21978	--	342.5	63256	--	32886	188920	--	327901

11-5300. TRINITY RIVER AT HOOPA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	4650	73	917	11700	850	26900	9180	600	14900
2	4620	72	898	10600	1050	30100	8620	500	11600
3	4880	56	738	9880	1150	30700	9110	620	15300
4	5740	78	1210	9440	1310	33400	8300	400	8960
5	7120	102	1960	9490	850	21800	8040	300	6510
6	8140	223	4900	9180	750	18600	7980	400	8620
7	8580	210	4860	8360	900	20300	7660	350	7240
8	8440	160	3650	8240	750	16700	7420	450	9020
9	7400	118	2360	13600	1550	56900	7160	350	6770
10	6950	92	1730	13800	1450	54000	6950	500	9380
11	8100	340	7440	30000	3600	292000	6570	520	9220
12	23300	2380	180000	23500	1840	117000	6370	300	5160
13	56100	4860	748000	20000	1320	71300	6250	390	6580
14	41200	3820	430000	17500	1300	61400	6170	380	6330
15	27500	2920	217000	15300	1400	57800	6260	510	8620
16	19600	2250	119000	14000	1100	41600	6860	490	9080
17	14300	1900	73400	12500	1120	37800	8060	500	10900
18	11500	1640	50900	13400	1100	39800	11100	1520	45600
19	11500	2330	72300	12000	1020	33000	11500	1050	32600
20	28000	5490	450000	11500	1150	35700	10800	680	19800
21	54300	6000	880000	10600	1020	29200	11100	650	19500
22	34700	3140	304000	9800	700	18500	11700	720	22700
23	24900	2180	157000	9540	620	16000	12800	700	24200
24	21900	2300	136000	9200	600	14900	13300	620	22300
25	20100	1880	102000	9060	600	14700	13600	650	23900
26	27700	4040	303000	8160	450	9910	14100	700	26600
27	23900	3000	194000	7780	280	5880	15700	880	37300
28	19900	2150	116000	8870	580	13900	18100	1120	54700
29	16500	1650	73500	--	--	--	20200	1400	76400
30	14300	1800	69500	--	--	--	22500	1600	97200
31	12200	1200	39500	--	--	--	23000	1450	90000
TOTAL	578020	--	4745763	347000	--	1219790	336460	--	746990

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	20900	940	53000	8040	100	2170	4190	38	430
2	17900	800	38700	7520	94	1910	4630	40	500
3	15600	700	29500	7160	76	1470	5020	33	447
4	12800	610	21100	6750	80	1460	5440	36	529
5	13500	692	25200	6570	108	1920	5620	36	546
6	12500	658	22200	7360	123	2440	5420	33	483
7	10700	570	16500	9060	128	3130	5080	31	425
8	9900	545	14600	10200	160	4410	4660	28	352
9	9880	490	13100	11100	175	5240	4260	26	299
10	10200	465	12800	11800	220	7010	4020	18	195
11	10600	440	12600	11900	248	7970	3810	13	134
12	12200	578	19000	11400	210	6460	3560	13	125
13	12400	570	19100	10700	185	5340	3440	14	130
14	10900	410	12100	9540	158	4070	3260	14	123
15	9590	340	8800	8040	132	2870	3070	16	133
16	9230	350	8720	7480	115	2320	3010	18	146
17	9850	349	9280	7540	105	2140	2750	15	111
18	11100	530	15900	7760	105	2200	2560	12	83
19	10500	535	15200	6880	105	1950	3110	30	252
20	10000	510	13800	6080	97	1590	3280	50	443
21	10400	570	16000	5850	70	1110	2700	40	292
22	12000	540	17500	6030	65	1060	2430	13	85
23	13600	318	11700	6280	59	1000	2290	6	37
24	11600	195	6110	6260	55	930	2230	4	24
25	9080	147	3600	5470	51	753	2120	3	17
26	8100	132	2890	5260	49	696	2020	11	60
27	7920	115	2460	5270	48	683	1910	11	57
28	8500	120	2750	4470	46	555	1830	10	49
29	9160	138	3410	4090	46	508	1750	9	43
30	8600	112	2600	4330	59	690	1700	8	37
31	--	--	--	4520	42	513	--	--	--
TOTAL	339210	--	450220	230710	--	76568	101170	--	6587

KLAMATH RIVER BASIN

11-5300. TRINITY RIVER AT HOOPA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1680	7	32	898	7	17	335	3	2.7
2	1690	7	32	818	5	11	321	2	1.7
3	1660	6	27	722	5	9.7	378	2	2.0
4	1600	6	26	674	6	11	418	2	2.3
5	1570	5	21	650	5	8.8	434	2	2.3
6	1550	5	21	634	5	8.6	442	2	2.4
7	1490	4	16	618	4	6.7	450	1	1.2
8	1440	6	23	610	3	4.9	450	1	1.2
9	1370	8	30	586	3	4.7	442	1	1.2
10	1380	6	22	570	2	3.1	442	2	2.4
11	1360	4	15	554	2	3.0	442	2	2.4
12	1320	6	21	530	2	2.9	434	2	2.3
13	1300	8	28	522	2	2.8	426	2	2.3
14	1250	12	41	506	2	2.7	418	3	3.4
15	1230	3	10	482	2	2.6	418	3	3.4
16	1190	3	9.6	466	2	2.5	426	3	3.5
17	1150	3	9.3	466	3	3.8	418	4	4.5
18	1120	3	9.1	450	4	4.9	474	3	3.8
19	1100	4	12	418	3	3.4	522	2	2.8
20	1080	4	12	410	3	3.3	538	2	2.9
21	1060	5	14	402	3	3.3	546	3	4.4
22	1030	4	11	386	2	2.1	530	3	4.3
23	994	3	8.1	378	2	2.0	514	3	4.2
24	978	5	13	356	2	1.9	498	2	2.7
25	970	8	21	349	2	1.9	482	1	1.3
26	978	7	18	356	2	1.9	466	1	1.3
27	954	6	15	356	3	2.9	450	1	1.2
28	1030	5	14	356	3	2.9	426	1	1.2
29	1130	5	15	349	3	2.8	418	1	1.1
30	1090	11	21	349	3	2.8	410	1	1.1
31	986	11	29	342	3	2.8	--	--	--
TOTAL	38730	--	596.1	15563	--	144.7	13368	--	73.5
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									2274385
TOTAL LOAD FOR YEAR (TONS)									7607861.8

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												METHOD OF ANALY- SIS	
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED													
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00			
DEC 10, 1968	1600	8	15400	1290	53600	23	28	47	61	73	82	98	100	--	--	--	VPWC		
DEC 25.....	1530	4	11300	993	30300	6	13	20	26	32	39	46	59	91	100	--	VBWC		
JAN 12, 1969	1530	5	28900	3270	255000	16	25	39	54	68	81	93	100	--	--	--	VPWC		
JAN 14.....	1630	7	37000	3510	351000	7	10	16	22	29	36	51	81	98	100	--	VPWC		
JAN 15.....	1615	7	25500	2790	192000	6	10	15	19	24	30	38	54	73	85	100	SBWC		
JAN 18.....	1545	6	11200	1590	48100	2	6	10	12	13	19	25	43	84	94	100	SBWC		
JAN 19.....	1630	6	11700	2750	86900	7	11	16	21	26	32	40	64	96	100	--	VBWC		
JAN 20.....	1630	7	35000	6240	590000	8	10	16	23	30	39	53	80	98	100	--	VPWC		
JAN 21.....	1630	7	64100	4840	838000	9	11	19	27	35	44	58	82	98	100	--	VPWC		
JAN 23.....	1630	6	29700	2870	230000	7	10	15	20	24	31	43	68	88	100	--	VBWC		
FEB 20.....	1600	6	11400	1200	36900	2	4	8	10	11	15	19	29	58	74	88	SBWC		
FEB 27.....	1300	6	7720	252	5250	--	3	16	18	22	31	41	56	90	98	100	SBWC		

PARTICLE SIZE OF BED MATERIAL, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

(METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

DATE	TIME	WATER TEMP- ERATURE (C)	NUMBER OF SAM- PLING POINTS	DISCHARGE (CFS)	PARTICLE SIZE												METHOD OF ANALY- SIS
					PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												
					.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0		
SEP 29, 1969	1800		3	410	2	5	45	60	74	77	80	86	97	100	--	S	

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LOCATION.--Lat 41°27'00", long 123°53'40", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.12, T.12 N., R.2 E., Humboldt County, temperature recorder at gaging station on left bank, 600 ft downstream from West Fork, 3.0 miles upstream from mouth, and 9.2 miles southeast of Klamath.

PERIOD OF RECORD.--Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 22°C July 20-22, 25, 26; minimum, 6°C on several days during January to March.

EXTREMES, 1966-69.---Water temperatures: Maximum, 22°C July 20-22, 25, 26, 1969; minimum, 4°C Feb. 15, Mar. 3, 1967, Jan. 27-29, 1968.

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	MAXIMUM	18	17	17	16	17	17	17	17	17	16	16	16	16	16	16	16	17	16	16	17	17	17	17	17	17	18	18	17	17	17	16	17
	MINIMUM	15	14	14	14	15	14	14	13	13	15	16	14	14	14	14	14	14	14	14	15	15	15	15	15	16	16	16	16	16	15	14	15
NOVEMBER	MAXIMUM	16	16	16	17	17	16	17	18	17	17	15	15	14	14	15	14	14	14	14	13	14	13	14	13	13	11	11	11	11	10	--	14
	MINIMUM	15	15	16	16	16	16	16	16	17	17	15	14	14	14	13	14	13	13	12	13	13	11	11	11	11	10	10	10	9	10	--	14
DECEMBER	MAXIMUM	10	10	10	11	11	11	11	12	12	12	10	10	10	10	10	9	10	10	10	9	9	9	10	10	10	10	10	10	10	9	10	10
	MINIMUM	9	9	9	10	10	10	10	11	11	10	10	10	10	10	10	9	9	9	9	9	8	8	9	9	10	10	10	10	9	9	9	9
JANUARY	MAXIMUM	10	10	11	10	11	11	11	10	9	10	10	10	10	10	9	9	8	9	9	9	9	9	9	8	8	9	9	9	8	7	7	9
	MINIMUM	10	10	10	10	10	10	10	9	8	9	10	9	9	8	8	8	8	8	9	9	9	9	9	8	8	9	9	8	7	7	6	8
FEBRUARY	MAXIMUM	7	8	8	8	9	9	9	9	10	9	9	8	8	8	8	9	9	9	9	8	9	8	8	8	8	8	8	9	8	8	--	8
	MINIMUM	6	7	7	8	8	8	8	9	9	8	8	8	8	7	8	7	7	8	8	8	8	8	8	7	7	7	7	7	7	--	--	8
MARCH	MAXIMUM	8	7	8	8	9	9	9	9	8	9	8	9	9	9	10	8	9	8	9	9	10	10	10	10	10	10	10	10	10	9	9	9
	MINIMUM	7	6	6	6	8	7	7	7	7	6	6	6	7	6	7	7	7	8	7	7	8	8	8	8	7	7	8	8	8	8	8	7
APRIL	MAXIMUM	8	8	8	9	9	9	10	10	11	11	9	9	11	11	11	9	10	9	11	11	10	9	9	10	11	11	10	10	10	--	10	
	MINIMUM	7	7	7	8	8	7	7	8	8	8	8	7	8	8	8	8	8	8	8	8	8	9	9	8	7	7	8	8	8	8	7	--
MAY	MAXIMUM	10	11	10	11	12	12	13	12	12	13	13	12	11	11	13	13	14	11	13	14	15	15	15	14	12	12	11	13	14	14	16	16
	MINIMUM	7	7	8	7	8	9	9	11	9	9	9	10	10	9	9	9	10	10	10	10	10	9	10	11	11	11	10	10	10	11	12	11
JUNE	MAXIMUM	16	17	16	16	15	14	14	14	14	14	14	16	16	17	18	18	18	17	16	19	18	18	16	16	16	15	15	17	17	18	--	16

KLAMATH RIVER BASIN

11-5305. KLAMATH RIVER NEAR KLAMATH, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 41°30'45", long 123°58'30", in SW $\frac{1}{4}$ sec.17, T.13 N., R.2 E., Del Norte County, at gaging station on right bank, 2.8 miles upstream from Turwar Creek, and 3.3 miles east of Klamath.

DRAINAGE AREA.--12,100 sq mi, approximately, not including Lost River or Lower Klamath Lake basins.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: November 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Minimum, 5°C on several days during January to March.

EXTREMES, 1965-69.--Water temperatures: Maximum (1966-68), 26°C on several days during July and August 1968; minimum, 4°C on several days in December 1967.

REMARKS.--Chemical-quality samples collected by California Department of Water Resources. No temperature record July 1 to Sept. 30; probe buried.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	LITHIUM (LI) (UG/L)	STRON- TIUM (SR) (UG/L)
OCT. 01...	1045	2280	17	9.2	17	0	21	10	17	2.0	10	150
NOV. 12...	1030	16500	--	11.2	13	70	13	6.3	5.1	1.0	10	80
DEC. 03...	0855	11500	7	12.6	16	40	16	7.6	6.9	1.0	10	70
JAN. 20...	1540	72300	6	12.7	13	10	14	5.0	3.1	.8	10	70
FEB. 03...	1425	34400	6	12.9	16	40	16	7.1	4.8	.0	20	100
MAR. 03...	1500	26000	7	12.8	17	10	17	7.4	5.9	.9	20	110
APR. 08...	0930	36300	9	12.2	17	20	15	7.0	6.6	1.3	10	40
MAY 13...	----	45000	13	11.8	11	--	9.3	4.0	2.3	.6	10	50
JUNE 10...	0930	15900	--	10.6	13	60	11	5.0	3.0	.7	10	50
JULY 15...	----	4150	20	8.9	13	10	17	7.1	5.1	1.1	10	90
AUG. 05...	----	3180	20	8.9	13	20	19	8.2	8.1	1.5	10	140
SEPT. 09...	----	2820	20	9.7	18	0	21	10	15	2.2	10	140

DATE	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	PHOS- PHATE (PO ₄) (MG/L)	BORON (B) (UG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	PH (UNITS)
OCT. 01...	121	0	16	5.2	.2	.3	--	120	94	0	144	7.9
NOV. 12...	67	0	10	2.2	.1	1.0	--	0	58	3	85	7.6
DEC. 03...	82	0	14	3.5	.2	1.0	.06	0	72	5	106	8.1
JAN. 20...	68	0	7.0	1.0	.1	1.1	.24	20	56	0	78	8.0
FEB. 03...	81	0	9.0	1.5	.0	1.4	.05	0	69	3	97	7.9
MAR. 03...	88	0	10	1.3	.1	1.4	.07	40	73	1	104	7.4
APR. 08...	80	0	8.0	2.1	.1	2.0	.20	0	66	0	98	7.7
MAY 13...	47	0	3.0	.8	.1	1.2	.15	0	40	1	55	7.7
JUNE 10...	59	0	5.0	1.1	.1	.1	.09	30	48	0	68	7.8
JULY 15...	87	0	7.0	2.6	.1	.0	.14	50	72	1	96	8.0
AUG. 05...	101	0	9.0	3.4	.1	.0	.13	120	81	0	113	8.1
SEPT. 09...	114	0	22	5.8	.1	.0	.28	100	94	0	150	7.8

11-5305, KLAMATH RIVER NEAR KLAMATH, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	SPECIFIC CONDUCTANCE (MICROHMS)	DISSOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD-SORPTION RATIO	ALKALINITY AS CaCO3 (MG/L)	TURBIDITY (MG/L)
OCT. 01...	234	20.0	21	.5	99	--
NOV. 12...	137	.12	15	.3	55	350
DEC. 03...	166	.14	17	.4	67	5.0
JAN. 20...	123	.11	10	.2	56	200
FEB. 03...	155	.13	13	.3	66	44
MAR. 03...	163	.14	15	.3	72	150
APR. 08...	157	.13	17	.4	66	90
MAY 13...	91	.07	11	.2	30	95
JUNE 10...	112	.09	12	.2	48	30
JULY 15...	166	.13	13	.3	71	3.0
AUG. 25...	197	.15	18	.4	83	2.0
SEPT. 09...	241	.20	25	.7	93	4.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	MAXIMUM	20	20	20	20	20	19	19	19	18	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	18
	MINIMUM	17	19	20	20	19	19	18	18	17	17	17	17	17	16	17	17	16	16	16	17	17	17	17	16	16	17	17	17	17	17	16	17
NOVEMBER	MAXIMUM	16	16	16	16	16	16	16	16	16	15	15	16	16	16	15	15	15	14	14	14	13	12	12	12	12	11	10	10	10	--	14	
	MINIMUM	16	16	16	16	16	16	16	16	15	15	15	16	16	16	15	15	14	14	14	13	12	12	12	11	11	10	9	10	10	--	13	
DECEMBER	MAXIMUM	10	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	8	8	8	8	
	MINIMUM	9	9	7	9	8	8	9	9	9	9	8	8	8	8	8	8	7	8	8	8	6	7	7	7	7	7	7	7	8	8	8	
JANUARY	MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	8	8	8	8	7	6	7	6	6	6	5	7	
	MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	6	8	8	7	6	6	6	5	5	7		
FEBRUARY	MAXIMUM	6	6	6	7	7	7	7	7	7	7	7	8	8	8	7	7	7	7	7	7	8	8	8	8	8	8	7	6	--	--	7	
	MINIMUM	5	6	6	6	6	7	7	7	7	7	7	7	8	7	7	7	7	7	7	7	7	8	8	8	8	7	6	6	--	--	7	
MARCH	MAXIMUM	6	6	7	6	6	6	7	7	7	8	7	7	7	8	9	9	9	9	9	9	9	9	9	10	9	9	9	9	9	10	8	
	MINIMUM	5	6	5	5	6	6	6	6	6	7	7	7	7	7	8	8	9	9	9	9	9	9	9	9	9	8	8	8	9	9	8	
APRIL	MAXIMUM	10	10	10	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	10	10	11	13	12	--	11
	MINIMUM	10	10	9	9	9	10	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	10	10	10	11	12	--
MAY	MAXIMUM	12	12	12	12	12	14	14	14	14	14	14	14	14	14	14	14	13	14	14	14	14	14	15	15	16	16	15	15	14	15	16	14
	MINIMUM	11	11	12	12	11	12	14	14	14	14	14	14	14	14	13	13	13	13	13	14	14	14	14	15	15	16	15	15	14	14	15	16
JUNE	MAXIMUM	17	17	17	19	19	19	19	19	18	18	18	18	17	18	18	19	20	20	20	20	20	20	20	20	20	19	18	18	17	18	--	19
	MINIMUM	16	17	17	17	19	19	19	18	18	18	17	17	17	18	18	19	19	20	20	20	19	19	20	20	19	18	18	17	17	17	--	18
JULY	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

KLAMATH RIVER BASIN

MISCELLANEOUS ANALYSES OF STREAMS IN KLAMATH RIVER BASIN

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
11-5258. WEAVER CREEK NEAR DOUGLAS CITY, CALIF. (LAT 40°40'06", LONG 122°56'31")																	
DEC 9, 1968	1100	7	D 19	6	.31	--	--	--	--	--	--	--	--	--	--	--	SPWC
JAN 2, 1969	1230	4	D 28	3	.23	--	--	--	--	--	--	--	--	--	--	--	
JAN 13.....	1400	4	930	1840	4620	7	7	11	15	22	29	42	61	84	92	97	
FEB 7.....	1100	3	D 91	4	.98	--	--	--	--	--	--	--	--	--	--	--	
MAR 20.....	1140	6	D 235	14	8.9	--	--	--	--	--	--	--	--	--	--	--	
APR 10.....	1540	14	D 129	6	2.1	--	--	--	--	--	--	--	--	--	--	--	
MAY 21.....	1120	9	D 119	8	2.6	--	--	--	--	--	--	--	--	--	--	--	
AUG 6.....	0905	16	D 3.7	5	.05	--	--	--	--	--	--	--	--	--	--	--	
11-5265. NORTH FORK TRINITY RIVER AT HELENA, CALIF. (LAT 40°46'55", LONG 123°07'38")																	
DEC 9, 1968	1400	4	247	1	.67	--	--	--	--	--	--	--	--	--	--	--	VBWC
JAN 2, 1969	1330	5	273	1	.74	--	--	--	--	--	--	--	--	--	--	--	
JAN 13.....	1600	5	1730	151	705	2	7	15	20	24	37	45	64	92	100	--	
FEB 7.....	1220	5	442	3	3.6	--	--	--	--	--	--	--	--	--	--	--	
MAR 20.....	1330	6	844	11	25	--	--	--	--	--	--	--	--	--	--	--	
APR 10.....	1435	9	1100	26	77	--	--	--	--	--	--	--	--	--	--	--	
MAY 21.....	1430	9	940	15	38	--	--	--	--	--	--	--	--	--	--	--	
AUG 6.....	1215	17	D58	1	.16	--	--	--	--	--	--	--	--	--	--	--	

D Daily mean discharge.

SMITH RIVER BASIN

375

11-5325. SMITH RIVER NEAR CRESCENT CITY, CALIF.

LOCATION.--Lat 41°47'20", long 124°03'20", in SW $\frac{1}{4}$ sec.10, T.16 N., R.1 E., Del Norte County, at gaging station on left bank, 0.5 mile downstream from South Fork, and 8 miles east of Crescent City.

DRAINAGE AREA.--609 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1969.

Water temperatures: October 1965 to September 1969.

EXTREMES, 1968-69.--Water temperatures: Maximum, 23°C July 19-22, 26; minimum, 6°C Jan. 29, 30.

EXTREMES, 1966-69.--Water temperatures: Maximum, 23°C on several days during 1968 and 1969; minimum, 4°C on several days during 1967 and 1968.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. No temperature record Aug. 31 to Sept. 16, probe out of water.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DISS- OLVED OXYGEN (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 01...	0830	280	15	10.3	--	--	2.8	--	88	0	--	2.9
NOV. 12...	0830	17900	10	12.8	--	--	1.7	--	58	0	--	2.2
DEC. 03...	0740	3740	7	13.5	--	--	1.8	--	61	0	--	2.2
JAN. 21...	0745	21500	7	13.3	--	--	2.4	--	48	0	--	1.7
FEB. 04...	0720	3990	6	13.5	--	--	1.9	--	50	0	--	2.1
MAR. 03...	1610	4400	7	13.1	--	--	1.4	--	48	0	--	1.9
APR. 08...	0755	3680	7	13.4	--	--	1.4	--	52	0	--	1.5
MAY 13...	0640	3740	10	12.6	4.7	5.7	1.2	.2	39	0	4.0	2.0
JUNE 10...	0745	1120	13	11.7	--	--	1.4	--	58	0	--	3.2
JULY 15...	0640	430	17	9.5	--	--	2.2	--	79	0	--	2.4
AUG. 05...	0700	322	--	9.6	--	--	2.2	--	84	0	--	2.6
SEPT. 09...	0655	236	17	9.1	12	12	2.2	--	89	0	4.9	3.0

DATE	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CaCO3 (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
OCT. 01...	--	0	--	--	81	9	7	.1	72	7.8	161
NOV. 12...	--	0	--	--	49	1	7	.1	48	7.8	101
DEC. 03...	--	0	--	--	63	13	6	.1	50	8.1	105
JAN. 21...	--	0	--	--	44	5	11	.2	39	7.8	84
FEB. 04...	--	0	--	--	43	2	9	.1	41	7.9	89
MAR. 03...	--	0	--	--	47	8	6	.1	39	7.3	89
APR. 08...	--	0	--	--	45	2	6	.1	43	7.8	90
MAY 13...	.0	0	38	.05	35	3	7	.1	32	7.6	70
JUNE 10...	--	0	--	--	49	1	6	.1	48	7.8	101
JULY 15...	--	0	--	--	69	4	6	.1	65	7.9	134
AUG. 05...	--	0	--	--	73	4	6	.1	69	8.2	146
SEPT. 09...	.0	0	75	.10	79	6	6	.1	73	8.2	160

SMITH RIVER BASIN

11-5325. SMITH RIVER NEAR CRESCENT CITY, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER																																
MAXIMUM	17	16	16	15	15	14	14	13	13	13	13	13	12	11	12	13	13	13	12	13	13	13	13	13	13	14	14	14	14	13	12	13
MINIMUM	15	16	14	14	14	14	13	12	12	13	13	12	11	11	11	12	12	12	11	12	12	12	12	12	12	13	13	13	13	13	12	11
NOVEMBER																																
MAXIMUM	12	12	12	12	13	12	13	14	14	14	14	13	11	10	11	11	12	12	12	12	13	13	12	12	11	11	11	10	10	10	--	12
MINIMUM	11	12	12	12	12	11	10	13	14	13	14	13	12	10	10	10	10	11	12	11	11	12	12	11	10	11	10	10	9	9	--	11
DECEMBER																																
MAXIMUM	10	10	10	11	11	10	11	11	12	12	10	10	10	10	10	9	10	10	9	8	7	9	10	10	10	10	10	10	9	9	9	10
MINIMUM	9	9	7	10	10	9	10	11	11	10	10	9	9	10	9	9	9	9	8	7	7	7	9	10	10	10	10	9	9	9	9	9
JANUARY																																
MAXIMUM	10	10	11	11	10	11	11	9	9	9	10	10	10	10	9	9	8	9	9	9	9	10	9	8	8	9	9	7	7	7	7	9
MINIMUM	10	10	10	10	10	10	9	8	7	9	9	9	9	9	9	8	8	8	8	9	9	7	8	7	7	7	7	7	6	6	7	8
FEBRUARY																																
MAXIMUM	8	9	9	8	8	9	9	9	10	10	10	9	9	9	9	9	9	10	10	9	9	9	9	8	8	8	9	9	9	--	--	9
MINIMUM	7	8	8	6	7	8	8	9	9	9	9	9	9	8	8	9	8	8	9	8	8	9	8	8	7	8	7	8	8	8	--	--
MARCH																																
MAXIMUM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	10	9	10	10	11	11	10	11	11	10	10	10	11	10	10
MINIMUM	8	8	7	8	8	8	8	8	8	7	8	8	8	8	8	8	9	9	8	8	9	9	9	9	8	9	8	8	8	8	9	8
APRIL																																
MAXIMUM	9	8	8	9	9	9	10	10	10	11	11	11	10	10	11	11	10	11	10	11	11	11	10	10	10	10	12	10	10	10	--	10
MINIMUM	7	7	7	8	8	8	8	7	9	9	9	9	8	8	8	8	9	9	9	9	9	9	9	8	8	8	8	8	8	8	--	8
MAY																																
MAXIMUM	11	12	11	12	13	14	13	13	13	14	14	14	13	12	12	14	14	15	15	14	15	16	16	15	15	14	13	15	15	17	17	14
MINIMUM	8	9	9	8	10	11	10	10	10	10	10	10	10	10	10	11	12	12	11	11	12	13	13	13	13	12	11	11	13	14	14	11
JUNE																																
MAXIMUM	18	18	18	17	17	15	15	15	15	15	15	17	17	18	20	20	20	20	19	18	20	19	19	19	18	18	17	16	18	19	--	18
MINIMUM	14	15	15	15	15	14	14	14	14	13	14	14	15	16	17	17	18	18	17	17	18	18	18	17	16	15	15	14	16	17	--	16
JULY																																
MAXIMUM	19	19	20	21	21	21	21	22	21	21	22	21	22	21	22	22	22	22	23	23	23	23	22	22	22	23	22	22	22	21	20	22
MINIMUM	17	17	17	18	19	19	19	20	20	20	20	20	19	19	19	17	19	19	20	20	21	21	21	20	19	20	20	20	20	20	19	19
AUGUST																																
MAXIMUM	21	22	22	22	21	21	21	22	22	22	22	22	22	21	21	21	20	20	20	20	21	21	21	21	20	20	20	19	19	20	--	21
MINIMUM	20	20	20	20	20	20	19	19	20	20	20	20	20	20	19	19	19	19	18	18	18	18	19	18	17	18	18	17	17	17	--	19
SEPTEMBER																																
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16	17	17	17	17	17	17	17	17	17	18	17	17	16	--	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	15	16	15	15	16	16	16	16	16	16	16	15	15	--	--

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